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Effective Multigrade Schools: A Review of the Literature

Katherine Hayes

Juárez and Associates

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Study Background and Objectives

This manuscript reviews and synthesizes current research and practical case studies about multigrade schools in Latin America and the Caribbean (LAC)[1] and addresses the effective use of multigrade schools.[2] The document has five sections and two appendices. The first section contains a statement or overview of the problem followed by a description of the study methodology. The second section presents a review of the research and discusses rural schools in Latin America and research about multigraded classrooms around the world. The third section discusses the factors influencing the success of a multigraded program first on the classroom level (physical layout of the classroom, instructional delivery and grouping, self-directed learning, peer tutoring, and evaluation and promotion); then on the community and institutional levels (curriculum development, instructional materials, teacher selection, and teacher training); and finally on the national level (national policy, necessary resources, and cost). The fourth section presents a case study about The New School (Escuela Nueva) in Colombia, and the final section contains conclusions and recommendations. The appendices contain guidelines for classroom management and thematic planning.

Statement of the Problem

Rural schools in developing countries are often designed for sparsely populated areas where students of various ages, grades, and experiences are grouped together in a single classroom. However, teachers are frequently ill prepared to deal with the complexities of a multigrade environment. This problem is often exacerbated by national education policies that consist of a subject approach to curriculum and student evaluations that require grading in each achievement area.

Instructional materials are usually lacking or insufficient in number in rural schools. Where student textbooks and teacher guides do exist, they have generally been produced for single-grade classrooms. As rural schools usually are found in low-income areas characterized by subsistence agriculture or day labor/seasonal migration economies, school resources are typically quite scarce.

Attempting to overcome these constraints to meet the needs of children attending one-room/one-teacher schools will require a complete change in pedagogical approach that must focus on the learner rather than on the subject matter. Reorienting teachers requires

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[1] The reader will note descriptions of multigrade schools around the world as well as in LAC regions. These descriptions are considered to contain information applicable to the LAC context.

[2] This document has been written as a result of the current interest by the USAID LAC Bureau in collecting and disseminating information on a number of topics of specific interest to human resource development assistance. One of these topics is the effective use of multigrade rural schools.

retraining in the new methodology, assessing individual cognitive and social development, and providing a learning environment that allows students to take advantage of existing resources. Students will be empowered as they become more and more responsible for their own learning.

Study Methodology

The study methodology consisted of an exhaustive literature search to obtain all relevant documents pertaining to the design, implementation, and evaluation of multigrade programs in domestic and international settings. The search for international documents led the researchers to the World Bank, UNESCO, and UNICEF. In addition, the U.S. Agency for International Development sponsored a variety of projects from which documents were drawn. These projects include LearnTech, the BRIDGES Report Series, the EHRTS Basic Education Review archives, and the literature review conducted for the Improving Educational Quality project.

The Educational Resources Information Center (ERIC) computerized document search and the ERIC Clearinghouse on Rural Education and Small Schools[3] provided a large pool of resources focusing on U.S. and international approaches to multigrade education. Canadian journals were also accessed through this clearinghouse. Finally, thorough library searches were conducted at the University of California at Los Angeles and at George Washington University, each of which have interlinking networks with other research institutions.

Literature Review

Rural Education in Latin America and Beyond

The problems associated with rural education are not unique to Latin America or even to developing countries. In Finland, 70 percent of all primary pupils are enrolled in schools with less than three teachers. Iceland reports an average enrollment for all rural primary schools of 50. One-fourth of the schools in Spain and in Scotland have less than 50 pupils. In Portugal, 80 percent of all pupils attend schools with only two classrooms. France has 11,000 one-teacher schools (Bray 1987). Among the countries of Latin America and the Caribbean, rural schools for grades K-6 are common. Guatemala, for example, has 1,818 urban elementary schools (both private and public) and 7,544 rural elementary schools. Secondary schools, on the other hand, are exceedingly rare in rural areas. Guatemala has 1,900 secondary schools; only 205 of these are found in rural areas (Ministerio de Educación 1992).

[3] This clearinghouse, sponsored by the U.S. Department of Education's Office of Educational Research Improvement, is located at the Appalachia Educational Laboratory, Charleston, West Virginia.

Examples of the problems associated with rural education include small isolated schools serving often the poorest of children, teachers who may be placed in rural schools because of their lack of seniority (experience) or their less-than-satisfactory performance, poor infrastructure and few resources, and high subject matter repetition and student attrition. Table 1 contains a list of the constraints unique to small rural schools compiled from research in the United States (Miller 1988) and Latin American (Schiefelbein 1991) settings.

The History of Multigraded or Nongraded Schools

Early schools in the United States were nongraded. This type of classroom organization was altered when the industrial revolution brought about large-scale urban growth creating a demand for mass public education and the graded schools. Graded schools provided a means of organizing and classifying an increased number of students. It was easier to manage students by putting them into grades. This structural change in American education was accompanied by the advent of the graded textbook, state-supported education, and the demand for trained teachers. These latter changes further solidified graded school organization (Goodlad and Anderson 1963). According to Miller (1989), graded schools are designed to manage large numbers of children rather than meet individualized needs.

Multigrade teaching combines children of different ages and skills in one classroom, usually with one teacher. The multigrade classroom is still an important fixture in American and European education. It exists to the greatest extent in rural areas, but also occurs in urban or suburban areas. In the 1960s and 1970s, the ungraded school, open education, and individualized instruction became driving forces in school instruction. The innovations were largely unsuccessful due to lack of training and time for teachers. In addition, parents, teachers, and administrators continued to expect that schools should be organized along graded lines. However, some of the more progressive and successful schools in the United States today continue to operate multigrade classrooms. Renewed interest in multigrade schooling and the resulting research about it may ultimately challenge the popularity of the graded school. Multigrade classrooms remain a vital solution in providing education to children in isolated or rural regions both in developing and developed countries.

Thomas and Shaw (1992) report that there are approximately 420,000 multigrade schools in China, 20,000 in Indonesia, and 1,540 in Malaysia. Twenty-two percent of Mexican primary schools are "unitary,"[4] while Colombia has established 20,000 multigrade schools called Escuela Nueva (Schiefelbein 1991). These schools have been replicated in Mexico, Costa Rica, and Guatemala. Schools containing multigrade classrooms comprise approximately one-half of the schools in Belize and 88 percent of the schools in Honduras (Honduras Ministry of Education 1989).

[4] "Unitary" schools offer all six grades with only one teacher.

Table 1. Constraints Unique to Rural, Small Schools

Classroom Factors

- Classes are often made up of more than one grade level.
- Teachers typically have three to five different preparations daily.
- Teachers often teach subjects in which they are not prepared.
- Equipment, instructional materials, and supplies are limited and/or dated. Informational resources for student use (media and library related) are limited or nonexistent.
- Support for dealing with special needs children is lacking.

School Factors

- Teachers are often responsible for extensive administrative, supervisory, extracurricular, and maintenance responsibilities.
- Junior and senior high schools are located in urban areas only.
- Resources (supplies and materials outdated) are limited.
- Teachers are more isolated from ongoing staff development.
- In-service support is either limited or nonexistent.
- Professional development information is limited.
- Few rules and policies (a more informal administrative style) are defined.
- Salaries are lower.

Sociocultural Factors

- Finding adequate housing is difficult.
- Private lives are more open to scrutiny.
- Cultural and geographical isolation and/or cultural/linguistic isolation may exist.
- Services such as medical and shopping may be quite distant.
- High parental expectations exist for involvement in community activities.
- Greater emphasis is placed on informal and personal communications.
- Teachers often experience loneliness when trying to fit into close-knit communities.
- Teachers often have problems adjusting to extreme weather conditions.

During a UNESCO-funded conference in 1980, representatives from India, Korea, Maldives, Nepal, Thailand, Philippines, Sri Lanka, and Indonesia met to discuss multigrade educational issues as experienced in their own countries. The problems and learning difficulties were nearly the same for every country: there were large numbers of students and few teachers. The two-grade combination classes were the most common; however, three or more grades in a classroom were also typical. The conference attendees identified five general problem areas: inadequately trained teachers, a scarcity of varied levels and types of materials, a lack of flexible and special types of curriculum organization for multigrade classes, inadequate school facilities, and a lack of incentives for teachers of multiple classes (UNESCO 1981).

Miller (1989) suggests that the problems experienced by multigrade educators in developing countries are similar to those found in the United States and Canada. The curriculum and programs need modifications that reflect the culture of the local community and the needs of the students within the demands created by the multigrade organization. UNESCO program participants recommended: (1) restructuring the curriculum by emphasizing the environment of the community, the history and culture of the community, and the skills of the community members (UNESCO 1981, 80) and (2) encouraging activities and experiences outside the classroom because indoor activities inhibit and restrict children (UNESCO 1981, 86).

Multigrade schooling is a worldwide phenomenon brought about either by necessity or by design. While multigrade education is difficult to implement successfully, a number of research studies have demonstrated the potential of the multigrade innovation.

Pros and Cons of the Multigrade School

The controversy surrounding multigrade teaching is largely based on different perceptions and definitions of the concept. That is, multigrade teaching when done correctly offers many advantages, particularly to the student, but when done poorly, causes enormous detriment to the students. Table 2 highlights Thomas and Shaw's arguments in support of and against multigrade education. Five positive results of multigrade schooling include (a) students have a better self-image and a more positive attitude about the school and learning, (b) teachers can make long-range plans spanning two or three years thereby allowing for greater depth of concept development, (c) teachers have the opportunity to be more creative, (d) teachers are forced to use a variety of instructional methods that are good for learning, and (e) management problems for the teacher are reduced.

Thomas and Shaw cite three principal arguments against multigrade schools (see Table 2). Three challenges associated with multigrade education include (a) planning science and social studies curricula without repetition from year to year, (b) finding, hiring, and placing new teachers into rural multigrade schools (because of the demands placed on teachers, experts recommend placing only experienced teachers in multigrade classrooms), and (c) convincing policy makers, curriculum developers, and parents that multigrade teaching can be more effective than single-grade teaching.

Table 2. The Pros and Cons of Multigrade Schooling

PRO
• Multigrade schools are an efficient means of providing basic education in thinly populated areas.
• Multigrade schools are an efficient means of using scarce educational inputs, such as trained teachers, classrooms, and materials.
• Multigrade students can achieve higher achievement levels, especially in math, language, and sciences.
• Maintaining village schools is important in building village identity and cultural life.
• Multigrade schools can benefit girls by expanding available school spaces and by helping ensure that schools are located closer to home.[5]
• Students "learn to learn" and "learn to teach" through independent inquiry and peer tutoring.
• Individual students and teachers develop a strong relationship over time, which helps the teacher assess the student and adopt appropriate teaching strategies.
• Students benefit from the unique multiage and peer socialization patterns in multigrade classes.
• The stigma associated with repetition is removed.

CON
• Student achievement may fail if programs are not supported by the required resources and teachers are not properly trained.
• Demands on teachers' time and organizational capabilities are high; they need special training and materials to perform their jobs effectively.
• Students may receive less individual attention and must often work independently.

[5] The authors cite King (1990) in stating that distance from school has been cited as a major factor in female enrollment. "Evidence suggests that locating schools within walking distance of home helps to increase enrollment and retention of girls by addressing cultural concerns and by lowering opportunity costs."

Research about Multigraded Classrooms

This section presents an overview of the current research with respect to multigrade classrooms and the performance of students in those classrooms. Miller (1989) has reviewed the research focused on multigrade classrooms in the United States and found little or no difference in student achievement between the single and multigrade classroom in at least thirteen studies. These results are supported by the research of Veeman (1987) and Noonan and Hallak (1987), as cited in Thomas and Shaw (1992). The multigrade classroom has the greatest impact on student performance in the affective domain (Pratt 1986; Ford 1977). Results generally favor the multigrade classroom when measures of student attitude toward self, school, or peers are compared across a range of schools and geographic areas.

In Miller's review, 65 percent of affective measures favored the multigrade classroom at a significant level, 13 percent indicated a trend toward the multigrade children scoring higher on affective measures, and 22 percent revealed no difference. Multigrade children, then, have more positive attitudes toward school, higher self-concept scores, and more positive social relationships.

The most comprehensive study reviewed by Miller was conducted by Pratt and Tracy in 1986. They sought to identify differences between single and multigrade primary classrooms in rural/urban settings.[6] Pratt and Tracy found no indication that academic progress or social development were affected by whether students were placed into a single or a multigrade classroom. Students from both types of classrooms were progressing at largely the same rate with larger differences found within classroom types than between them. The greatest variation was found in student on-task behavior. Pratt and Tracy recommended the following:

- Expectations about the amount of preparation and curriculum planning needed to be clarified for teachers.
- Teachers should not be required to write out separate lesson plans for each grade; rather they should be encouraged to plan for joint grade instruction.
- Cooperative learning should be enhanced, grades should not remain separate, and the curriculum should not be repeated from one year to the next.
- Teacher management skills must be enhanced.

[6] The methods used in the study included teacher interviews, structured classroom observations, analysis of student work, and a student attitude measure with a heavy emphasis on the classroom context.

Bandy (1980) studied the characteristics and needs of country school teachers in British Columbia, Canada, and found that the most important factor to successful multigrade instruction was the teacher's ability to plan and organize. Student performance was mediated by the level of teacher expertise. Without adequate training and experience on the part of the teacher, student performance was likely to suffer. He recommended the following:

- Teacher training must be grounded in field-based experience.
- The novice teacher needs the opportunity to observe and teach with an effective model.
- Teachers need ongoing staff development.

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 the students' achievement test scores were compared with scores of students from urban schools. Results were favorable for the rural school: students performed nearly the same as their urban counterparts. Five positive environmental characteristics emerged from the observational data:

- *School routines*: These were structured so that children began the day, completed workbook assignments, met in small groups, went to the library, told stories, etc., with a minimum amount of noise and disruption. In part, this was due to a scheduling tree where each student's assignment was posted and to the highly predictable nature of class routines. For example, spelling tests were given all at once with unique words for each grade given in turn.
- *Group learning*: Each grade met with the teacher twice a day. When non-grouped 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.
- *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.
- *Independence*: Observed work habits of children indicated a high degree of self-discipline. They had specific assignments and time lines to meet. They passed out corrected workbooks without teacher prompting.

- *Community involvement*: Community members frequently visited the school. Mothers cooked a hot lunch once a month and planned holiday parties. The board chairman stopped by to see if the school needed anything. A clear demarcation between the school and the community was not apparent. Students were always hospitable and friendly toward new people entering the classroom. For example, kindergartners were welcomed into the classroom; older students were warm and helpful, frequently explaining what was being worked on.

In the developing world, results are mixed. Togolese and Burkinabe multigrade students performed substantially better than single-grade students (Thomas and Shaw 1992). Researchers credit the success of multigrade students to the effects of peer tutoring, independent work, and the variety in pedagogical approaches found in multigrade classrooms.

Of the 1,300 primary schools in Central Kalimantan, 460 have only one to three teachers. To assist them with multigrade teaching, the Indonesian government developed materials with which pupils could teach themselves and each other. The materials are available in five subjects: mathematics, social science, Pancastla (Indonesia's national ideology), natural science, and the Indonesian language. The project leaders assumed that religion, sports, and music could be taught to combined classes and therefore that self-instructional materials were less necessary in these subjects (Bray 1987).

The materials were only available for Grades 4 to 6 because children in lower grades are not considered sufficiently mature to work by themselves. However, other programmed materials that enable adult volunteers to work with children and still allow teachers to concentrate on children with particular difficulties have been developed for the lower grades. A detailed evaluation in 1984 showed (a) that the project pupils performed better in most subjects than did other pupils and (b) that the project children were more self-reliant than other pupils.

Multigrade students in Latin America (northeast Brazil, Colombia) have also outperformed their single-grade counterparts in academic achievement (Harbison and Hanushek 1988; Rojas and Castillo 1988). Evaluations undertaken with the New School in Colombia have shown that the multigrade students match their single-grade counterparts in creativity and have higher levels of self-esteem, higher math scores, and higher Spanish scores[7] than children attending traditional rural schools.

On the negative side, a recent study conducted by Project BRIDGES in Pakistan documented that single-grade students significantly outperformed multigrade students in achievement tests. The authors found that single-grade teachers devoted more time instructing students than did multigrade teachers, used fewer monitors (assistants) to teach students, and devoted more

[7] Third grade Spanish and third and fifth grade mathematics were the academic subjects selected for the evaluation.

time to making lesson plans (Rugh 1989). Similarly, the composite score on the Belize National Selection Examination placed multigrade schools in the lowest one-third of the country. However, variables such as distance from town, space per pupil, teacher education and experience, the use of peer tutoring, and the preparation of daily teaching notes discriminated between higher achieving and lower achieving multigrade schools (Nielsen 1992). Multigrade schools in Mexico show high rates of repetition and attrition, particularly, in schools with few materials, poor facilities, and untrained teachers.

Multigrade instruction (when correctly implemented) has a long, successful tradition and is a viable approach to school organization. Research strongly contradicts the dominant organization typically found in many single-grade classrooms and supports the success stories of multigrade classrooms. Interdependency, cooperation, multiple task activities, individualized learning, and heterogeneous grouping have emerged from requirements of coping with multiple grade levels in a single room.

Factors Influencing the Success of a Multigrade Program

This section presents an analysis of the elements of multigrade education starting at the classroom level and ending at the national policy level, offers a framework for designing a multigrade educational program, and suggests ways to implement such a program. Many of the research studies cited are based on North American contexts; however, examples are from studies undertaken in developing countries. The case study of Escuela Nueva in Colombia (presented in the next section) examines one innovative program that addresses the problems associated with LAC rural education through multigrade schooling.

Classroom Interventions

Generally speaking, no single approach is correct for implementing a sound multigrade program; however, some elements are more crucial than others: planning, teacher training, educational philosophy about the ways in which children learn, grouping, materials, and sensitivity to the cultural/community context.

When educators think about the effective multigrade classroom, they get a mental picture of a typical day, which in a LAC multigrade classroom can look something like the scene described by researchers visiting rural classrooms in Colombia:

Arrival at Emilio Rocha School

The coordinator of discipline rang the bell and announced "time to work"; all of the children lined up by height and grade. The children in charge of personal hygiene checked hands, fingernails, ears, and hair of their classmates. The students entered the classrooms and gathered their materials; they were then greeted by the teacher.

They exchanged information, asked questions, laughed, and received pats on the head or shoulder. Then they sat down to work, each one on a chosen assignment. They got up freely to consult with peers or with the teacher. Some went to the mathematics learning corner and counted sticks, others went to the science corner to identify different stones, another went to the library for a dictionary, and others went outside to look for materials to complement their lesson. One girl interviewed us about the city and recorded our answers in her notebook. She then began to work with mathematics, trying to measure with a yardstick. Her concentration was broken when we asked to test children of the third and fifth grades. On returning to work she seemed confused, she got up and went to the teacher who explained the lines of the yardstick and gave her a new sheet of paper. He also showed her how to measure pieces. He left the room and returned with a metal yardstick used for sewing. This she recognized, and they discussed how the two were the same. When she finished her work, they discussed ways to read the yardstick and its uses. He was a teacher facilitator.

This day in a class of children from second to fifth grade showed us the dynamics that can be created between teacher and student. If necessary, the teacher directed the children to the road that they should follow in undertaking a task; then he corrected, encouraged, or challenged them to look for solutions, always with words such as "you're doing good" or "yes, you can do it." We also saw the academic orientation of the children when they worked in small groups: discussion, defense of positions, and finally a synthesis of ideas. We observed an absence of fear in asking questions and a spirit of voluntarily helping classmates with "I'll explain it to him, Teacher," while the teacher watched to ensure the correctness of the explanation.

We decided to visit the first grade classroom to find out how the children were being taught to read. When we went in, we were almost flattened by a group of 14 children running for the court; they were having a reading class. We were astonished. "What, reading in the patio? without texts?" Yes, it was a class of dynamic reading that used small flash cards with syllables, short words, long words, and new words. The children competed, laughed, and identified real life objects matching the words. Many didn't want to stop when recess came and it was time to eat the snack that mothers had prepared and to play. Teachers joined actively in the games with children during recess.

Pedagogy and the Classroom Environment

The environment will have a great influence on the success of the multigrade classroom. Two relatively straightforward aspects of the environment are the physical layout of the classroom and the daily schedule. Both layout and schedule should be conducive to teaching more than one group. Bray (1987) recommends that each grade have its own area in which to display work. The classroom should also have desks or benches that can be moved easily, long blackboards at each end, and plenty of space (suggested dimensions range from 1.2 to

1.5 square meters per child). Mobility (furniture, room dividers, etc.) is the key to a well laid-out classroom.

The classroom can be divided into activity centers that are areas of the classroom designated by the teacher for specific purposes. Purposes of activity centers[8] include quiet or individual study, testing, partner work, group discussions, audiovisual or reference work, and teacher tutoring or small-group instruction. For example, a corner could be designated for science and social studies lessons, another for reading, and another for hands-on activities such as working with art supplies, manipulatives, or simple experiments. Each corner would need materials to accommodate children of different ages.

The learning center is an excellent way to reinforce and enrich student learning with little direct teacher supervision. However, materials preparation requires careful planning and organization. Table 3 outlines seven important steps for effective learning centers (Miller 1989).

When planning the physical layout of a classroom, it is important to consider what kinds of behaviors are appropriate for what kinds of activities and what are the best means to foster those behaviors. Will teachers work alone or be assisted by aides/parent volunteers? What resources do students bring to the classroom? What are the traffic patterns in the classroom? What activity centers will be specified for which students? How will the classroom organization and furniture accommodate age and size differences? Where will students keep their belongings?

Sample floor plan designs are presented in Figures 1 and 2. Miller (1989) emphasizes the importance of explaining the room arrangement and the rules that accompany each area to the students who will be using them.

[8] In some cases, activity centers will be known as learning centers. The term *learning centers* is used to describe a self-instructional learning activity that has been placed in a clearly defined area of the classroom.

Table 3. Effective Learning Centers

- Select a subject area.
- Determine the skill or concept to be taught, reinforced or enriched.
- Develop the skill or concept into a learning activity (such as, manipulating, experimenting, listening, viewing).
- Prepare the skill or concept into an applying activity (such as, filling in, arranging in order, putting together, taking apart, listing, classifying, tracing, writing).
- Incorporate the skill or concept into an extended activity (such as, comparing, developing your own, researching, reconstructing).
- Place all the games, work sheets, charts, etc., together in one area for children to use in a self-selected manner.
- Develop some form of record keeping and evaluation so that both students and teacher can account for time spent and learning accomplished at the learning center.

FIGURE 1. SELF-CONTAINED CLASSROOM ORGANIZED BY AREAS OF ACTIVITY

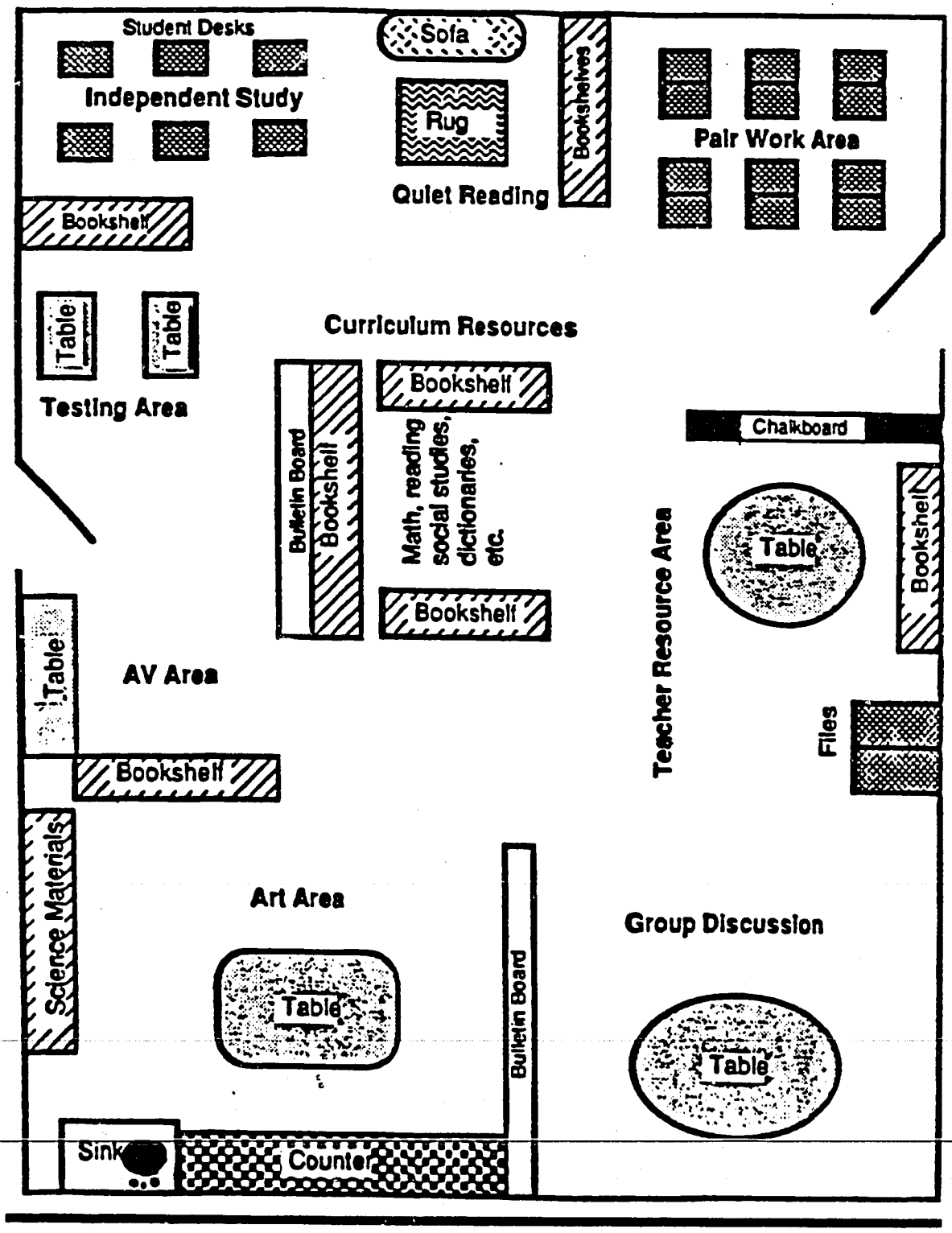
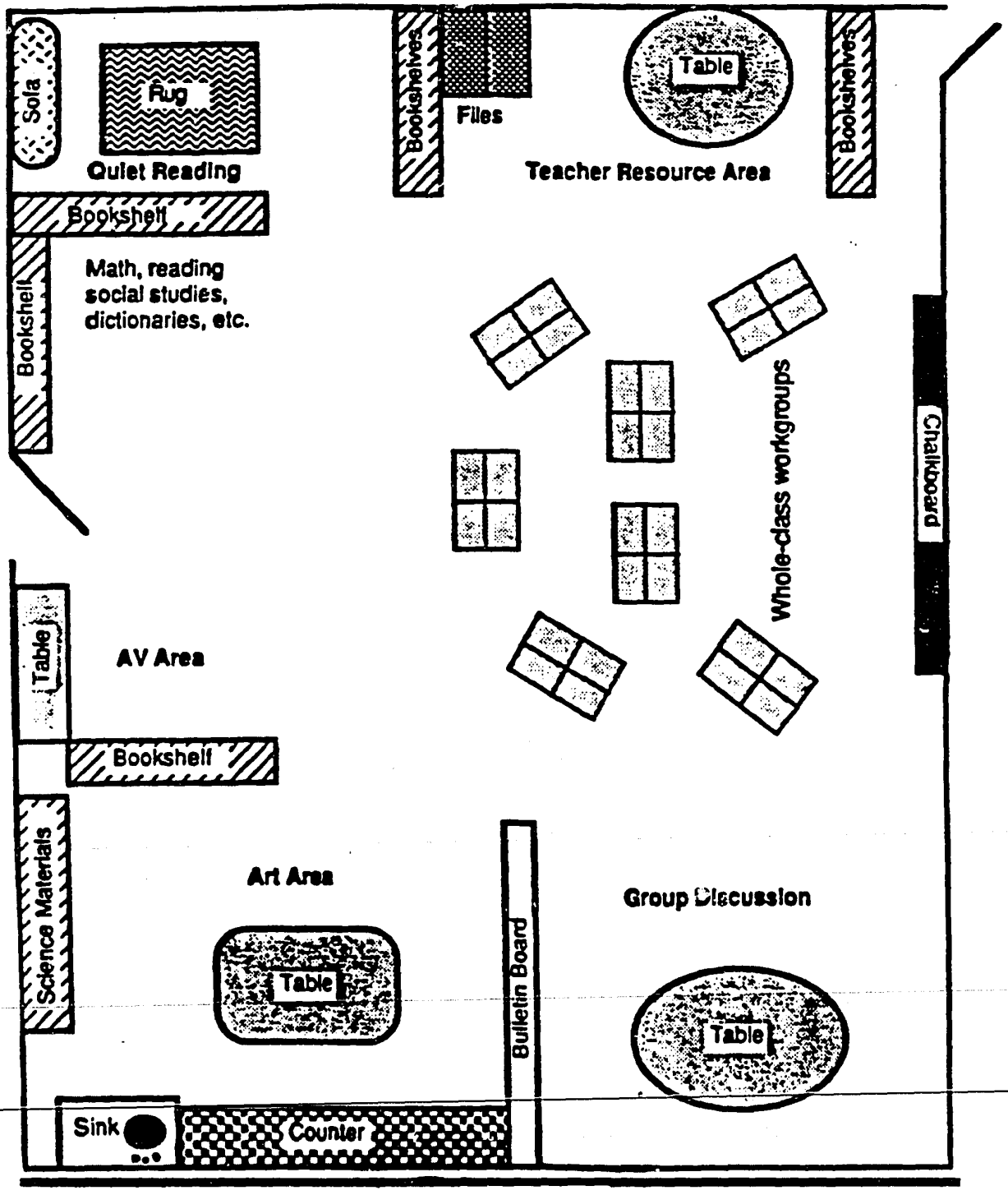


FIGURE 2. SELF-CONTAINED CLASSROOM ORGANIZATION FOR COOPERATIVE LEARNING



Scheduling and Planning

Schools in rural LAC countries should have flexible schedules so that agricultural demands on children's work can be accommodated. Teachers will have to make long-range plans as well as daily and weekly plans. Scheduling can be greatly facilitated by careful curriculum planning. Through the use of modular curricula, the students complete "cyclic levels" of mastery. Cyclic levels refer to increased levels of learning accomplished by the student returning to similar materials and lessons but processing them at increasingly complex cognitive stages as previously learned knowledge becomes the basis for new knowledge.

Using this approach (Holman 1989), similar assignments can be given to all grade levels within a class, with differential interpretation of student performance made by the teacher based on developmental principles and the previous performance of each student. That is, program content is adjusted so that all grade levels are taught the same subject at the same time with the expectations, the products, and the outcome differing by grade or ability level.

With respect to the schedule, Bray also recommends that all classes work on the same topic at the same time and that there be a split in which groups sometimes work on the same subject and sometimes on different subjects. Start and end times should be staggered so that two groups do not start on new work at the same time, and the whole class should be together at the beginning and at the end of the day to provide a sense of cohesion.

When developing a schedule, Miller (1989) emphasizes the following:

- Schedules need to be displayed clearly so they will be understood by students.
- Sufficient time should be provided for working with each maturity level (such as, for primary grades, middle grades).
- Curriculum areas of high priority should receive adequate time.
- Organization is simplest if all grades work on the same subject at the same time.
- In general, a schedule or routine should make the daily and weekly instructional activities as predictable as possible for students.
- Daily schedules should not be confused with weekly schedules. Flexibility is important.

For a complicated schedule to function well and so that children of different age groups and abilities are all engaged in learning activities at the same time, the multigrade teacher is going to have to be very well organized. Careful planning is crucial to the success of the multigrade program. The teacher will have to draw upon a variety of delivery methods, all

of which must be planned well in advance. Appendix A offers planning guidelines for classroom management, and Appendix B offers guidelines for thematic planning.

Curriculum and Materials

The next three sections address the following questions: What, how, and to whom are the concepts, skills, and content that are going to be taught?

The planned curriculum[9] implemented by the multigrade teacher will clearly have a significant influence on academic and social outcomes. In planning which curriculum to use, the teacher should consider the following questions:

- What do students need to know? (direct assessment)
- How will I help them learn it?
- What resources will I use?
- How will I know that the students have learned it?

The multigrade teacher or curriculum developer will want to create a flexible and diversified curriculum that satisfies the needs of children in the community. It is important to involve parents, teachers, and the community in the curriculum development effort because the more relevant the curriculum is to the lives of the children, the better. Relevant curricula incorporate meaning, self-sufficiency, work experience, and productive work into the classroom experience.

The multigrade classroom is a great forum for using an integrated curriculum. Units can be combined across grades and across content areas as well. Thematic approaches to curriculum development lend themselves to integrated cross-age, cross-subject matter curricula (see Appendix B). The educator chooses any theme (such as corn), creates corn-related themes such as Corn History (discovery, historical importance, myth and legend, and current value), Corn Research (different types, optimal conditions for growing, chemical make-up, nutritional ingredients), and Corn Computation (measure, weight, number of kernels per ear, number of kernels by row, estimates, graphs, scales). From this web of corn-related themes, the educator can select topics for lesson development, then develop objectives and activities appropriate for each level.

Another type of curriculum typically used in multigrade classrooms is called "modular curriculum." Modular curricula allow the children to proceed at their own pace through a series of learning modules (Thomas and Shaw 1992). This system is quite well suited for

[9] Curriculum may be overt (planned) or hidden. The hidden curriculum refers to those aspects of schooling not overtly presented in the classroom. Examples include tracking/grouping practices, scheduling and the allocation of time, disciplinary practices, the school norms, and values and human relationships.

rural children who are often absent due to illness or agriculture demands. With a modular system, there is no repetition as children master one set of materials before moving on to the next. "They do not repeat subjects already mastered, do not suffer the stigma of being held back in any grade level or the trauma of adjusting to a new peer group" (Thomas and Shaw 1992, 29). The modular curricular system has been adapted to the Colombian context for use with self-instructional texts in the New School (Colbert et al. 1987).

The materials used in the multigrade classroom will of necessity be as clearly written as possible, that is, explicit, readable, and coherent. Self-instructional materials should incorporate the answers to questions so that children can make progress and assess their own progress without having to turn to the teacher. For example, materials that require children to draw upon their own experiences and daily lives are more likely to be useful to them. Low-cost materials must be easily accessible and interesting as well.

The importance of low-cost, self-instructional materials cannot be understated. While curriculum development, textbooks, and other instructional materials often fall under the purview of the national ministries of education, in reality teachers have to obtain, develop, or borrow their own materials. Nielsen (1992) found that 75 percent of multigrade teachers in Belize used materials and aids that they made themselves largely for use in basic skills areas. These materials included games (phonetic, math, word, matching, reading, bingo, etc.), puzzles, cards (work, activity, math, flash alphabet, reading, etc.), tables and charts, pictures, flip charts, and study sheets. Thomas and Shaw (1992) provide instructions for simple duplicating methods to be used in rural schools.

Supplemental materials (library books, radios, tape recorders, and possibly television) add educational enrichment to the multigrade classroom. The New School Program in Colombia requires a library as one of the essential elements of the program. "A 100-book library (including dictionaries, textbooks for subjects, children's literature, and books on community development) is a key additional class resource . . . . The library is used to complement the self-instructional textbooks to allow children to learn about new areas (or to find a starting point for a new module) and provides some breathing space for new learners" (Schiefelbein 1991, 21).

Instruction

Instruction refers to this question: How are concepts, skills and content going to be taught? Miller (1989) is widely cited for naming six key variables affecting multigrade teaching:[10]

- classroom management and discipline
- classroom organization
- instructional organization and curriculum
- instructional delivery and grouping—cross grouping
- self-directed learning
- peer tutoring

Talented multigrade teachers are able to keep one group involved with meaningful, individualized work while they work with another group. They make academic/behavioral expectations clear and consistent and promote a sense of oneness or unity among all students in the class. Good multigrade teachers approach instruction with a clear sense of goals and objectives. "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 be 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 are barely appropriate. This is often the case when basic skills are taught to an entire class when there is a wide range of student ability levels" (Miller 1989, 115).

Time is a crucial factor in student learning, but learning time does not always equal time spent in school. Rodriguez (1992) found that in Venezuelan primary classes only 40 percent of classroom time was used in actual teaching. Hornberger (1987) reported that only six percent of the schooltime in Puno (Peru) rural schools was devoted to actual learning. Factors contributing to that dismal figure included teacher and pupil absence, nonacademic tasks during schooltime, athletic events, field trips, busy work, waiting, and learning how to line up and sit down. In the United States primary schools, Goodlad (1986) found that about 70 percent of class time is spent on instruction.

Karweit's (1987) formula for determining effective learning time is often helpful in planning instruction:

learning time x quality of instruction x student engagement = effective learning time

Planning to improve student learning involves improving one of the three variables that impact on student learning: learning time (scheduling), instructional quality, and student

[10] Much of this section has been adapted from *The Multigrade Classroom: A Resource Handbook for Small, Rural Schools* (Miller 1989).

motivation or effort. Instructional quality can be partially addressed by matching instructional organization with the needs of the students. Table 4 presents the characteristics of unidimensional classrooms versus multidimensional classrooms. Unidimensional classrooms are those resembling the traditional one in which entire classrooms of children work on individual work sheets for which they receive individual grades, or children are assigned to reading or math groups based on their abilities. Traditional classrooms have not been found to be successful for children who may be at risk for failure or dropping out.

In the multidimensional classroom, a variety of instructional strategies and student opportunities for performance create many occasions for children to demonstrate competence. Teachers who wish to change a unidimensional learning environment need to become aware of effective teaching practices and use them in a variety of task structures. One manner of changing a task or activity structure is to convert closed or "convergent" learning activities to open or "divergent" learning structures. Table 5 provides examples of convergent and divergent learning activities.

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

Classroom Norms	Unidimensional Classroom	Multidimensional Classroom
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.	Ability has many different dimensions. Every child can demonstrate competence and ability on some instructional task. Therefore, many different tasks are used.
Teacher Role	The teacher is the presenter of curriculum content, grader of student accomplishment, manager of resources, and controller of student behavior.	The teacher is a problem solver, tutor, facilitator, who promotes all children to achieve learning objectives and to excel across a broad range of competency areas.
Learner Role	Students listen, respond, study, and take tests.	Students 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 are used for learning. These are whole group instruction, independent study, seat work or small, stable ability groups.	A wide range of different activities for learning where students can demonstrate a variety of competencies: individual, pair, small-group, and large-group activities.
Learner Assessment and Evaluation	Grades, which rank and label learners, are arbitrarily curved and normally distributed. Evaluation is highly visible and comparative.	The 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	Low achievers suffer from 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.	Students' 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.

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

Structure	Convergent (Single Correct Answer)	Divergent (Multiple Correct Answers)
Whole-class (same assignment/task)	Every student memorizes the same list of adjectives and writes down their definitions.	Each student writes down ten descriptive words. These are complied into a word bank and stories are written.
Whole-class (same assignment/task with cooperation)	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 their stories to their neighbor.
Ability grouping (independent work)	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 work sheet 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 (cooperative work)	Students work together to define a set of descriptive words and to complete the teacher work sheet. 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 work sheet). (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).

Teachers will also want to examine the instructional methods they use. Are they engaged in passive or active teaching? Active teaching consists of discussions, demonstrations, and small group projects, etc. The teacher will start with a perplexing question that engages student interest and thought. The project will involve divergent questions where no single answer is correct and students from many different levels can participate. However, students do need to be trained in how to listen and support their peers during discussion. Discussion is ideal for total class instruction in multigrade classrooms.

Passive instruction consists of lecturing, recitation, seat work, copying from the blackboard, etc. Although recitation is the predominant instructional method in schools (in the United States and developing countries[11]) and is the primary form of instruction in teacher preparation classes, it has not been shown to be a method that lends itself to multigrade or multiability instruction. Recitation is most effective when used for basic skills instruction, where all students are learning the same skill and/or are at the same performance level.

The types of activities planned by the teacher and the sequencing of activities will impact on basic skills performance. Before a lesson begins, the teacher should do the following to establish a framework for the lesson:

- Organize learning materials in advance.
- Provide clear direction about the work to be done.
- Tell students what materials they will use and what activities they will complete.
- Administer a pretest.
- Discuss the objective of the lesson.
- Provide an overview of the lesson.
- Relate the new material to subject matter students have already learned.

These steps have been shown through research to be highly effective in teaching basic skills. During direct instruction, the teacher may present the material to the students and elicit their reactions. Direct instruction often consists of two phases. In the first, the teacher presents the skill or concept in the form of a model that demonstrates how the parts of the skill are connected and then works through several examples. In the second phase, the teacher

[11] In Belize, "The teacher instructs one or more classes; gives seat work to the others . . . . Although alternatives seem more exciting and effective, teachers seem to have settled into this routine" (Nielsen 1992, 14).

conducts recitation to check for student understanding monitors comprehension, supervises the students' practice of the skill, and provides assistance or further explanation where necessary.

One problem common to every teacher is keeping students engaged in meaningful activities while the former works with small groups or provides one-on-one instruction to a student who needs the help.

Grouping, Individualized Instruction, and Peer Tutoring

This section suggests ways for multigrade educators to encourage self-directed learning in their students. Whole class grouping is the most common form of grouping. While the strategy has little pedagogical value when teaching basic skills to multigrade or multiability classes, there are times when teachers can use whole class grouping effectively. Activities that work well include speeches before the group; exchange of ideas during group instruction, unit introduction and reviews followed by level-specific materials; demonstrations of experiments; some types of information exchange; dramatic presentations and stories; problem solving games; and managerial issues such as classroom rules, scheduling and planning, teaching how to use equipment, and anticipatory activities.

Cross-age grouping has a number of advantages. Children learn from their peers and different ages learn to socialize. Upper grade children act as role models for younger children, younger children receive enrichment by listening to what is taught to the older grades, and upper grade students review what is being taught to the younger grades.

Ability grouping is best suited for teaching basic skills in reading and math where the content primarily reflects convergent information. However, ability grouping may result in differential treatment between groups of differing abilities. Children in low achieving groups receive more negative input from teachers and may exhibit lowered motivation and off-task behavior. Miller (1989) recommends varying the kinds of groups to which children are assigned. Possibilities include grouping by diagnosed academic needs such as "needs to learn question marks," grouping by objectives that overlap across grade levels in which learning objectives are to be repeated and built upon during subsequent grades, grouping by level of self-direction, grouping by interest, and grouping for cooperative work.[12]

The research of Kagan (1989) has shown that cooperative learning methods and cooperative grouping is superior to traditional forms of grouping and instruction in seven areas: academic achievement, ethnic relations, social skills, self-esteem, self-direction, positive attitudes toward school, and role-taking abilities. Table 6 illustrates the differences between cooperative and traditional learning groups.

[12] Other work groups could include problem solving or problem-specific grouping, reinforcement grouping, and learning style grouping (Manitoba Department of Education 1988).

Table 6. A Comparison of the Elements of Cooperative and Traditional Learning Groups

Cooperative Learning Groups	Traditional Learning Groups
Positive interdependence	No interdependence
Individual accountability	No individual accountability
Heterogeneous	Homogeneous
Shared leadership	One appointed leader
Shared responsibilities for each other	Responsibilities only for self
Task and maintenance emphasized	Only task emphasized
Social skill directly taught	Social skills assumed and ignored
Teacher observes and intervenes	Teacher ignores group functioning
Groups process their own effectiveness	No group processing

Careful planning for cooperative activities ensures the success of the enterprise. Traditional schools socialize children into competitive and individualistic behavioral norms. These norms can be exchanged for those emphasizing cooperative skills with teacher planning and student training. In rural LAC settings, cooperative norms are often those under which the children and their families operate. Cooperative behaviors are more in keeping with their own background and culture.

In planning cooperative group work, the teacher must first decide how students will work together (in pairs, small teams, at learning centers). Then the teacher will decide on the training program for developing cooperative skills,[13] and choose the actual tasks the groups will perform (such as, offer interesting and motivating activities, allow different children to make contributions, require a variety of skills and behaviors). Finally, the teacher will decide how and when the grouping will occur and determine how the cooperative learning will be evaluated. The teacher strives for simplicity and clarity so that students understand what they are supposed to be doing.

Multigrade teachers around the world report a strong dependence on peer tutoring. Peer tutoring has been shown to improve student performance for the learner and the tutor in a number of important areas such as self-esteem, academics, and motivation. Tutoring may appear to be a spontaneous, informal activity, but successful tutoring programs have both purpose and structure. The advice from the experts is "keep it simple." The uses of peer tutoring include the following:

- Drill fellow students in spelling and mathematics.
- Help other students develop a skill that the tutor possesses.
- Build the self-esteem of the tutor.
- Model skills (gymnastics, singing).
- Explain a concept in children's language.
- Let a student (or students) teach a chapter in social studies.
- Help each other with study skills and researching.

[13] Children will learn to depend on fellow students for work completion, to be responsible for their own and their group-mates' behavior, to listen and value what other students say, to give others a chance to talk, and to contribute to the group effort (Cohen 1986).

Teachers of successful tutoring programs do the following:

- Start with clear and attainable goals.
- Prepare the class by explaining the purpose and nature of peer or cross-age tutoring in school learning.
- Ensure that materials, texts, and learning objectives are similar to or the same as those used by the teacher.
- Select the simplest and most direct approach to having tutors present materials to their partners within the confines of the subject matter.
- Work toward making tutoring materials as independent of the teacher as possible.

As in any educational intervention, planning is essential. Planning a successful peer tutoring program involves setting goals and choosing learning objectives, deciding who will be involved in tutoring, deciding where tutoring will take place, scheduling the tutoring sessions, deciding what subjects will be tutored, and deciding on tutoring materials, procedures, and strategies.

This section has addressed issues relating to grouping and peer tutoring. However, two of the most essential elements of the well-run and effective multigrade classroom are the teacher's ability to implement individualized instruction and the student's ability to engage in self-directed learning. Teachers use individualized instruction that is based on the assessed capabilities of each child, materials and procedures that permit students to progress at a pace suited to their abilities and interests, and periodic evaluations that inform the student about mastery of learning goals. Students assume responsibility for diagnosing present needs and abilities, planning learning activities, and evaluating their progress toward mastery. Alternative activities and materials are available for aiding student acquisition of essential academic skills and content. Individualized instruction provides students with choices in selecting educational goals and cooperation in achieving group goals.

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. 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, cooperative learning activities, and individual work." The teacher does not abdicate the responsibility for student learning.

Students will have to be trained to be self-directed learners so that the teacher can attend to other students. Self-directed learning is wholly or partly under the control of the learner; however, the teacher must be sure that the academic demands on the individual learner are

appropriate and that the learner has adequate instructional support (materials, learning centers, etc.) and has the opportunity to learn and practice from effective self-directed learning endeavors. Teachers will not implement self-directed learning programs in LAC rural schools unless they question their own assumptions about learning, self-motivation, and the classroom environment. Miller cites Knowles (1975) in presenting Table 7.

Although teachers will have to expend more effort at the beginning of a school year to facilitate and encourage self-directed learning, they will find the benefits to themselves and students are well worth the effort.

Table 7. Assumptions About Teacher-Directed versus Self-Directed Learning Environments

	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

Community Intervention

This section describes the role of the community (parents, leaders, skilled individuals, gatekeepers, etc.) in a successful multigrade program. Researchers agree that one of the most important characteristics of the successful multigrade teacher is the ability to adjust to rural life.[14] In many rural areas, teachers are looked upon as community leaders; in others, they may be looked upon as interlopers. In either case, the rural school teachers' ability to sell themselves and to sell the multigrade program will have an enormous impact on the success of the program. Community meetings to introduce the multigrade program should occur well before the academic year. At these meetings, teachers describe the program and enlist the assistance of the community.

Community members can help the school by donating land, food, or labor to the school; they can work in the classrooms, teach classes in handcrafts or specialized skills (smithing, mechanics, carpentry, sewing, needlework, etc.). Volunteering in the classroom encourages parents to be more actively involved in their children's education. Children whose parents express a hands-on interest in their offspring's schooling generally do better in school. Once school has started, the teacher will want to be in frequent communication with all parents (those who volunteer and those who do not) and keep them apprised of their children's progress.

Thomas and Shaw (1992, 24) provide the following vignette from Lungwangwa's 1989 study of Zambian multigrade schools.

> *Communities with active viable parent-teacher associations demonstrated a clear willingness to tackle the problems of school development . . . . PTAs raised significant contributions in-kind and in cash to construct classroom blocks, teachers' houses, and latrines. PTAs also tackled such problems as high student-teacher ratios, female dropout rates, and provisions of supplies. Productive school community relations meant that parents were actively involved in the development of the school—not only in the construction and in the maintenance of the physical infrastructure, but in issues of quality and attitudes toward education.*

In Colombia, the New School curriculum contains strategies for bringing the community into the classroom. For example, one of the first classroom activities at the New School is the preparation of the community map that represents the neighborhood and catchment area of the school and that contains the family names of each of the students. Parents who see their names on the map feel like they are a part of the school. Children also rely on information

[14] In Belize, teachers who originated from the same area in which they taught were found to be more committed to the local school and community as evidenced by their involvement in extra curricular activities and the number of years they had taught in the same school (Nielsen 1992).

from parents and neighbors and use it to develop projects such as a family information register, a calendar of agriculture events, and a social/cultural monograph (Schiefelbein 1991). The Foxfire Series, a publication initiated by Eliot Wiggington, provides another example of rural school children who learn academic skills by going out into their communities and finding out what their friends and family members can teach them.

National and Regional Intervention

The previous two sections have taken a microlevel approach in examining the factors necessary for successful multigrade education to occur in rural areas of LAC countries. This section considers the issue from a larger perspective: national policy and regional implementation. Thomas and Shaw (1992) argue that implementing multigrade education should occur in two stages: experimental (in which pilot schools are established, fine-tuned, evaluated, and used as bases for expansion) and expansion (in which the experimental program becomes the national program). They further state that during the expansion stage, several national policy-level decisions will have to be made:

- Creation of a decentralized administrative network
- Provision of teacher training in multigrade techniques
- A clear policy on recruitment and support of multigrade teachers
- Acceptance of a flexible curriculum open to regional or local adaptation
- Development and allocation of training materials to multigrade schools

The authors emphasize that while many multischool programs have passed through the experimental stage, few countries have been successful in expanding the program at the national level. They cite two key factors needed to successfully expand from experiment to practice: multigrade advocates must play a key role in providing the necessary know-how and political motivation as the program expands and resources must be designated for teacher training and curriculum development/materials dissemination.

The development of a system of rural schools must be accompanied by the development of an administrative network to support them. A decentralized educational system provides the mechanism by which local needs are identified and addressed. "It fosters independent learning and development of decision-making skills in teachers and local administrators—the same skills teachers try to foster in their students" (Thomas and Shaw 1992, 23).

Teacher recruitment must be undertaken with the reality of the multigrade teaching situation in mind. Many studies list the qualities most needed by the successful multigrade teacher:

- Positive attitude
- Enjoyment in working with parents and children
- Extra skills in leadership and communication
- Good organizational skills
- Creativity and flexibility
- Willingness to work hard
- Resourcefulness and self-direction
- Willingness to work with the community
- Strong belief in the importance of cooperation and personal responsibility in the classroom
- Experience in the grade levels to be taught

However, the qualities listed are not necessarily shared by every applicant to the multigrade program. Realistically speaking, the persons seeking these positions may well be the most poorly trained or those persons who cannot find teaching positions elsewhere. If recruiters and administrators want to ensure that they get the best teachers for the job, they are going to have to provide incentives to encourage the right kind of teacher to apply for and stay with the multigrade school. These incentives do not have to be directly tied to salary (although higher salaries do make the positions more attractive to more qualified teachers). Other incentives include initial and in-service training, support services such as aides who assist teachers during class time or substitutes who will teach during planning periods, provision of teacher housing, and local recruitment (such as, recruiting and training teachers from catchment areas).

Teacher training is one of the most important variables associated with the successful multigrade program for a number of reasons. In the first place, most teachers who have received training have been trained in single-grade classrooms. Secondly, research has indicated that most teachers teach in the same way they were taught: through recitation (Tharp and Gallimore 1989). As Schiefelbein describes (1991, 8):

> *Most young Latin American teachers have spent at least 12 years (and many up to 18 years) seated quietly in their benches or tables with a flat or sloping top for writing, while the teacher has been talking or writing at the chalkboard, mainly describing facts, definitions, and statements to be memorized.*

While the literature between the United States and developing countries differs with respect to the curriculum for teacher education, a general framework that applies to rural education in both regions can be developed.

- Teachers need training in practical methods courses.
- Teachers need courses in effective teaching practices.[15]
- Teachers need to learn to teach with limited resources.
- Teachers need to learn how to teach two or more grade levels in the same classroom.
- Teachers should be exposed to community development strategies and learn about working with children from cultures other than their own.
- Teachers must have an opportunity to practice in a rural setting.

Table 8 (adapted from Miller 1989) illustrates a variety of strategies that can be applied when training teachers for rural/multigrade schools and offers a wide range of learning experiences (classroom or field-based) that can be offered to teachers-in-training according to the particular constraints inherent in their teaching sites. For example, the difficulties associated with having to teach in multiage classrooms could be addressed by classes or practices relating to the following:

- Rural field research
- Cross-cultural communication
- Case study research
- The use of educational resources
- Multicultural teaching
- Multigrade subject instruction
- Microteaching
- Curriculum integration
- Cooperative learning
- Community as resource
- Working with a mentor teacher
- Using cohort grouping
- Taking part in teaching practices

[15] Planning, organization, and delivery of instruction; peer tutoring; self-directed learning; individualized instruction; classroom management skills; and development and use of materials and assessment.

In New Zealand, all training colleges have model small schools in which trainees observe and are involved in multigrade teaching without having to travel long distances. These colleges recruit students from rural areas, stress the importance of the future teachers' community development roles, and help with accommodations once the teacher is placed in school (Bray 1987). Other approaches to teacher training include the use of model schools (Colombia) and radio broadcasting (Nigeria, Tanzania, and Zimbabwe) (Thomas and Shaw 1992).

The decision to devote national funds to multigrade schools is made at the national level. Ministries of education will have to plan their budgets to ensure an adequate supply of textbooks and other self-instructional supplies as well as provide supplemental materials like school libraries. Multigrade schools generally have higher textbook and materials costs and higher furniture costs; however, the more efficient use of classrooms and teachers will result in savings in the long run. More importantiy, decreased attrition and repetition rates and increased community contributions will lead to substantial savings for school systems implementing multigrade education.

TABLE 8. Planning Matrix for Rural Teacher Education

Preservice Strategies

Campus to ..... Field Based

Rural Constraints	Rural Sociology	Rural Field Research	Cross Cultural Communication	Problem Solving W/Case Studies	Educational Resources	Multicultural Teaching	Multigrade/ Subject Instruction	Micro-Teaching	Curriculum Integration	Cooperative Learning	Community As Resource	Mentor Teacher	Using Cohort Grouping	Rural Field Study	Teaching Practicums	Live With Family
Classroom Factors																
Multiage Classrooms		X	X	X	X	X	X	X	X	X	X	X	X		X	
Out-of-Field Classes		X	X	X	X	X	X	X	X	X	X	X	X		X	
Multiple Preparations		X		X	X		X	X	X			X	X		X	
Lack of Support Services		X		X	X	X	X		X	X	X	X	X		X	
Limited Information Resources	X	X		X	X		X	X	X	X	X	X	X		X	
Limited Equipment		X		X			X	X			X	X	X		X	
Limited Supplies/Curriculum		X		X	X	X	X	X	X		X	X	X		X	
School Factors																
Expanded Duties		X		X			X				X	X		X	X	
Poor Budgets		X		X							X	X		X	X	
Limited Staff Development		X		X		X	X	X		X		X		X	X	
Lower Salaries		X		X								X				
Fewer Defined Policies, etc.		X		X								X	X		X	
Combined Schools		X		X			X		X			X	X	X	X	
Sociocultural Factors																
Privacy	X	X	X	X									X	X		X
Community Involvement	X	X	X	X	X	X	X		X				X	X		X
Cultural Differences	X	X	X	X	X	X	X		X		X		X	X		X
Informal Communication	X	X	X	X		X	X				X		X	X		X
Geographic Isolation	X	X		X	X								X	X		X
Linguistic Isolation	X	X	X	X	X	X					X		X	X		X
Housing	X	X		X									X	X		X
Loneliness	X	X	X	X	X	X				X		X	X	X		X

This section has addressed the factors influencing the success of a multigrade program. The discussion included elements crucial to setting up and maintaining a multigrade classroom such as the following: the classroom environment; learning centers; scheduling and planning; curriculum and materials; grouping, individualized instruction, and peer tutoring; and community participation. Regional and national factors influencing the success of multigrade schools include a national commitment to incur the costs of experimentation and expansion, and a national policy to provide teacher training, the development and allocation of materials, and administration and support.

The New School (Escuela Nueva)

Colombia's New School represents the most successful and the most widely implemented educational innovation in Latin America. The roots of the New School are found in the Unitary School promoted by UNESCO as a methodology to address the myriad of problems faced by educators working in rural areas. The Unitary School was designed to permit a school to operate with only one teacher who used instructional cards that allowed work with several groups at once. The emphasis was on active learning and automatic promotion (Levine and Lockheed 1991). The Unitary School was never widely implemented in Colombia because policy makers could not arrive at a consensus on a national strategy.

The Design of Escuela Nueva

Escuela Nueva's emphasis is similar to the Unitary School. Escuela Nueva seeks to improve the quality of education by an active teaching-learning process, a flexible system of promotion, closer ties between school and community, and an appropriate curriculum to meet rural needs. The program was designed to avoid the problems of the Unitary School program. One unique feature of the design was Escuela Nueva's integration of and dependence upon three agents of change: the teacher, the student, and the community.

Additional features of the program make it exceptionally attractive. For instance, the materials used by the students are affordable. One set is durable and long lasting and can be used by more than one child. The curriculum applies to the daily lives of the students. In addition, Escuela Nueva encourages participation in school affairs through school government, which also fosters cooperation, comradeship, solidarity, and participation. Finally, a small library is furnished to support student activities.

The expectations and demands of Escuela Nueva teachers are many and challenging. Teachers are expected to have positive attitudes toward the new methodologies, the rural area, the administrative officials and technical counselors. Teachers should become facilitators or guides rather than mere instructors. Teachers are expected to become active community leaders, and they have to manage the components of the program efficiently. Escuela Nueva teachers also teach several levels at once, organize the student government,

promote learning corners and library teaching, use flexible promotion requirements, and change and adapt the schedule to the environment and level of the students.

The Escuela Nueva model seeks to develop active and reflexive learning, attitudes of cooperation and solidarity, self-concept improvement, and knowledge and basic information of curriculum areas. Community members are expected to participate in the school's daily affairs and to grant the teacher a more prominent position within the community so the school is transformed into a center of community integration.

Strategic Components

Training

Escuela Nueva was conceived with four strategic components: training and follow-up, curriculum, administration, and community relationship. This first component refers to teachers and administrative supervisors, whose training and follow-up is performed through workshops that present the characteristics, methodology, and strategies of the program necessary to successfully manage the first five basic education grades.

The workshops consist of in-service training that incorporates group discussions to encourage change and commitment toward the new program and to show the teachers how to conduct group discussions with their own students. Several areas are included in the training:

- A visit to a model demonstration schools to learn about the process of school and community organization
- Follow-up process
- Student materials and library management
- Materials adaptation and supervision

The program supervisors also take part in the workshops (to a much greater depth than the teachers) so that they can act as "multipliers" and provide training to many teachers. Their supervision ensures the achievement of the program's objectives through follow-up and formative evaluation. A manual designed for use in the teacher training workshops, *Hacia la Escuela Nueva*, serves the administrators in working with the teachers, who in turn perpetuate the manual's active process applications when they use it with their students.

Curriculum

The curriculum component can be adapted to the individual community context and is organized to allow for flexible promotion. Students who miss school because of labor demands or illness can pick up where they left off without having to repeat the same material or fail their classes. Student guides and teacher/supervisor manuals, designed to promote active learning on the part of the students, are crucial for individual and group work. An integrated curriculum is also considered vital in the implementation of the program. It fosters "active and reflective learning, the ability to think, analyze, investigate, create, apply knowledge, and improve children's self-esteem . . . emphasizes social relevance and inductive, concrete, active learning experiences for children" (Levine and Lockheed 1991).

A teacher serves as guide, supervisor, and evaluator in the learning process of students. Because students advance according to their aptitude, the classroom is arranged in areas of interest and subjects and is supplemented by the minilibrary. Participation in the student government encourages the socioemotional development of the students.

The elements that fall under the curricular and administrative components are (as mentioned before) the learning corners, the library, the student guides, and the school government. Self-instructional educational material for the students and the teachers (*Hacia la Escuela Nueva* manual) was designed for the program. It is used from grades 2 to 5 in natural science, mathematics, social studies, and language. The guide serves to orient the student toward objectives, allows the students to choose various activities, and encourages group work. Two or three books are used per area per grade. Each book contains two or three units, which in turn are composed of objectives, conditions, evaluations, activities, and correct answers to the evaluation questions; every unit may be completed in one or two weeks.

The school library complements the self-instructional guides, and its use fosters and enriches independent student work. The use of the library also has been related to student cognitive outcomes. At sites in which the library plays a meaningful role and its use is fully incorporated into regular student activities, students demonstrate remarkable academic progress.

The physical layout of the classroom, especially when more than one grade is taught in one room, is important. One Escuela Nueva strategy is to place the working tables facing each other, to position the youngest students directly across the teacher's table or desk, to arrange the tables so that the light penetrates over the students' left side, and to place blackboards so that all groups are served. The learning corners may be placed in the background, but should be well lit and accessible. Bulletin boards that contain the alphabet, upper and lower case letters, numbers from one to nine, and quantities like 10, 100, 1,000, 10,000, and 1,000,000 must be visible. Bulletin boards may also be used to exhibit work achieved by the students, to inform students and visitors of current affairs, to post events, etc. A bookcase for the library also has to be provided and be within easy access.

Student are responsible for a diary, attendance control book, a contest book, and contributions to the suggestion box. Students use the diary as a journal to keep track of any anxieties experienced, the attendance control book to keep track of their own attendance, and the contest book to identify outstanding students monthly. Students communicate their wishes and concerns to the teacher through the suggestion box. Additionally, the teacher uses a progress control book to track the progress and subject mastery of the students.

Administration

The aim of the administrative component is to change the role of the supervisor from solely an administrator to a teachers' facilitator, counselor, and administrator. The structure of the Colombian Escuela Nueva administration consists of central and state (department) levels. A national committee ensures the compatibility of program policies with national goals and objectives while state committees are accountable for planning and implementing the program, for training teachers, and for conducting monthly follow-ups through workshops.

Community

Finally, the model's community component seeks to strengthen school-community relations via parents' participation in school activities so that the school becomes an avenue for community development. Community participation in the Escuela Nueva program is considered crucial in strengthening the relationship between the community and the school.

For instance, the teacher training manual lists different activities that can be carried out by the community in the interest of the school and vice versa. In the benefit of the school, the community can contribute by building and/or making improvements to already existing services (such as, sanitary), the water tank, the recreational field, the library, bookcases and tables, and/or the organization of learning corners. By the same token, the school can lend its facilities for community activities, sponsor a particular event (such as, agricultural or health oriented), or act as a center of community integration.

In encouraging community participation, a community map is developed and school surroundings are illustrated so that students identify the school with the community. Demographic data provides general characteristics of the area including illiteracy levels and numbers of children anticipated for coming years. In addition, a county monograph is "constructed" to plan some school activities: community organizations, cultural and sporting traits, nutritional habits, health conditions, employment situation, agricultural products, and marketing. Also important is the agricultural calendar, which is the basis of the scholastic calendar.

Expansion and Evaluation of the Escuela Nueva

A number of factors contributed to the success of Escuela Nueva, such as national coordination, central support, the building of commitment, incremental expansion, and the collaboration to obtain resources for the schools. The national coordinators were the same educators who had launched the program and managed its innovation throughout the formation. Their responsibilities were coordination, planning, organization and implementation of basic tasks, and development of instructional materials. Important players, they stayed with the program throughout its growth. The program's success can also be attributed to committed regional coordinators. That is, the central-level administrators supported the regional coordinators who, in turn, supported local educators. The commitment to the program was perpetuated from the initiators to the parties involved at all levels.

As the initiators of Escuela Nueva had never contemplated the possibility of implementing the program at the national level, they focused on promoting and refining Escuela Nueva at the local level. However, as the program expanded, so did the need to modify the program in terms of selection process, training, materials delivery, and follow-up to schools. In the program, trained supervisors and teachers act as multipliers in the training of other teachers. However, this process became much more expensive as more and more supervisors and teachers demanded training.

The efforts to obtain the necessary school resources were aimed in different directions ranging from private organizations to state and national government and international organizations. Evidently, student guides production costs were low, and the guides could be used by a number of children or in individual succession. The cost-effectiveness of the materials contributed to the program's longevity.

The results generated from an evaluation of twelve Escuela Nueva schools have illustrated the degree to which the level of program implementation is dependent on the support of the local administrators (to assure that training and materials arrive during program initiation) and the commitment on the part of the headmasters and the teachers. This evaluation was conducted by Carlos Rojas and a team from the International Learning Cooperative (1991) to determine the elements most crucial for successful implementation.

While the outcomes of the evaluation stated that all twelve schools were identified as "good" schools, three were considered most successful in levels of implementation, seven were labeled moderately successful, and two were considered least successful. In the case of the three most successful schools, teachers felt that they had become better teachers through planning and tailoring learning opportunities to students' realities. Student cognitive gains were reported and were attributed to the use of guides and local materials and to the participation in the school government. Community support also surpassed that seen in the other sample schools.

The schools considered moderately successful differed from the most successful with respect to scores on cognitive measures. Some suffered more than others from less teacher commitment, poorer physical plant, or lack of community support. The least successful schools were characterized by little local support and little teacher commitment to the program. However, all schools were determined to provide a much improved educational experience to rural children. Sustained evaluation of the Escuela Nueva program has shown positive results (Schiefelbein 1991). Escuela Nueva has improved promotion rates, student achievement, and self-esteem and has gained support from teachers, local authorities, and local communities.

Conclusions and Recommendations

This document has presented an overview of multigrade education in the United States, Canada, and Europe, and in developing countries throughout the world. Multigrade education has been implemented in urban, suburban, and rural areas, and, when successfully done, is particularly useful in providing quality education services to children in remote regions. Multigrade schools cost more at the outset, but ultimately are cost-effective strategies because they reduce repetition and attrition. Multigrade educated children in the United States perform as well as single-grade educated children, but the former receive higher scores in self-esteem. In Colombia, children educated through the Escuela Nueva outperformed the other children in rural schools in measures of achievement and self-esteem.

The concept of multigrade instruction is likely to be seen as more important if linked to the concept of multilevel instruction. Furthermore, the skills of effective multigrade teachers are worth emulating in the single-grade classroom. If a district or ministry deems it necessary to combine grades, administrators should be apprised of how roles will change and what is to be expected. To implement a multigrade program, the following components are necessary:

- The national government must be committed to providing fiscal support for the program.
- A pilot study should be undertaken so that the multigrade program can be tailored to the local context.
- Teacher and community support must be achieved.
- A widespread program for specialized multigrade teacher and supervisor training (pre-service and in-service) must be developed.
- The logistic support to provide sufficient low-cost materials in a timely manner should be well in place.

- Teachers should be supported with access to mentors (supervisors) and professional communication that reports what works and what does not work in multigrade instruction.

- Sound instructional practices such as peer tutoring, self-directed learning, planning, integrated and contextualized curricula, and classroom management should be implemented.

- To enhance the learning environment, educators should create learning centers, use cross-age grouping, and provide self-instructional and enrichment materials.

The Escuela Nueva provides the best example of the success with which a multigrade program can be implemented in a country with relatively little resources to devote to education.

Bibliography

"Anuario Estadístico 1991." 1992. Guatemala: Ministerio de Educación, Centro América.

Bandy, H., and Gleadow, N. 1980. *The Identification of Skills and Characteristics Needed by Country School Teacher.* Victoria, B.C.: University of Victoria.

Bray, M. 1987. *Are Small Schools the Answer? Cost Effective Strategies for Rural School Provision.* London: Commonwealth Secretariat.

Cohen, E. G. 1986. *Designing Groupwork.* New York: Teachers College Press.

Colbert de Arboleda, V. and Chiappe, C., Arboleda, J. 1987. "The New School Program: More and Better Primary Education for Children in Rural Areas in Colombia." *Effective Schools in Developing Countries*, edited by Henry M. Levin and Marlaine E. Lockheed. Washington, D.C.: The World Bank Education and Employment Division, Population and Human Resources Department.

Dodendorf, D. M. 1983. "A Unique Rural School Environment." *Psychology in the Schools*, 20: 99-104.

Ford, B. 1977. "Multiage Grouping in the Elementary School and Children's Affective Development: A Review of Recent Research." *The Elementary School Journal*, 78:149-159.

Good, T. L. and Brophy, J. E. 1987. *Looking in Classrooms.* New York: Harper and Row.

Goodlad, J. I. 1986. *A Place Called School: Prospects for the Future.* New York: McGraw-Hill Book Company.

Goodlad, J. I. and Anderson, R. H. 1963. *The Non-Graded Elementary School.* New York: Harcourt, Brace and World, Inc.

Harbison, R. W. and Hanushek, E. A. 1988. *Educational Performance of the Poor: Lessons from Rural Northeast Brazil.* Washington: Monograph prepared for World Bank Workshop.

Holman, D. et al. 1989. "Implementing Experimental Based Education in a Rural Setting." Paper presented at the National Rural Education Association Conference, Reno.

Hornberger, N. H. 1987. "Schooltime, Classtime and Academic Learning Time in Rural Highland Puno, Peru." *Anthropology and Education Quarterly.* 18(3): 207-221

"La Escuela Multigrado en Honduras." 1989. Honduras: Ministerio de Educación.

"Language Arts/English Handbook for Primary Teachers in Multi-graded Classrooms." 1988. Winnipeg: Manitoba Department of Education.

Kagan, S. 1989. *Cooperative Learning: Resources for Teachers.* Laguna Niguel, CA: Resources for Teachers.

Karweit, N. 1987. "Diversity, Equity, and Classroom Process." *Social Organization of Schools: New Conceptualization of Learning.* Hollinan, M. (ed.). New York: Plenum Press.

King, E. M. 1990. "Educating Girls and Women: Investing in Development." Washington, D.C.: The World Bank.

Levine, H. M. and Lockheed, M. E. (eds.). 1991. *Effective Schools in Developing Countries.* Washington D.C.: The World Bank, Population and Human Resources Department, Education and Employment Division.

Lungwangwa, G. 1989. *Multigrade Schools in Zambian Primary Education: A Report on the Pilot Schools in Mkushi District.* Stockholm: Swedish International Development Authority (SIDA) Education Division.

Lungwangwa, G. 1990. "Meeting the Educational Needs of Children in Sparsely Populated Areas through Multigrade Teaching: An Experience from Zambia." A summary of a research report. Republic of Zambia: Ministry of General Education.

Miller, B. A. 1988. "Teacher Preparation for Rural Schools." Portland: North West Regional Laboratory.

Miller, B. A. 1989. *The Multigrade Classroom: A Resource Handbook for Small, Rural Schools.* Portland: Northwest Regional Educational Laboratory.

Nielsen, H. D. 1992. "Research on Multigrade Teaching in Belize. Chapter I: Current Practice, Teacher Attitudes and Student Achievement." Drafts of executive summary and chapter one. Washington, D.C.: Learning Technologies Project, USAID-sponsored project.

Noonan, R. and Hallak, J. 1987. "Multiusage Instructional Settings in Less Developed Countries." *Prospects*, vol. XVII, no. 4: 64.

Pratt, C., and Treacy, K. 1986. *A Study of Student Grouping Practices in Early Childhood Classes In Western Australian Government Primary Schools.* (Cooperative Research Series, no. 9). Nedlands, Australia: Education Department of Western Australia.

Rodriguez, P. et al. 1992. "The Emilio Rocha School Case, Colombia." *How Schools Improve: International Report*, edited by Per Dalin. Oslo, Norway: IMTEC.

Rojas, C. and Castillo, Z. 1988. *Evaluación del Programa Escuela Nueva en Colombia.* Bogota, Columbia: Instituto Ser de Investigación.

Rugh, A. B. 1989. "Effective Classroom Practices in Primary Schools of Pakistan." Research report no. 8. Boston: Harvard University, BRIDGES Project.

Schiefelbein, E. 1991. "In Search of the School of the XXI Century: Is the Colombian Escuela Nueva the Right Pathfinder?" Santiago, Chile: UNESCO/UNICEF.

Tharp, R. G. and Gallimore, R. 1988. *Rousing Minds to Life: Teaching, Learning and Schooling in Social Context.* Cambridge: Cambridge University Press.

Thomas, C. and Shaw, C. 1992. "Issues in the Development of Multigrade Schools." Washington, D.C.: World Bank.

UNESCO. 1981. *Education of Disadvantaged Groups and Multiple Class Teaching: Studies and Innovative Approaches.* (Report of a study group meeting). Jakarta, Indonesia: UNESCO.

Veenman, S., Voeten, M., and Lem, P. 1987. "Classroom Time and Achievement in Mixed Age Classes." *Educational Studies*, vol. 13, no. 1.

Appendix A

Guidelines for Planning Procedures and Rules for the Classroom

PROCEDURES IN THE CLASSROOM

	Questions to Ask Yourself	Your Planning Notes
Desks, Tables, and Storage	What are your expectations about the use of chairs and desks?	
	If students use tote trays for materials, what rules are needed for when and how these areas are to be used?	
	What standards do you want to establish about upkeep of desks and storage areas?	
Learning and Activity Centers	How many students will be allowed in each area?	
	What rules and procedures will you establish for the care and use of materials?	
	What rules will students be expected to follow for each center in the classroom?	
	What guidelines do you want to establish for when students can use the centers?	
	How will students know what the rules and procedures are?	
Student Resource Areas: Materials, Books, and Supplies	What are student responsibilities for taking care of these items?	
	What rules need to be established for when and how these areas will be used?	

	Questions to Ask Yourself	Your Planning Notes
Teacher Resource Center (Desk Area)	What rules do you want to establish about teacher resources? Your desk area?	
Drinking Fountain, Sink, Pencil Sharpener, and Bathroom	How many students can be in these areas at a time?	
	What rules do you want to establish concerning when and how these areas are to be used?	
	What cleanliness standards for the bathroom will you set to ensure it is kept clean?	

PROCEDURES FOR OTHER AREAS OF THE SCHOOL

	Questions to Ask Yourself	Your Planning Notes
Areas Outside the Classroom: Bathrooms, Office, Library	When and how will students have access to these areas?	
	How will students be monitored?	
	How will students behave in these areas? Get to and from them?	
	What procedures will you establish for lining up and going places as a group (such as recess, lunch)?	
	What safety rules do you need to establish for playground and equipment?	
	What standards will be established for eating lunch (such as manners, noise level, behavior)?	

PROCEDURES DURING WHOLE-CLASS ACTIVITIES AND SEAT WORK

	Questions to Ask Yourself	Your Planning Notes
Student Participation in Class Discussion	How and when do you wish to address questions and responses (such as raising hands, calling out)?	
Cues or Signals for Getting Students' Attention	How will you signal or cue the class when you want everyone's attention (such as blinking lights, hand signal, bell)?	
Talk Among Students	What do you expect and desire about noise level?	
	What cue or signal will you use to let students know the noise level is unacceptable?	
	What procedures and guidelines will you establish for students working together?	
Making Assignments	How will students know what their assignments are?	
	When and how will you give instructions for assignments?	
	How will you monitor progress on assignments?	
Passing Out Books, Materials, Supplies	How will students obtain the materials they need for assignments?	
	Will materials need to be passed out? What types?	
	Who will pass them out and when will they be passed out?	

	Questions to Ask Yourself	Your Planning Notes
Passing Out Books, Materials, Supplies (Continued)	What will students be doing when materials are being passed out?	
Students Correcting and Turning In Work	How will assignments get corrected? Will students have access to answer keys?	
	What procedures will you have for turning in assignments? Consider where and when?	
	What rules will you have for turning work in to you while you are engaged in instruction with individuals or small groups?	
	How will you keep track of completed work that has been turned in?	
Handing Back Assignments	How quickly will assignments be returned?	
	What procedures will you use for returning work?	
Makeup Work	How will you monitor who misses instruction and assignments?	
	How and when do you plan to have makeup work completed?	
Out-of-Seat Guidelines	For what reasons can students leave their seats during teacher directed instruction?	
	For what reasons can students leave their seats during seat work?	

	Questions to Ask Yourself	Your Planning Notes
Guidelines for Activities When Seat Work is Finished	What activities are acceptable to do when all work is finished?	
	What procedures will be needed for using extra materials and supplies (such as reading books, art supplies, games, etc.)?	
	Will students be allowed to work together and, if so, what will be your guidelines?	

PROCEDURES DURING SMALL GROUPS

	Questions to Ask Yourself	Your Planning Notes
Movement Into and Out of Groups	How will students know when to come to their groups?	
	What procedures, rules, and teacher signals (cues) will need to be taught to students about movement to and from small groups?	
	What will students do with materials used prior to coming to a group?	
Bringing Materials to the Group	What materials or supplies should students bring or not bring to the group and how will you explain this beforehand?	
Expected Behavior In Small Groups	How and when can students ask questions and give responses?	
	What expectations do you have for how students are to work together and how will you convey your expectations so students learn these?	
Expected Behavior of Students Not Meeting in a Group with the Teacher	What will the rest of the class be doing while you are meeting with a small group?	
	What will you expect about noise level and student access to you?	

	Questions to Ask Yourself	Your Planning Notes
Expected Behavior of Students Not Meeting in a Group with the Teacher (Continued)	How will students learn your expectations about behavior when they are not in a teacher group (such as getting help, noise level, leaving the room)?	

OTHER PROCEDURES TO CONSIDER

	Questions to Ask Yourself	Your Planning Notes
Beginning the School Day	What routines do you plan to establish for opening each school day? Attendance? Date? Lunch Count? Sharing? Days schedule? Special Event?	
	What constraints will affect these routines (such as student arrival times)?	
Ending the School Day	What routines will be established for ending the day? Homework? Positive feedback? Stacking chairs? Cleaning?	
	Will you use a system of student helpers? What constraints should be considered (such as leaving school early)?	
	What standards will you set for student helpers in carrying out their roles?	
	What consequences and rewards will you use for student helpers?	

Appendix B

How to Plan a Theme

How to Plan a Theme

Choose the theme.

The theme can come from one of many areas:

- curriculum
- a big event (circus)
- students' interest
- seasonal topic

Decide on the language arts goals and objectives for the theme in the following areas:

- listening
- speaking
- reading
- writing
- viewing

Decide on specific skills to be practiced.

Determine goals and objectives for all curriculum areas included in the theme.

Find suitable reading selections in the following areas:

- readers (2 or 3 series)
- library books (school or public library)
- books or magazines that the children may have at home

Gather additional materials which support the theme.

Find poems, songs, stories, plays and other materials, such as, records, films, VCR-tapes, audio-tapes, puzzles, games, pamphlets, work sheets, magazines, transparencies, slides, pictures, and concrete objects from the following areas:

- school, resource room, and public libraries
- Manitoba Education library
- materials students have at home
- community resources and personnel

Decide on duration of theme.

To teach the theme format use a theme with a short time line and few selections. Do this with the first theme of the year. A short theme can be done in one day. Longer themes can last from three to six weeks. It is important to end the theme while interest is still high.

Divide the class into groups using various criteria for each element of a theme.

- a variety of grouping procedures for specific purposes
- reading ability, interest, friendship, and cross-age grouping practices
- a change of group members for each element of the theme

Assign each group appropriate selections.

Reading selections that the teacher feels are appropriate should be chosen for each particular group (challenging without being frustrating.) Therefore, at times, one may need only about eight copies of each selection. After students have completed the assigned selections and the activities that go with them, they may then choose any of the other selections which they would like to read. This allows poorer readers to choose a difficult story if it is of particular interest to them, and it gives better readers a chance to soar.

Plan three or four activities to go with each selection.

Plan activities that incorporate various aspects of a language arts program:

- reading
- writing (various types)
- speaking
- listening
- presenting
- viewing
- questioning
- thinking
- researching (finding answers)

Within these strands, plan to include activities which require higher level thinking skills (Bloom's Taxonomy). Students should be asked to compare, contrast, evaluate, synthesize, create, and analyze. Use open-ended assignments that allow all students to work to the best of their ability. Plan also to include activities that suit the various learning styles found in every group: visual, auditory, and kinesthetic learners.

Plan for large group—whole class—lessons.

- introducing the theme
- building schema for the theme—creating a word bank, formats of work
- modelling
- sharing time

Require that a specific number of basic activities for each selection in every theme be completed.

- write the title of the story
- set the purpose for reading; for example, pose one or two good questions that you would like students to answer as you read the selection
- read the selection
- discuss responses
- write complete answers to your questions

Organize additional activities for a group or for individual students.

Incorporate activities in reading, writing, listening, speaking, art and drama that will permit students to make personal choices and to enable them to work independently.

Integrate with other subject areas as much as possible.

Social studies, science, health, art, music, and physical education are subjects used most frequently.

Provide for on-going related activities:

- daily journal—read, but do not correct student diaries
- story time—read aloud daily a novel or story that goes with the theme
- vocabulary—make vocabulary lists as needed for theme writing purposes and for journals
- individual reading time—allow time for uninterrupted reading
- role playing and improvisation—organize puppetry, drama, reader's theater, and other oral language activities

Plan how students may evaluate the theme.

Allow students time to provide feedback on the theme.

Plan for student evaluation.

Student evaluation should be based on the goals and objectives of the theme. For students to realize success, and receive an extra boost to help them when they experience difficulty, daily continuous diagnosis and evaluation is required. Immediate feedback eliminates wasted time working on material students have already mastered and facilitates individual or small group reteaching, when necessary.

Incorporate methods of evaluation.

- teacher observation
  - systematic observation (sharing time and individual student conferences)
  - anecdotal records kept by the teacher
  - samples of outcomes
- teacher-made miniquizzes that test the language arts objectives
  - cloze technique
  - oral and written questions
  - quick individual "test" on a specific skill area