Improving education in rural areas:

Guidance for rural development specialists

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Executive summary

Universal basic education is a critical part of rural development. Individuals who have had some education are better farmers and more capable of finding off-farm employment. The rural sector also benefits from the overall development of the national economy and the alleviation of poverty, in which basic education is essential. Yet rural primary schools in low-income countries often suffer because they are remote from the central offices of the ministry of education, which distribute instructional resources, so their quality is poor. In addition, the national schooling model, developed in an urban context, is not so relevant to the rural setting, and rural families cannot afford the direct cost of schooling nor the opportunity cost of having their children away for many hours of the day in low-quality schools.

In the past decade, the World Bank and other international funding agencies have worked with governments to provide good-quality primary schooling to all children, even those in remote rural areas. During this period, several models of rural schools have been piloted, and educators are learning more about the underlying principles of providing good-quality education in rural areas. The key factors include local voice in what the school offers and how it is governed (often in the form of community schools), recruiting and supporting capable teachers, adapting the curriculum to a rural setting while keeping it within the national system, helping those who cannot afford school to pay for it, and budgeting for the full cost of constructing new schools.

The World Bank has a mixed record on supporting rural schools. Rural primary education is now benefiting, however, from experience with new models supported by the Bank. Because it is important to understand the distinctive characteristics of rural settings, to which schools must be responsive, and to support interventions that enhance rural schools and their grounding in a rural environment, education specialists at the Bank could benefit from collaboration with their colleagues in rural development.

- Help educators define what is "rural." Bank documents reveal that those who plan education projects do not generally look at quantitative or qualitative data that would demarcate rural areas and that would reveal variations within rural areas that are important for supporting rural schools. Rural development specialists might help education specialists analyze the rural space, both the physical and social/cultural environment, so that either national or targeted rural education projects take the particular rural environment into account in project design and implementation. School mapping (determining where new schools should be built) is a particular exercise that would benefit from input of individuals that know the rural areas being mapped.

- Collaborate in the preparation of World Bank required planning documents, including the Country Assistance Strategy and the Poverty Reduction Strategy Paper (PRSP). The PRSP, in particular, includes a focus on Community-Driven Development (CDD), which is the process shown to be effective in providing access to those public goods that are within the management capacity of community organizations. The CDD process encourages cross-sectoral activities and provides a procedural opportunity for Bank staff and their clients to consider improvements in primary schooling in plans for developing and sustaining the rural space.

- Make available to schools people and other resources for teaching children about their rural environment, agricultural skills, and other practical skills and knowledge that complements the academic curriculum. Help schools connect children to their environment.

- Partner on straightforward, well-defined interventions, such as mounting solar-power panels on schools or providing well water to schools. Satisfactory cooperation on visible projects might then point the way to other kinds of collaboration.

- Encourage communities to use the school as a center for education and social activities beyond primary school. Make the school hospitable for adult literacy classes, extension activities, women's groups, community functions, and other activities and events. This not only brings parents into the school, it also helps transform the school into a multi-function learning and meeting center and puts it at the center of the community. The CDD process lends itself to exploring community uses of school facilities.

- Collaborate to train extension agents and primary school teachers to listen and respond to expressions of needs and problems outside of their own professional setting. Extension agents can learn to deal not only with agriculture and teachers not only with schools, but instead, both can deal with the broader rural space.

- Promote political support. Effective schools, like other rural institutions, require broad-based support at the local level. Projects in all rural sectors, including education, often have components designed to increase support for their activities. Rural development and education specialists might pilot activities that foster local political support for a wide array of development activities, including school improvements as well as other rural development activities. Again, the CDD process provides opportunities for this kind of cross-cultural cooperation.

Table of Contents

Purpose

World Bank specialists in rural development detect an urban bias behind the negligent state of rural primary schools in low-income countries. Ministries of education, with their limited resources, lack of affinity with rural problems, and pressure from urban power bases fail to give adequate support to rural schools. Yet World Bank education projects usually give priority to primary schools in rural areas, especially to schools for rural girls and for children living in poverty. What is behind this apparent contradiction? One explanation is that because most Bank projects in basic education are aimed at the entire primary education system, and the reform of education systems and their schools is a long, slow process, educators have only recently begun to learn and share information about what distinguishes rural schools from urban schools and what are the most cost-effective ways of supporting rural schools.

The purpose of this paper is to give rural development specialists an overview of basic education in primary schools in rural areas, what is being done to improve it, and what role they can play in improving it. While rural development specialists should not expect to design primary school components to their projects, they should be able to consider possibilities for including these schools in rural development strategies with an integrated perspective. With a good understanding of the problems facing rural primary schools, models that hold promise for improving these schools, and the principals that should guide rural education reform, rural development specialists should be able to assess the viability in their own projects of activities that would facilitate improvement of rural schools. We hope that this may lead to collaborative partnerships between the Rural Development Family and the Human Development Network that reach where educators alone cannot move.

Methodology

To pull together the experience of ministries, the World Bank, and other funding agencies on basic education in rural areas, we looked at three kinds of data.

- To review the World Bank's experience, we constructed a database on Bank basic and primary education projects between 1989 and 1999 that included rural schools in their domain. We reviewed the design documents (SAR or PAD) of about half of these projects to see what the particular problems were in education in rural areas and the strategies proposed to address them. The complete list of primary education projects that include rural areas is listed in Annex 1.

- To review the experience of other funding agencies, we looked at their available documentation and spoke to selected representatives.

- For existing analyses, we looked at the research literature on rural education in developing countries and the World Bank Education Advisory Service sources.

We found consistent agreement among analyses on the importance of educating rural children, definitions of the problems facing rural schools, and solutions devised to improve rural schools. We also found some underlying principles, learned through experience, and some still controversial issues.

The paper is organized to address these questions:

- From a global perspective, how does rural basic education compare with urban education?

- Why is basic education important to rural development?

- How do international organizations invest in basic education?
- What successes have been achieved in rural basic education?
- What strategies are critical to developing effective rural schools?
- What is the Bank's record in supporting rural basic education?
- What should be the role of rural development specialists in supporting rural education?

While basic education for adults, particularly literacy programs, are critical to rural development, adult basic education is beyond the bounds of this paper.

Rural education—an overview

There is little dispute that basic education[1]—often characterized as the reading, math, and other skills and knowledge taught in the first four years of primary school—is critical to economic and social development. Without basic skills, according to one definition, a person cannot comprehend the instructions on a bottle of medicine or a bag of fertilizer or read a government notice. Neither can the person compute a bill or write a letter. Without basic skills, it is impossible to develop one's potential or to contribute in anything more than a rudimentary manner to society (Greaney, 1999).

During the 1990s nearly every low-income country has made a concerted effort to get more children into school. In many countries enrollment numbers and sometimes even enrollment ratios have increased impressively. Successful strategies for educating children in remote rural areas, however, remain somewhat elusive. Those who focus on rural development problems generally leave education in rural areas to the ministry of education. Yet ministries of education are often overwhelmed with system-wide challenges of reforming policies, funding allocations, recruiting and training teachers throughout the country with far from adequate resources. Rural schools, where barriers to reform are higher and wider, tend to get left out. They are often only nominally part of the ministry's school system and receive few, if any, of its benefits.

The result is often a gap between the proportion of urban children and of rural children who are enrolled in primary school. Table 1 presents the proportion of ten-year-olds enrolled in primary school in a sample of selected countries. Although children are expected to start primary school at around age 6 in most countries, many do not begin that young. Thus, we take age ten as an indicator of enrollment ratios.

Table 1: Ten-year-olds currently enrolled in primary school (net enrollment)

Country	Year	All (%)	Urban (%)	Rural (%)
Africa				
Benin	1996	47	66	39
Ghana	1998	78	92	73
Ivory Coast	1994/5	53	65	45
Niger	1977	31	61	19
Tanzania	1996	61	77	57

[1] While the term "basic education" refers to the teaching of basic math, literacy, and other skills to children *and adults*, this paper is concerned only with schooling at the primary level. Thus, we use the terms "basic education" and "primary education" interchangeably.

Uganda	1995	80	83	76
East Asia/Pacific				
Indonesia	1997	95	98	95
Philippines	1998	93	95	92
Europe/Central Asia				
Turkey	1998	87	90	83
Latin America/ Caribbean				
Bolivia	1997	96	97	95
Brazil	1996	96	97	93
Guatemala	1999	89	92	87
Nicaragua	1998	81	90	73
Middle East/ North Africa				
Egypt	1995/6	83	92	77
Morocco	1992	59	89	40
South Asia				
Bangladesh	1996/7	78	75	78
India	1992/3	76	88	70
Pakistan	1991/2	62	76	50

Source: "Educational Attainment and Enrollment Profiles: A Resource Book based on an Analysis of Demographic and Health Survey Data" by Deon Filmer, 1999. Development Research Group, The World Bank. This book seems to be the best source of disaggregated rural/urban data on education enrollment and attainment.

Education data for Africa show that enrollment is highest in large cities. In Ethiopia, Mali and Niger, primary enrolment rates for the capital city are more than four times those for rural areas. Although gender equity has been a high priority goal worldwide for governments and international funding agencies, the gap between rural boys and girls enrolled in school is often far smaller than between rural and urban children. In Morocco in 1994, while 85 percent of girls in urban areas attended primary school, only 32 percent of rural girls did so. And while 95 percent of urban boys were enrolled, only 64 percent of rural boys were. Where children are not enrolled, they do not learn. Results on a test of children in Bangladesh to measure basic skills, for example, found the proportion of urban children satisfying the criteria to be more than double that of rural children (Greaney, 1999).

Thus, the great inequities between the accessibility and quality of schooling in rural and urban areas has severe consequences for rural development.

The value of basic education

Why should a rural development program be concerned with basic education and primary schools? The importance of basic education to improving individual lives has been argued from various perspectives. From a narrow perspective of agricultural improvements, basic education improves farmer productivity. From a somewhat broader perspective of rural development, it facilitates off-farm employment and the economic development of rural areas. That universal or widespread basic education is a key factor in national development can be seen in comparisons between the rate of primary education in countries that have had high economic growth rates (mainly in East Asia) and those that have not (mainly in South Asia and Africa). World Bank economists and others have argued that economic data demonstrate higher returns on investments in primary education than in secondary or tertiary education (Psacharopoulos, 1991). Basic education is also a factor in alleviating poverty.

There are various explanations of why schooling contributes to economic productivity (Carnoy, 1994). These include the following.

- Individuals acquire skills in school that enable them to be more productive.
- What individuals learn in school makes them more likely to adopt new technologies and practices.
- Schooling helps individuals function more effectively in modern production organizations.
- Schools socialize people into functioning effectively in modern society.
- The discipline of learning taught in school helps individuals learn new skills outside of school.

Whatever one or combination of these explanations may be accurate, there is little dispute that some years of schooling—a threshold level is hard to define—contributes substantially to individual and thus to social and economic development.

Supporting national development

Post-World War II economists sought an answer to the unexplained residual in the traditional production function: Output = *f*(Land, Labor, Capital). In reviewing data on national expenditures on education, econometricians found human capital to be the significant variable that had not previously been considered. Economic historians were then able to establish that periods of national long-term economic growth were generally preceded by increases in the population's literacy level. Education provides the necessary infrastructure for industrial advances to take place (Psacharopoulos, 1991).

A country's economy benefits from a high rate of individuals who are educated. It is also important, however, that these individuals are not only those with high-level skills heavily concentrated in urban labor markets; a broader base of people with some education is required. A study in India of the relationship between human capital and economic development found that

> Although higher levels of education may have a greater direct impact on economic development, primary and middle schooling are important because they widely distribute the conditions conducive to development (Mathur, 1993, in World Bank, 1997).

In addition to monetary benefits, education—especially basic education—provides other productivity benefits. A literate person is better able to purchase and use goods. Women with some education are more likely to provide better sanitation conditions and more nutritious meals for their families, thus enabling them to lead healthier, more productive lives. Educated women are also more productive within the household. These broader benefits relate not only to improved productivity, as measured by the Gross Domestic Product (GDP) but also to improved human development, as measured by the Human Development Index, which is based largely on the indicators of life expectancy at birth, educational attainment, and GD).

Perhaps the greatest contribution of education to national development is through its effect on the birth rate. While primary education is not the single cause of reducing population growth, it appears to be a key factor in the complex process. The association between rising rates of primary schooling for girls and declining birth rates is well documented in many countries and generally accepted as a major consideration in a government's development policies. The importance of public as well as private investment in education as a means of reducing population growth and thus promoting economic development is incontrovertible.

Improving agricultural practices

One economist suggests there are four stages of agricultural technology, each requiring a progressively higher level of knowledge and skill (thus education) on the part of the farmer.

> Traditional farming, where techniques are handed from father to son, requires little or no formal education. The second stage involves the use of a single modern input; for example, the utilization of fertilizer is considerably improved if farmers have rudimentary literacy and a knowledge of addition, subtraction, and division. In the third stage, which uses several complementary inputs simultaneously, technology can be aided if farmers have more complex mathematical skills and a rudimentary knowledge of chemistry and biology. Finally, full irrigation-based farming requires farmers to calculate the effects of changes in crops, climate, and so on (Heyneman, 1983, as summarized in Psacharopoulos, 1985).

In this analysis, basic education would assist at the second stage of technology use in agriculture. Here we have some important evidence of the relationship between education and agricultural productivity. As far back as 1980, The World Bank presented the results of oft-cited research in 18 low-income countries on the relationship between four years of education and annual farm output (Lockheed, Jamison, and Lau, 1980; Jamison and Lau, 1982). Summarizing the research, Psacharopolous (1985) reported that

> If a farmer had completed four years of elementary education, his productivity was, on the average, 8.7 percent higher than that of a farmer with no education….If allowance is made for the availability of complementary inputs required for improved farming techniques, the effect of education increases when farmers are able to use complementary inputs. In cases where complementary inputs were available, the annual output of a farmer who had completed four years of primary schooling was 13.2 percent higher, on the average, than that of a farmer who had not been to school. The studies also show that…education is much more likely to have a positive effect in more progressive, modernizing agricultural environments rather than in traditional ones.

Other studies carried out in Korea, Malaysia, and Thailand (Jamison and Lau, 1982) and in Nepal and Thailand (Jamison and Moock, 1984) indicate that the effects of education on the physical output of farmers are "positive, statistically significant, and quantitatively important" (Jamison and Lau, 1982). A meta-analysis of 14 empirical studies found a reasonably clear pattern of a positive relationship between schooling and agricultural productivity (Moock, 1994). Thus, the direct effect of basic education on agricultural productivity is well documented.

The *World Development Report 2000/2001* provides an illustration of interactions between basic education and the gains from irrigation. A study of the impact of an irrigation project "tried to explain differences in farm profits as a function of irrigated and non-irrigated land allocations with controls for the observed factors that determined the administrative land allocations to households on decollectivization. Assuming that placement of irrigation is not based on expected rates of return, the results suggest that households with high levels of primary schooling benefit most from irrigation….More education raises the returns to irrigation, and the effect is particularly strong for the poor, who tend to have the least education."

Giving more people a basic education may also help to protect the environment. Families with better educated parents and hence fewer children reduce demographic pressure on natural resources and the environment. Educated people can assimilate more information and employ means to protect the environment and better manage resources (World Bank, 2000a).

Facilitating off-farm employment

Successful rural development goes beyond increased productivity in agriculture. Expansion of off-farm job opportunities is a necessary condition for reducing the size of the agricultural population and labor force. Changes in the occupational composition of the labor force, formal and informal, prevent overcrowding on the land and make possible higher levels of productivity and per capita income (Johnston, 1982). Youth and adults who seek a transition from farming to off-farm employment often require basic skills in literacy and math, if not the experience of formal learning and discipline that comes from attending school. They need to be able to make simple business transactions, to weigh and measure, and to read simple documents.

Human capital theory, described above, applies not only to wage earners but also to workers in the informal sector of the economy, many of whom are found in rural areas. Studies on returns to investments in education usually come from urban labor market surveys, so there is little information on how education affects rural incomes. A World Bank study in Kenya that calculated rates of return to rural and urban education showed that the impact of education is greater on off-farm income than on farm income (Psacharopolous, 1985; Lanjouw, 1999). Lanjouw looked at the heterogeneity of off-farm labor. He found that the probability of employment of salaries workers in rural towns rises as education levels rise, though the same is not true for casual non-farm wage employment. Self-employment is most likely for those with some basic education but lower for those who are illiterate and those with high levels of education. The payoff on investments in rural education are particularly high in areas where the economy is modernizing and generating new production possibilities (T. P. Schultz, 1988). In addition, the many youth and adults who migrate to urban areas are much more likely to find productive employment if they have attended school and learned basic skills.

Alleviating poverty

Alleviating poverty has become, in recent years, the fundamental argument for policies that redistribute public goods more equitably. The relation of any given growth rate to poverty reduction depends on the investments in people. The more equitable the investments, the greater the impact of growth in lowering the incidence of poverty (World Bank, 2000a). As put forth by economist T.W. Schultz (1964), education is essential to alleviating poverty, because the creation of human capital is the creation *and distribution* of new wealth.

Education contributes to the reduction of both absolute and relative poverty. Basic education, in particular, helps to alleviate poverty by helping poor people improve their lives. Mothers with some education raise healthier families. Children and youth with basic skills and knowledge can read and handle numbers, which gives them access to information and thinking processes that give them more choices about how to behave in their families and in the community. Adults can make more informed decisions about political and social events that affect the quality of their lives.

For these reasons, basic education is viewed worldwide as a human right. The recognition of basic education as a human right as well as a critical dimension of balanced economic growth has changed the way the international community invests in education.

International investments in education

Based on the research findings of the 1960s on the importance of human capital in economic development and in the 1970s and 1980s on the relationship between educating girls and lowering birth rates, the international community shifted its investment policy during the 1990s to provide more support to basic education. Though much of this

attention has gone to rural primary schools, inadequate analysis of rural/urban political economies has contributed to the slowness of funding agencies in supporting education policies and practices that result in effective rural schools.

Education for All

Educating all children was not a goal of most countries in their early years of independence. Schooling—even public schooling—was limited to those areas in which children were easy to reach and willing to attend. In the early 1990s, however, the international community began a global campaign to get more children into school.

At a 1990 World Conference on Education for All, held in Jomtien, Thailand, and at a series of regional meetings that preceded and followed that major event, governments pledged to expand schooling and improve its quality, and international funding agencies pledged to support them. These agreements set the agenda for basic education and became the framework for subsequent activities of governments and international agencies.[2] Since the conference, governments have made concerted efforts to increase access to primary schools, and school enrollment rates have risen in most countries. (Unfortunately, population numbers have also grown, reducing the impact of higher enrollment numbers on enrollment rates, particularly in sub-Saharan Africa.) A second worldwide Education for All conference was held in 2000 in Dakar, Senegal, where governments were encouraged to keep on the path staked out in 1990.

At the Education for All conferences, international funding agencies, including the World Bank, have pledged to support governments' efforts to expand access to education. The World Bank, with UNESCO, UNDP, and Unicef, was a convener of the Education for All conference and has strongly supported governments that are aiming to provide more and better education to children. At the Jomtien conference in 1990 the Bank committed itself to doubling its lending for education. In absolute terms education lending increased from an annual average of $918.7 million in the period 1986-1990 to $1,910.8 million for 1991-99. In the post-Jomtien period of 1991-1999 an average of 8.2 percent has been directed to education compared to the pre-Jomtien period of 1986-1990 of 4.8 percent. The percentage of basic education to total education lending rose from 27 percent in the 1986-90 period to 44 percent during 1991-99, following Jomtien (World Bank Education Advisory Service).

Though there is no single source of data on what multi-lateral and bilateral funding agencies give to basic education, we have pieced together figures that help provide a picture of financing to the sector. Table 2, an adaptation of the World Education Report, presents information about expenditures in 1980, 1992, and 1997 on education by bilateral and multilateral agencies.

Table 2. International funding of education, 1980-97 ($US M)

Agency	**1980**	**1992**	**1997**
OECD donor countries	3395	3465	3553
Africa Development Bank	27	310	154
Asian Development Bank	65	236	628
European Development Fund	34	89	…
Inter-American Development Bank	67	261	1019

[2] The definition of basic skills adopted by the EFA conference includes "both essential learning tools, such as literacy, oral expression, numeracy and problem solving, and the basic learning content (knowledge, skills, values and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continue learning."

World Bank	440	1884	880
UN Development Program	31	12	9
UN Population Fund (UNFPA)	3	5	6
UNICEF	34	72	82
UNESCO	78	82	106

Source: World Education Report 2000. UNESCO

Table 2 reveals, that with a few exceptions, agency funding has increased dramatically since 1980, with significant rises by 1992, after the Jomtiem conference.

Table 3 gives information about what share of spending by some members of the Organization for Economic Cooperation and Development (OECD) went to education and to basic education in 1998.

Table 3. Basic education as a percent of education and total overseas development commitments by OECD countries in 1998

	% of education		**% of total**	
	1991	**1998**	**1991**	**1998**
Canada	1	4	.1	.7
Denmark	18	40	n/a	4.1
Finland	0	62	0	4.3
Germany	25	20	0.5	1.2
Ireland	n/a	55	n/a	10.1
United Kingdom	n/a	44	0.0	n/a

Source: Overseas Development Institute, Funding Agency Contributions to Education, EFT report, 2000.

Though these data reflect only a portion of OECD members (France, Italy, Japan, Sweden, the United States, and other members did not supply data), they can be considered representative of the larger community of international funding agencies. They demonstrate increases in both the total and proportional amounts of funding going to education. In line with the Education for All campaign, a large proportion of education funding goes to basic education.

Funding agency allocations to rural education

It is impossible to factor out the portion of this amount that went to rural areas, because most project design documents of the World Bank do not clearly distinguish between urban and rural investments. World Bank documents now include poverty analyses, identifying at a district or sub-sub-national level those parts of the country that fall into definitions of poverty areas. Bank and other funding agencies also disaggregate data according to gender and are able to show at national and sub-national levels where girls are under-represented in enrollment and completion statistics. But with some exceptions, project documents do not clearly define what is urban and what is rural, even though many acknowledge that such a distinction exists. Sometimes “rural” is explicitly equated with poverty, and more often this association seems to be implicit, even though we know that not all rural people are poor, and vice versa. The focused attention to educating girls has benefited rural schools, because gender-based analyses have shown many out-of-school girls to be in rural areas.

In order to make a rough calculation of World Bank spending on rural education, we looked at the data on all projects in the World Bank project database approved between 1989 and 1999 and classified as “education,” “primary education,” and/or “basic education.” Our analysis revealed 105 of these projects at least mentioned

inclusion of rural areas as part of the project. Funding for these projects totaled approximately $8.7 billion. It is probably fair to say that a large portion of amount went to rural schools. These projects are presented in Annex 1.

The World Bank is not alone in its loose distinctions between allocations to rural and to urban education. We were hard pressed to find such distinctions in the documentation of other international funding agencies. The Education for All declaration, however, states that "rural and remote areas" should receive special attention, and most agencies have responded to this mandate in their policy statements, even without clear definitions of the basis of their allocations (Bentall, 2000). The program of the Education Group of the Food and Agricultural Organization (FAO), for example, has a strong focus on improving education in rural areas and linking basic education to meeting food security needs. The Group has initiatives aimed at providing food for students, helping education systems improve curricula at all levels in response to rural development needs and farmers' demands, and providing environmental education and nutrition education, among others (Gasperini, 2000).

At the same time, international agencies, in their work with governments and non-government organizations, have focused attention on education in rural areas. We have learned much about the problems peculiar to rural conditions and about strategies that surmount these problems. In the next sections, we look at these problems and strategies.

The barriers to good-quality rural schools

While the evidence for links between basic education, economic development, and poverty alleviation is abundant, and funding agencies are investing significantly in basic education, it remains more difficult to provide good-quality basic education to children in rural areas than to those in urban areas. It is not enough to enroll children in schools. Drop-out rates are high in many low-income countries, reflecting families' awareness that they get little return on their own investment. If the families of those children see no value in the time and other costs spent on schooling, they are likely to withdraw them from school. Likewise, the social rate of return is low if those who attend school do not learn much (Hanushek, 1995).

Though the distinction between rural and urban areas is usually not bi-modal but rather on a continuum, the differences between the quality of urban schools and rural schools can be stark. In most urban areas—even in the poorest countries—education is in high demand, and the main problem facing schools is that they are overcrowded and lack sufficient amounts of furnishings, equipment, and instructional materials.

Schools in rural areas range from those in provincial capitals and other towns remote from the capital city to those in sparsely populated areas, usually situated between villages and isolated from any one village. Even further along that end of the continuum are temporary schools for nomadic populations. In spite of notable differences in rural areas and rural schools, the schools can generally be characterized by features that distinguish them from urban schools.

What makes education more difficult in rural areas? One set of factors lies in the communities' perception of education (demand-side), and the other is that facing the ministry of education (supply-side).

Community perceptions

- Because rural areas are less densely populated than urban areas, rural schools are farther apart, requiring many children to walk long distances or pay for transportation and to lose valuable time in walking that could otherwise be spent helping at home. Some families are unwilling to send their small children down long roads alone.

- Rural children, more than urban children, are required by their parents to supply labor on the farm and in the home. Even children who live close to a school pay high opportunity costs in terms of the household economy. This is particularly true in planting and harvest seasons.

- As many incidences of household poverty in most countries are likely to occur in rural areas, children who attend school often suffer from poverty ailments such as poor health and are unable to afford the costs of school, including pencils, lunch, shoes, and often uniforms.

- Many families see little immediate value in their children sitting behind desks, learning reading and writing and other skills for which there is no use in the village. Children themselves often find no reinforcement of what is taught in school, making it seem like a foreign environment. The perception that school is of little value is heightened when poorly built, poorly lit schools are badly maintained, teachers often absent, and, in fact, very little teaching and learning taking place.

- Some parents see school as a funnel to urban areas where there are jobs. This can soon lead to disillusionment, if jobs do not materialize, or a fear that school will rob them of their children.

- Even where a primary school is accessible, there may be no secondary school within commuting distance. Parents who see primary school as the first stepping stone are often not willing to send their children when they know that the second stepping stone is out of reach.

- Finally, in spite of the poor conditions of schools, parents are usually asked to pay fees, official and unofficial, in addition to other costs.

Ministry challenges

It is not enough that rural families are less able and willing to send their children to school. The ministry of education faces physical, social, and economic limitations in what it can supply to rural areas.

- Far fewer teachers want to serve in rural schools. Most individuals who have the education credentials that would qualify them as teachers have had some urban or quasi-urban experience, if only in teacher training school. Many are reluctant to be posted to remote rural areas, especially in communities that are not their own. This is particularly true of female teachers.

- The cost-effective cascade model of teacher training (training master trainers who, in turn, train teachers, does not work well in rural areas, because teachers are spread thinly over wide distances, and it is difficult to bring teachers together for training.

- Long distances, poor roads, and inadequate shipping vehicles make it difficult to get building materials, furniture, equipment, and textbooks to remote rural schools. Points of sale of textbooks and other school supplies are few and far between in rural areas.

- While in many cases, building materials and furniture can be locally supplied, instructional materials are not available. These include not only textbooks but also the visual materials that decorate classrooms and stimulate learning, as well as simple scientific lab equipment, radios, and other audio-visual equipment that has become a standard part of many classrooms.

- Communication between ministry offices—even provincial and/or district offices—and schools is difficult, so school principals and teachers get little if any guidance from a professional support network. It is difficult to

bring teachers, principals, parent groups, and other school supporters, together for training and information centers.

- The curriculum (the knowledge and skills to be taught and the methods used for teaching) may not be relevant to rural communities. When the curriculum goes beyond basic math, reading, and writing, teachers use little discretion in adapting it to what students know and what their needs and interests are.

- The language of instruction is often a European language used in the capital city but not beyond. Though not strictly a rural problem, language differences are exacerbated in rural areas where teachers may not have mastered the language of instruction or may not even know the local language, if they come from another part of the country.

- While urban parents and communities sometimes play an active oversight role in their schools, this rarely happens in rural communities, where parents are less skilled at holding officials accountable, reviewing financial statements, and even feeling confident that they can ask questions.

- Support services for remote rural schools are not always fully institutionalized. Unlike systems of agricultural extension, most systems of school supervision merely attempt to link rural schools through the bureaucratic structure to central ministry offices. The ministry often lacks the resources to help these links function as channels of support.

In sum, it is not surprising that many rural children do not attend school and that among those who do, many fail to learn even basic skills.

Successful models of rural schooling

In the past 15 years or so, educators have made headway in addressing the dismal conditions of rural schooling. Successful models of rural schools always begin as small-scale projects, because they are designed as modifications to the national school system, which often has an urban bias in curriculum, financing, and delivery and management of resources. Some successful models have achieved global fame and have been adopted (not always successfully) in other countries and even other regions of the world. The best known are the Escuela Nueva, which was created in rural Colombia, and the Bangladesh Rural Advancement Committee (BRAC) schools.[3]

In this section we describe six models of rural education that are less well known but have shown success and, in most cases, grown beyond the pilot stage. These models seem to respond to the rural communities they serve and have become institutionalized within the education sector, if not within the ministry itself.

Community schools in Mali

Sixty percent of primary school children in Mali live and attend school in the capital city, Bamako. Many of the 40 percent who attend school outside of Bamako have suffered from a school system that could not succeed in reaching them with adequate facilities, teachers, or materials. Many parents did not see the relevance of schooling to their children's lives, and schools were not well attended. In the early 1980s, Mali attempted to "ruralize" the curriculum in rural schools, introducing practical agricultural and manual skills, but the experiment failed. Parents saw the

[3] Based on the assumption that these models are familiar to most professionals in rural development, we will not include them here; brief descriptions of these models are presented in Annex 2.

curriculum as a second-rate alternative, and teachers, trained in urban, French-speaking schools, had neither the ability to nor the interest in teaching practical skills. They stood by with folded arms as children tended the gardens—the produce of which was used or sold by teachers.

In 1987, Save the Children USA (SCF), an NGO that had been working in community development and adult literacy in rural areas, used its knowledge of the rural environment to help communities in a selected area build and operate their own schools. Each village-based school contracted with SCF to build and maintain a school and to recruit, hire, and supervise a teacher who was part of the community. SCF provided building and instructional materials, trained the teachers, and abbreviated the national curriculum and adapted it to rural life. Initially serving grades 1 through 3, the schools used the local language, not French.

By 1994, there were 176 community schools serving over 10,000 children in the Sikasso region of Mali. Gradually, the schools added grades 4 through 6. These community schools operated independently of the ministry of education, though with the intent that school completers would be eligible to move into ministry schools. Over the years, this has required negotiations between SFC and the schools, on the one side, and the ministry, on the other, which was developing new policies for primary education. These policies eventually incorporated some features of community schools, including a revised curriculum, more appropriate for Mali's rural (as well as urban) children, and teaching in local languages in the early grades. The community schools also evolved, changing their curriculum and putting teachers on the ministry payroll.

Thus, community schools and government schools have become what are called "communal schools," with closer alignment in curriculum and financing mechanisms. Rural communities have benefited from the compromise. They now receive more financial support from government, including grants to cover some expenses. The ministry has also benefited. It has seen the feasibility of less expensive, locally constructed schools, and of possibilities for lowering teacher salaries to a level that the government can afford but that also provides adequate income for rural teachers.

Other countries in West Africa, including Ivory Coast, Mauritania, Nigeria, Togo, and Burkina Faso, have seen the growth and development of community schools in recent years. Like the community schools in Mali, most are multi-grade schools, and the school calendar is built around harvesting and planting times. In some places, the schools have been operating completely on the basis of community support. The World Bank, other funding agencies and NGOs have begun to help governments assist these schools, working to build on what already exists, not tampering with what the community values, but bringing in government resources, such as funding and teacher training.

Decentralized schools in El Salvador

While Mali's community schools moved from a stark alternative model toward something more integrated within the ministry's system, El Salvador's EDUCO schools were adopted by government early on. EDUCO (or *Educcacion con Participacion de la Comunidad*) schools emerged in the 1980s, when communities in rural areas, cut off from central services by a civil war, organized and supported their own schools through an association of households. In 1991, the ministry decided to support EDUCO schools as a means of expanding education in rural areas. Thus, these independent schools became part of the ministry's system without completely losing their autonomy. The ministry contracts with Community Education Association (or ACE) to deliver a curriculum to students enrolled in the school. The ACE hires teachers, monitors their performance, and equips and maintains the school. This kind of local management and administration was expected to meet local needs more appropriately than would management by the ministry.

The opening of EDUCO schools helped many rural children gain access to primary school. World Bank studies of the schools also show that teacher absences and student absences are lower than those of traditional schools in rural

areas. While test scores in math and language are not as high as in traditional rural schools, this may be because EDUCO schools serve the most remote areas, where children come to school from illiterate families and without the advantages of those in somewhat better off areas. EDUCO does provide monthly classes for parents on how to support their children's education. EDUCO teachers also spend twice as much time with parents as do teachers in traditional schools.

Although the EDUCO schools are often labeled a "decentralized" system, they have more autonomy than decentralized schools in other countries because they are not administered through the layers of the ministry but, instead, through an autonomous, parallel management unit within the ministry. Even so, as in other decentralized systems, the financial cord connecting them to the ministry has presented some problems. The ministry transfers funds to the school through another government agency, and this has resulted in delays to teachers' pay. In a very few decentralized systems, such as Uganda, district administrative offices are given budgets earmarked for teachers' salaries, somewhat reducing the problem of getting teachers their paychecks, but even in decentralized systems, this remains a difficulty.

Cluster schools in Cambodia

Following years of political instability, Cambodia's education sector is rebuilding, using a new and innovative approach to developing "effective schools." Outside of Phnom Phen, Cambodia is mostly rural (85 percent of the total population in 1998) and mostly poor. Due to relatively high population density, however, schools are spaced close enough to allow them to share resources. Building on this advantage the ministry has created clusters of roughly five to ten schools. Unicef has been supporting cluster schools since the mid-1990s, and in 1999, the World Bank began support of a pilot project that links cluster schools to the ministry's policy formation and implementation process. The pilot began in about 20 clusters in the Takeo province and has expanded within that province and to others.

The essential element of cluster schools is a cluster resource center, which allows schools to share materials and expertise. Clusters also allow school officials to look at the data on enrollments, drop-outs, and achievement among their schools to discover where there may be inequities and, if necessary, to trace those inequities to unequal distribution of resources. Animators (district inspectors) serve as links between clusters and ministry offices—provincial and national. Each animator is trained and supported in good teaching and management practices, which they share at cluster meetings and on school visits. They also send information about what works at the school level to ministry offices. Animators are supervised by British volunteers, who help to bring in information about best practices.

World Bank support adds to the resources available to clusters by providing small grants for the execution of cluster improvement plans. Through a process that involves all stakeholders, each cluster identifies and prioritizes what it needs to become an effective school (following the guidelines developed by the ministry). It then develops a proposal for a one-year grant. The ministry's only voice in the cluster's choice of resources is a list of items it will *not* provide. So far, the control over its resources that this grant process offers to schools and clusters has proven to be an incentive for their improvement.

Cambodia's cluster-based program also features an innovative teacher training scheme. Teacher training often presents a dilemma to small rural projects, because it is generally a national service, provided through urban-based colleges. Without training, teachers cannot qualify to practice and, indeed, lack the skills to teach. Even in-service training often becomes centrally driven and ineffective in rural areas. In Cambodia, clusters select teacher training teams from among a number of NGO groups that provide the service. One day a week is set aside for teacher-training activities.

School clusters have been supported for many years by UNESCO's Bangkok office, and they appear in Thailand, Sri Lanka, and other East Asian countries as well as Cambodia. They appear to have become an institutionalized support system for rural schools that otherwise would depend largely on their own meager resources and support from distant provincial offices.

Schools for rural girls in Baluchistan

A prominent piece of the Education for All campaign has been increasing the enrollment and success of girls in primary school. Often rural schools have benefited from this effort, as many of the girls who are not in school live in rural areas. And, in many cases, rural boys have also profited from the attention to rural girls.

In 1990, no more than 10 percent of the schools in the Balochistan province of Pakistan were girls' schools. Only 20 percent of girls were enrolled in school, and the enrolment rate was much higher in the 15 percent of the province that is urban. The low density and large distances between villages make it extremely difficult to put a school within walking distance of many children. Under these conditions, government officials had assumed that rural families were not interested in sending their daughters to school. Yet studies revealed that parents were interested in schools for their daughters and their sons—if schools provided a good education. Parents said that they want to see a school that has a solid structure, a boundary wall, and a water pump and latrine in working order and one that is safe and secure. They want to see their children learn to read and write. They want teachers to be present and punctual, refrain from beating children and from taking bribes from parents (World Bank, 1996).

Cooperating with the provincial government and other donors, the World Bank launched a project in 1992 to improve schools for girls in rural Baluchistan. Working with government officials, Bank staff asked communities to find a teacher, form a school, and give instruction for several months in an existing venue before making construction funds available. Through trial and error, a fourteen-step process for opening and maintaining a community school was set. At the heart of this process is the establishment of a Village Education Committee, which, with help from the NGO, takes responsibility for opening the school. The committee is required to find a place for the school to operate before one is built, provide land for the building, monitor the performance and progress of the school, periodically evaluate its success, and provide information to parents and the Education Department. The government builds the school, pays the teacher, and provides instructional materials. By taking on these responsibilities, the committee offers security and support to the teacher, who is selected from among qualified women living in or near the village, making it more likely that she will not abandon her job.

A particular problem in teaching rural girls is that the culture allows girls to be taught only by women. Yet qualified women from population centers are unwilling to teach in rural schools. Many who were appointed to teach in rural areas either move unofficially to schools closer to home or simply do not appear regularly at school. Only two teacher training colleges are available for women, both close to Quetta, the provincial capital. An important function in the Community Support Program is the Mobile Female Teacher Training Unit (MFTTU), which solves the problem of sending young female teacher recruits long distances to teacher training colleges for long periods. The MFTTU selects women who have been teaching for several months in newly established community schools to attend three months of training at a nearby site. When they return to their village, the teachers continue to get support.

The project has being brought to scale throughout rural areas of the province. As of 1997, it had opened over 400 schools, moving toward enrollment of 20,000 students. In 1995, the gross female enrollment rate in CSP villages was 87 percent, while the rate in the province as a whole was only 18 percent. Weaknesses in the school system must still be eliminated. Foremost is the need to improve the subject knowledge and pedagogical skills of teachers. Teacher morale will be low until teachers are brought to a more professional level of performance and rewards.

School health services in Guinea

While scant attention has been paid to the physical well-being of children over age five, studies of this age group reveal that poor health and nutrition have a profound effect on children's ability to pay attention and learn in school. Guinea has been using World Bank support in a program aimed at using the school to improve the health and nutrition of school children. The program has been on the cutting edge of efforts to approach learning from this direction.

Baseline studies in 1996 revealed that many Guinean children were affected by parasitic infections and micronutrient deficiencies. Working in seven sub-prefectures, some rural and some urban, selected to represent the different ecological conditions of the country, health surveyors found that over 60 percent of children were infected with worms, around 10 percent with urinary and/or intestinal schistosomiasis, nearly 60 percent with Malaria and with anaemia. These figures varied considerably from region to region.

To help treat these problems, the ministries of education and health piloted interventions in school health services and improved health education among 36,000 children living in these seven areas. In 1997 they extended the program to 350 000 children living in ten prefectures and communes of the country.

The program is not simply in the hands of health professionals . It promotes health education in schools and among parent groups (APEAEs, or Association of parents and friends of the school). APEAEs are trained to treat some ailments (schistosomiasis, worms, and malaria), to distribute nutritional supplements (iron and iodine), to establish targets for treatments, to keep medicines supplied, and to encourage out-of-school children to participate in the program. Teachers are trained to treat infections and malaria, to use health education materials, and to refer children in need of specialized health services. An agency of the health ministry administers the medication component.

An assessment of the expanded program focused, among other things, on rural/urban differences in how the program was implemented. It found that 76 percent of urban schools had received medications and 72 percent of urban children had received them. Though 62 percent of rural schools received medications, only 43 percent of rural school children had received them. The failure to receive medications was usually due to their insufficient supply or to children being absent from school. Though the program has also tried to include children not enrolled in school, only 11 percent of these children received medications. Levels of community involvement and teacher participation were high, though procurement and delivery of medications were often delayed, and some APEAEs had difficulty managing the delivery of medications to schools.

Guinea's school health program has succeeded in initiating collaboration between the ministries of health and education and in reaching a high rate of its target population, despite extreme variations of malnutrition and disease from one community to the next. Educators in more countries have begun to take notice of how important good health and nutrition is to learning and to plan for similar initiatives in their own schools.

Using radio in Dominican Republic and Nepal

In 1974 a Radio Math program was introduced to primary schools in Nicaragua. Educators transformed an individualized instruction format into a mass media format, incorporating the guiding principles of interactive learning, rigorous lesson design, and reinforcement. Schools put radios into the classroom, and children listened to the lessons under the supervision of a teacher. In the intervening years, the Radio Math innovation, known as Interactive Radio Instruction (IRI), has been adapted to other subject matter and used in other countries.

RADECO is an IRI program designed to reach children who have little or no access to school in one rural region of the Dominican Republic. It teaches basic math and reading skills as well as some science and social studies. The

curriculum is based directly on the national school curriculum. RADECO was innovative as an IRI project in the setting in which lessons were broadcast. Following earlier experiences of Accion Cultural Popular (ACPO) in Colombia, where radio was used in a format that was not interactive to teach children and adults at home, RADECO created an infrastructure of modest shelters built by villagers that were used as learning centers. Children congregated at these centers late in the day, when they were free of chores. Radio auxiliaries, or paraprofessional teachers, distributed print materials to accompany the radio lesson, turned on the radio, and did what they could t help students follow the radio lesson. This group structure has worked well in the area it serves.

Radio was also used in rural Nepal in the 1980s. To improve the skills of uncertified teachers, a series of teacher training programs relied heavily on radio instruction but also used print materials and monthly session in which trainees met with experienced teachers whose own primary education was incomplete or weak. The curricula included both basic subject matter and pedagogical skills. Trainees did not assemble to listen to the radio lessons, because great distances and varying schedules precluded such classes. Instead, they were expected to tune into the radio broadcasts and work with the print materials on their own.

While logistical difficulties and problems in developing an institutional base for the project crippled the IRI project in Nepal, IRI has been used more successfully in remote areas of other countries, including Indonesia, to train teachers. IRI has also shown to be a useful means of supporting teachers in the classroom and improving their teaching skills as they participate in lessons with their pupils (Moulton, 1994).

India—A comprehensive multi-faceted project

The World Bank has been supporting India's effort to attain universal primary education through a series of District Education Programs in the most disadvantaged states. The most recently approved project, in Uttar Pradesh, illustrates the range of strategies being used to address the large and varied population of that state. The majority of the 160 million people in the state live in rural areas, and 42 percent of those live below the poverty line (World Bank, 1999). Based on the Bank's experience in a series of primary education projects in India, the Uttar Pradesh project, as described in the Project Appraisal Document, includes, among others, the following components.

- To overcome the inadequate number of qualified teachers, the government hires para-teachers for the early grades. Following the *Shiksha Karmi* project in Rajasthan, para-teachers are selected and appointed by the Village Education Committee of the p*anchayat* government, and their contract is renewed annually on the basis of their performance. They are given 30 days of initial training and a refresher course of 15 days every year thereafter. The project provides continuous professional support and is considering a career ladder to sustain their interest. About 17,000 para-teachers are being employed, trained, and supported.

- In rural areas where the population is dense, the government has instituted double-shifting, trying out five different models of hours and teacher rotation among classes.

- For villages and hamlets for which state norms for school construction do not apply and for situations where children cannot avail school facilities, the project provides alternative schooling facilities. One alternative is most suited to small, isolated communities where the total number of children does not exceed 40. Another enriches Muslim schools (*maktabs and madarasa)*, especially for girls, by adding a literacy component in consultation with the minority community and religious leaders. Special arrangements are available for flood-prone areas where schooling is disrupted during the monsoons. Another alternative is the Education Guarantee Scheme, for sparsely populated areas; the community identifies the teacher, provides accommodation and decides the time, duration, and venue for the center, and the Credit finances the instructor's salary.

- Specific interventions are designed to address the educational needs of certain groups, including children from scheduled castes and scheduled tribes.

- Special provisions are made for girls, such as free textbooks, escorts, and female teachers. New Early Childhood Care and Education centers are established in some places to improve school readiness and contribute to the enrollment and retention of girls by providing alternative sources of sibling care during school hours.

- The project supports linkages with local health authorities to ensure regular quarterly heath check-ups of the school children and thus promote the integral development of children and improve their regular attendance at school.

- Because community support is considered vital to sustaining good schools, a community mobilization program is intended to develop sensitivity to the importance of educating children and a sense of ownership among the community for education issues. The project helps Village Education Committees play a significant role in school management and draws upon other rural programs, such as water users' groups and women's self-help groups.

- An important piece of the project is designed to improve school quality. The project supports government and non-government organizations in the institution of a holistic pedagogical approach to teaching. This includes revising curricula, developing training modules and instructional materials, and using continuous assessment methods in the classroom to monitor students' progress.

- The project also strengthens state and division education offices so that they gain the capacity to carry on, once project support has terminated.

Through these and other strategies, the Uttar Pradesh and other primary education projects of the World Bank in India cover the entire gamut of strategies, including a number of innovations, to reach a wide range of disadvantaged groups in a predominantly rural area. Other rural-oriented Bank projects are comprehensive in this way, though few have such a range of specific strategies for different groups. The success of this approach depends heavily on acceptance by communities for identifying their needs, selecting from a menu of options (in many cases), and customizing schools to be responsive to the children they serve.

What are the critical elements of these models?

The various models that have just been presented represent a handful of successful approaches to rural education among a much larger field of failures. Successful models have often been introduced by organizations that have worked in rural development—not necessarily education—or that work in non-formal education, outside of the formal school system. From these projects and others that began within the formal school system, we have learned more about the critical elements of successful rural schools and the related issues that remain unresolved. These have to do with local ownership of the school, teachers, curricula, size, financing, facilities, distance, and partnerships with other sector programs. In this section we will look at each of these elements.

Local ownership

Rural schools are more likely to be effective when they have strong links to the community. In some cases, such as the early model of community schools in Mali and other West African countries, the community builds and operates the school, with little, if any, help from the ministry of education. In other cases, such as EDUCO in El Salvador and the girls schools in Baluchistan, the ministry provides resources, such as a conditional grant, building materials, or

teachers. In most cases, parents and other community members have a say in how to use resources. In some cases, they also make decisions about what is taught (the curriculum), when, where, and how.

The many variations of the local-ownership element stem from the principle that people are more willing to support an institution when they have a stake in its success. Another principle, however, also affects community support of schools. Most families think that a school should look something like the traditional government model, and they are quick to spot second-rate alternatives. Thus, attempts to help communities create learning organizations that may be more suited to the conditions of their rural community and culture than the adopted Western model of schooling have often failed. The non-formal education movement of the 1970s, for example, in spite of its substantial contributions to education, left in its wake many attempts to educate rural children without the promise that they could qualify for state certification. Non-formal or non-government schools that did help students transit into higher grades of government schools, such as the BRAC schools in Bangladesh, became accepted in the eyes of parents and, with the relatively high-quality education they offered, flourished.

The organizers of community schools and mechanisms to allow local control of schools face another dilemma. On the one hand, local control often means local financing. Community schools in Africa, Latin America, and Asia have sprouted because the communities were neglected by the ministry's system and parents who wanted their children in school were willing to pay. On the other hand, national school systems should distribute resources equitably to all schools, rural and urban. As long as poor rural communities finance their own schools, government resources to education are inequitably allocated to urban schools, where, ironically, families can probably afford to pay more. If the ministry builds and furnishes a school in the community, parents may stop paying as much, but they may also lose control. A balance needs to be found between government support and community ownership of the school.

The Mali community schools and EDUCO are two cases how this dilemma was gradually resolved. Communities started the schools, and the ministry eventually augmented what had begun. EDUCO schools make a contract with the ministry, so shared responsibility is guaranteed. In other cases, such as the *Nueva Escuela Unitaria* in Guatemala, an adaptation of Colombia's *Escuela Nueva*, the ministry of education piloted the intervention and expanded it. From the beginning, however, mechanisms for community management were built in.

In contrast to community schools that are established by parents and other community members, another model of local ownership is gaining attention. As Ethiopia, Uganda, Indonesia, and other once highly-centralized governments begin to decentralize the administration of social services, including education, provincial and even district governments gain authority over schools. International funding agencies, including the World Bank, are eager to see this downward push of control move all the way to the school. Unfortunately, it sometimes stops at the next level below the center, having little effect on communities. But elsewhere, communities have taken the opportunity of shifts in power to take more control. In the southern region of Ethiopia, for example, schools have established parent committees, many of which have begun to hold school principals and teachers accountable to the community. Brazil, which has always had a complex structure of state and local authority over schools, has moved toward strengthening the management ability of school oversight committees. Though this effort began in urban areas, it is moving to rural areas as well.

The other mechanism that fosters local control is clustering of schools, a movement that has taken hold in East Asian countries but can also be seen in Uganda, where there are "core" schools linked with "outreach" schools, and even in Lesotho, where the distance between schools can be huge. The main purpose of school clustering is to help schools share resources, experience, and best practices. School clusters also demonstrate to schools a more horizontal management model, one that encourages peer-level exchanges. This kind of modeling helps principals and teachers who participate in clusters replicate the behavior in their own school communities.

Teachers' incentives and training

While local ownership seems to solve many of the problems facing rural schools, one element of schooling that communities cannot supply and manage on their own is perhaps the most critical one: teachers. Typically, a national school system includes training colleges for teachers at every level: primary, secondary, and tertiary. The academic requirements for entry into the college vary from level to level, as do the certificate granted by the college and the salary attached to it. The trainers of these teachers also attend specified colleges or university departments and become certified to train specified levels of teachers. Thus, teacher training is a complex, centralized function.

As long as primary education was demand-driven, that is, provided in areas, usually urban, where the government and families together could pay for schooling, teachers were part of the economy. In remote rural areas, however, the dearth of people with education credentials feeds upon itself. Because few rural children make their way through the school system into teachers colleges, few are qualified to be teachers. Moreover, since most high-quality teachers colleges are in urban areas, students who do complete college many do not want to return to village life, where there is no water, electricity, or bright city lights.

Thus, the single most critical problem facing rural schools is the shortage of qualified teachers. And, though correspondence colleges and other distance education technologies have permitted older students and adults to minimize their face-to-face contact with teachers, primary school children, in any structured learning setup, need them badly.

Ministries of education, left with the responsibility of providing qualified teachers to rural schools, face three challenges: producing qualified teachers, deploying them to rural schools, and giving them professional and sometimes moral support.

The traditional pre-service training college is being transformed in most countries to a program that offers both pre-service and in-service training. Teachers who are recruited directly by community schools not only lack training in teaching methods and skills, they usually have only a weak knowledge of math, languages, science, and other subject matter. Yet they often receive nothing but in-service training, because they are badly needed in the classroom. The Zimbabwe Integrated Teacher Education Course (ZINTEC) gives teacher trainees four months of residential pre-service training, followed by three years of in-service training, using distance learning technologies and some supervision, and concludes with another four-month residential. Uganda has developed a Teacher Development and Management System that gives three-years of on-the-job training to the under-qualified teachers. Teacher trainers use bikes, buses, and other forms of transportation to reach remote schools and meet with teachers. They held regular classes with teachers at "core" schools, and gave regular tests to help qualify them. Other countries have similar in-service programs for unqualified teachers, as well as in-service training and upgrading for those who are qualified. Baluchistan has helped solve the problem with its Mobile Female Teacher Training Unit. Nepal and other countries have begun to use radio broadcasts to reach teachers in remote areas.

There is continuous debate within the education community about the wisdom of allowing untrained teachers in the classroom, especially when their own education and basic knowledge and skills are limited. Many education professionals do not want to dismantle the traditional pre-service training system. Yet as long as teachers seeking jobs are those who have completed pre-service training in an urban college, ministries must find ways to deploy graduates to rural areas. Even more difficult is getting an experienced teacher in an urban area to move to a rural area. Many primary teachers are women whose husbands are employed in cities. Single women often are not comfortable living in rural communities other than their own.

Government policies also affect the ease with which teachers serve in rural areas. Based on cost-of-living differences, some ministries pay far less to teachers in rural areas. Sometimes ministries prohibit husbands and

wives from teaching in the same school, making it nearly impossible for a family to live and work in a small remote community.

Ministries and communities can provide incentives to teachers to move to rural areas. These include not only salary differentials but also free or subsidized housing, food, or transportation. Zimbabwe is considering a system of bonding whereby the government would pay for teacher training as part of a loan repayable in five years after appointment to the teaching service. Other conditions also help attract teachers to rural areas, including support networks such as school clusters, in-service training, and other forms of professional support. Finally, in some communities, the prestige of teaching motivates some to work even under adverse conditions.

In addition to incentives and in-service training, there are other local solutions to the problem of teacher shortages. One is to use volunteers and less qualified persons as assistant teachers in a school with some qualified teachers. The para-teachers in India are used in this way. Any such solution, however, depends on the ministry's permitting flexibility in its standards and creativity in addressing problems.

Professional support for rural teachers is often missing in rural schools. Hierarchical ministries of education usually employ school inspectors at the district level, but like many sub-central government employees, inspectors are not given the skills, vehicles, or motivation to actually visit schools and provide encouragement and professional guidance to teachers. This is where school clusters and other decentralized professional support networks have made a difference. Local groups that hold schools accountable to communities can also pressure school principals into offering professional guidance to teachers. Rural school support programs often include training and support for school principals, recognizing them as the keystone to effective schools and supportive communities.

In sum, a rural school can hardly function without good teachers, yet competent, qualified teachers are rarely found in remote rural schools. Ministry efforts to solve this complicated dilemma have received support in recent years from the World Bank and other international organizations. A wide range of solutions is being tried, but the problem must be tackled in each school system, each school, and each community.

Curriculum adaptations

In the discussion of local ownership of rural schools, we introduced the dilemma that while the traditional ministry model of primary schooling may not serve rural areas well, rural parents want their children to learn in an environment that looks like a traditional school. Central to this dilemma is the curriculum—what is taught, when, and how.

Many national ministries of education consider the curriculum the most sacred element of schooling. Decisions on the subjects that are taught, the amount of time devoted to each of them, and the language of instruction can require delicate handling, and those who approve a curriculum do not like to see it tinkered with. It has been said that changing a curriculum is like digging up a graveyard, and rewriting instructional materials to correspond to a new curriculum is no small task. Thus, a national standardized curriculum usually appears in all schools, urban and rural, with or without the teachers and other resources needed to implement it. When the curriculum is rigid, dictating the date and time each lesson must be delivered, for example, teachers are reluctant to change the pace to respond to student needs or to innovate with methods or materials.

Pressure also comes from parents to hold schools to the national curriculum. As we have noted, schools that offer stark alternatives in subject matter and methods can be viewed as second-rate alternatives to "real" schools, and countries that have tried to "ruralize" the curriculum usually failed for this reason. A regional study of agriculture-oriented curricula found the approach to be limited to manual activities on the school garden plot, sometimes exploiting students' labor for teachers' benefits (Riedmiller, 1991). A second issue with curriculum is the extent to

which teachers actually follow it. When teacher a teacher is frequently absent, as happens often in rural schools, students miss many lessons.

Implementation of the curriculum is also jeopardized in rural areas by the agrarian calendar, which draws many children out of school for planting and harvesting. In countries where the ministry is supporting programs for rural schools, adjustments to the school calendar and the daily timetable do not seem to be contentious issues. An important feature of multi-grade schools is that their flexibility in curriculum—allowing students to progress at their own pace—is generally accompanied by flexible school hours and a calendar that suits agrarian patterns.

Rural schools are often disadvantaged when the official language of instruction is not the mother tongue of the students (or even of the teacher). While national curricula and instructional materials are usually written in the predominant language of the capital city, whether that be a national language, a foreign one, or the language of those in power, minority groups, many of which are in rural areas, are not always conversant with that language. During the past two decades, researchers have learned more about the importance of learning to read and write in a mother tongue, and more and more governments, especially those that are decentralizing education services, have begun to translate curricula and materials into local languages. In Viet Nam, for example, the World Bank and Unicef are helping the ministry of education use local languages for instruction in remote rural schools, where roughly 15 percent of the population comprise over 50 different ethnic minority groups. Books are being developed in some of these languages, and teachers are being trained to use them in multi-grade schools. This trend toward bi-lingual instruction, however, has faced resistance from several corners. Sometimes advisors from the former colonial power, especially the French, have been reluctant to support the development and production of local language materials. Maliens, with French involvement, have struggle for more than fifteen years over whether to use local languages. More often, political leaders see the language of instruction as a means of giving a national identity to ethnic minority groups. A third force of resistance comes—again—from parents who see instruction in local language as second-rate education.

There is one curriculum concern that affects both urban and rural areas: instruction in the prevention of HIV/AIDS. In 2001, 36.1 million people are estimated to be living with HIV/AIDS, and the overwhelming majority of people with HIV—approximately 95 percent of the global total—live in the developing world (Centers for Disease Control). Ministries of education recognize the urgency in controlling this epidemic and are piloting many different curricula to teach children about HIV/AIDS and how to prevent the disease. Because ministries do not often have budgets for special curriculum activities such as HIV/AIDS, large international agencies are likely to design and train teachers to give lessons, and larger agencies finance them; their inclusion in a school's curriculum is often limited to the defined areas in which an NGO or other agency operates. Wherever good-quality teaching suffers, instruction in HIV/AIDS prevention is most surely inadequate.

Other programs oriented to rural children and delivered on a small scale, often with help from NGOs, include those aimed to help children improve their nutritional status. Such programs might include school meals as well as information about nutrition. Some programs attempt to make science teaching more relevant to students' daily lives, while others offer instruction in how to protect and improve the environment. The effectiveness of these lessons, however, depends on the soundness of the curriculum design and the training and competence of the teacher.

Financing

Though not all barriers to improving rural schools can be reduced to matters of cost and financing, many of them can. Governments cannot often afford to cover the costs of educating all—or even many—children. Neither can many families in rural areas cannot afford to pay school fees and other expenses that cover the costs of school. Many governments of low-income countries are adopting cost-sharing policies. As we have discussed, while government must be responsible for building and maintaining systems that support all schools, rural as well as urban,

government and other organizations need to contribute their share in a way that does not disempower school communities. This has been done successfully through grants, often earmarked, to school clusters, to schools, and even to individual students in the form of scholarships. Baluchistan's provincial government gave scholarships to rural girls who are in need. Guinea gives small grants to schools that prepare acceptable proposals for use of the funds, and Cambodia does the same for school clusters.

Many rural school programs use the strategy of targeted financing with success, though not without problems. Targeting individuals for scholarships, for example, can lead to abuses when school officials are under pressure to select students, and grants to schools and clusters are sometimes wasted on poorly planned projects or unfeasible ideas. Another problem is that schools that receive grants tend to attract students, teachers, and other resources away from schools that do not. So, while putting funds into the hands of the buyer is more effective than supplying a turnkey school, in terms of reinforcing local ownership, targeting selected students, schools, and clusters raises other issues.

Targeting selected students, schools, or clusters also raises equity issues. Funds allocated to selected groups lower the general funding available for urban and other rural schools that are not targeted but also well short of the resources they need to offer good-quality education.

Decentralized financing is an alternative to targeting students, schools, or clusters. In the long term, decentralized administrative units are expected to allocate funds among social services, including education, health, and often roads, water, and other public services. In the short term, central governments are tying many strings to funds passed on to decentralized offices, indicating a hesitation to trust actions of these offices. Decentralized financing is expected to have the advantage of raising local tax revenues, though this is also a long-term expectation. In principle, however, the enforcement of local taxes will bring a higher portion of funding from private pockets, albeit through government channels.

Decentralized financing should also be more efficient and secure. The fewer hands that funds pass through the more likely they are to finance instructional inputs. Researchers in Uganda have tracked capitation grants—regular grants to schools based on their enrollment—and found leaks all along the way, between levels of the ministry, between the ministry and local banks, local ministry offices and schools; even the arrival of a grant at a school is no guarantee it will be used as promised, especially when school management committees are not prepared to monitor school finances.

Construction and rehabilitation

Until recently, the World Bank and, to a much lesser extent, other funding agencies have responded to low levels of enrollment in rural areas by building new schools and rehabilitating those in need of repair. This is a sensible response, because it cuts down the distance between many children and the school. But school construction and rehabilitation has often failed to improve access and has been even less successful at improving the quality of education. The problems lie partly in delivering materials, covering related recurrent costs, and poor maintenance of facilities.

Many school construction projects have foundered on the inability of the ministry to procure and deliver building materials to remote areas. Procurement problems are well known. Delivering concrete, lumber, tin roofs, and other supplies where there are poor roads, and constructing buildings where the level of standards and skills are low are also familiar problems in every sector of development.

A problem more peculiar to education infrastructure projects is that the school building itself is a mere shell unless it houses a good teacher. While the building may be a one-time modest cost, teachers' salaries represent a considerable

recurrent expense to the government, as do the systemic costs of supporting teachers, supplying instructional materials, and managing the education system.

The architectural design of a school should be appropriate to its use and setting. In earlier years, ministries often used a single design for schools outside of urban areas. In more recent years, it is more common to find several alternative designs, varying by size and materials. Multi-grade schools benefit from a design that allows small group work. In some environments, special designs have been used. For example, in areas of South Asia and Africa where the population is nomadic, school structures can be collapsible and portable. Though the design of a school is not always a contentious issue, sometimes ministries prefer large, expensive models. Communities too sometimes envision a school building that is neither affordable nor appropriate. School design and construction should involve negotiations between users, funders, and the experts in design.

Distance teaching

Distance teaching, using the medium of written lessons and tests sent between a distance teaching college and its students, has for many years helped people living in remote areas acquire high school diplomas and other certificates of education at the secondary and higher levels. But these media are not effective for primary school pupils, who need much closer supervision and face-to-face contact.

Our example of the use of radio for primary schooling in remote areas focused on Interactive Radio Instruction. IRI was not designed specifically for remote schools and, in fact, has found better success in more populous areas where radios and batteries are more likely to be available at an affordable cost and where radio signals are dependable. And, while the first project of this kind, Radio Math, was designed for use without the teacher's participation, experience has shown IRI programs to be more effective when the teacher plays an active role in the lesson. Nevertheless, as the projects in the Dominican Republic and Nepal demonstrated, IRI shows some promise in rural areas.

The most successful component of IRI is the content of the lessons. Many educators have now learned how to design and test lessons that engage students actively and successfully teach the knowledge and skills of the curriculum, whether that be the national curriculum or one designed for the IRI program. Some programs, such as Radio Language Arts, developed in Kenya, have been adapted for use in other countries—in this case, Lesotho. But many projects develop their own lessons. The weakness of IRI, or any distance technology, is its dependence on radio broadcasts, which require negotiations with those who control the airwaves, and on the ready availability of working radios.

The main constraint in the use of radio and other distance technologies, however, has been cost. Developmental costs, which are high, are often covered by external funding agencies. Recurrent costs, which include payment to someone for at least occasional face-to-face meetings, are also high, and for ministries of education in which most of the budget is consumed by teachers' and administrators' salaries, little is left for instructional technology—often even textbooks. Yet as electronic media rapidly proliferate, even in low-income countries, and as their costs come down, IRI holds promise as a delivery mechanism for reaching remote areas.

The Bank's record in rural education

As the international agency that has given more than any other to basic education throughout the world, the Bank has contributed appreciably to nations' capacity to get more children into school and to provide them with a better education. World Bank research has often pointed the direction toward better investments and more effective

schools, and Bank investments have enabled small-scale projects to increase in scale and, in many cases, to be institutionalized within the education sector.

Rural/urban distinctions

The extent to which the Bank has supported rural education is also considerable but less easy to determine. Project documents (Staff Appraisal Reports and Project Appraisal Documents) in the education sector seldom disaggregate data according to rural/urban indicators. Such analysis would not be straightforward (as male/female analysis is), because rural and urban environments are not clearly distinguishable. Population density, topography, and distance from urban areas are only three of many variables characterizing rural areas. In many countries, there is no consistently applied definition of "rural" among government agencies and other organizations. It is also difficult to target the rural poor in education projects, because the rural poor live dispersed over large areas, rural areas are diverse, and are often mixed in with the not-so-poor.

Just as many project descriptions do not distinguish in their analysis between urban and rural conditions or differentiate between various rural conditions, many do not describe explicit strategies for improving education in rural areas. Sometimes, the only difference in strategy between rural and urban areas is that multi-grade schools are advocated for rural areas and double-shift days for urban areas. (Double-shifting is a solution to overcrowded urban schools.) Though multi-grade schools have become frequent features of Bank-supported projects, these schools in and of themselves do not provide high-quality education. They require a teacher trained to use a multi-grade curriculum and a classroom that allows students to work in small groups. Since students in multi-grade classrooms should be able to progress at their own pace, self-paced materials are also useful.

Rural/urban distinctions in school models appear most frequently in large, highly populated countries (the District Education Projects in India, and projects in Pakistan, China, and Brazil), where they are clearly targeted to areas of rural poverty. Distinctions are also apparent in some Latin American projects, where the rural population of the region constitutes a lower portion of the total than in other regions (Table 4). Models such as *Escuela Nueva*, *Nueva Escuela Unitaria*, and EDUCO were designed for remote rural populations in countries that have large urban populations. In contrast, project designs in countries in Africa and East Asia (except for China) are less likely to distinguish between rural and urban strategies, based on the implicit recognition that most areas are rural.

These regional differences in strategy reflect, among other things, the regional differences in the portion of the population that is rural. Table 4 illustrates these regional differences and the extremes between Asia and Africa, at one end, and Latin America/ Caribbean, at the other. Table 4 also shows that the rural/urban distribution of the population does not correlate exactly with enrollment rates in primary school.

Table 4. Regional differences in rural population and primary school enrollment rates

Region	Rural population as % of total	Net enrollment nationwide (%) 1995*
South Asia	72	68
Sub-Saharan Africa	67	57
East Asia/ Pacific	66	96
Middle East/ North Africa	43	81
Europe/ Central Asia	34	94
Latin America/ Caribbean	25	92

Source: World Bank, 2000b; *Unicef, 1999.

Rural education strategies

In our sample of basic education projects, we found project papers in each region that evidenced explicit strategies addressing rural schools: local management, teacher incentives and training, curriculum adaptations (including multi-grade schools), targeted or decentralized financing, and school construction and rehabilitation. Table 5 presents this sample and indicates the more common strategies used.

Table 5. Sample of education projects with rural components

Project Name		Date	Local	Schools	Curric	Teacher	Finance	Notes
AFRICA								
Benin	Education Development	May-94			X			Rural girls don't pay fees
Gambia	Education Sector (03)	Sep-98		X				Focus on girls
Ghana	Basic Education Sector Improvement Program	Jun-96	X					Local languages; School fund; girls focus
Guinea	Equity and School Improvement	May-95	X	X	X	X		T deployment; latrines; small grants
Ivory Coast	Education and Training Support	May-98		X		X		T deployment
Mauritania	General Education (05)	Apr-95		X	X	X		Mobile IST; girls focus
Niger	Basic Education Sector	May-94		X	X			School feeding program
Tanzania	Human Resources Development Pilot	Oct-97	X					Small grants; girls focus
EAST ASIA/PACIFIC								
Cambodia	Education Quality Improvement	Aug-99	X	X				Clusters; effective schools; animators
China	Education Development in Poor Provinces	Mar-92	X	X	X	X	X	T incentives; free tuition & books; bilingual TT
China	Basic Education (03)	Mar-96		X	X	X		Bilingual, skills training; nomad schools; TT
China	Basic Education (04)	May-97		X	X	X	X	T Service Network; solar power
China	Basic Education in Poor and Minority Areas	Sep-94		X		X		Girls focus; bilingual; many innovations
Indonesia	Sulawesi and Eastern Islands Basic Ed	Apr-99				X		Training for Ts in remote rural areas
Indonesia	Sumatera Basic Education	Apr-99				X		Training for Ts in remote rural areas
Laos	Education Development	Apr-93	X	X	X			Local languages; clusters; community constr.
Malaysia	Education Sector Support	Mar-99		X		X		Hostels; T housing
Mongolia	Poverty Alleviation for Vulnerable Groups	Jul-95	X	X	X	X	X	Nomad education
EUROPE/CENTRAL ASIA								
Macedonia	Education Rehabilitation	Sep-97	X	X		X		Books; decentralized TT
Moldova	General Education	Apr-97				X		Decentralized TT
Moldova	Social Investment Fund	Feb-99	X					Small grants
Tajikistan	Education Reform	May-99	X	X			X	TT
Turkey	Basic Education	Jun-98		X		X		T deployment, housing; TT
LATIN AMERICA/CARIBBEAN								
Bolivia	Education Quality and Equity Strengthening	Jun-98						School nucleii; rural girls focus
Brazil	School Improvement FUNDESCOLA (01)	Apr-98	X					Decentralization; small grants
Brazil	School Improvement (02)	Jun-99	X					*Escola Ativa*
El Salvador	Basic Education Modernization	Sep-95	X		X		X	EDUCO; pre-school
El Salvador	Education Reform	May-98	X		X		X	EDUCO; *Fondo Sonvisa* ; pre-school

Guatemala	Basic Education Reform	Jan-98	X		X	X	X	Rural program is PRONADE
Nicaragua	Basic Education (02)	Aug-99			X			Serves Atlantic coast indigenous groups
Uruguay	Basic Education Quality Improvement	May-94	X					Sub-grants
Uruguay	Basic Education Quality Improvement (02)	Jul-98						pre-school
Guatemala	Basic Education Reform	May-97	X		X	X	X	PRONADE; girls focus
MIDDLE EAST/ NORTH AFRICA								
Egypt	Education Enhancement Program	Dec-96				X		TT; distance education
Morocco	Social Priorities Program - Basic Education	May-96		X	X			Canteens; pre-school
SOUTH ASIA								
Bangladesh	Primary Education Development	Apr-98	X	X				NGO schools; clusters; supplem. materials
Bhutan	Education (02)	Mar-98		X	X			Comm. schools; supplem. Materials; distance ed.
India	Andhra Pradesh Economic Restructuring	Jun-98						
India	District Primary Education (02)	Jun-96	X	X		X		Awareness campaigns; IST; school grants; materials in tribal langs; pre-school; NFE; peripatetic Ts; distance ed; fund for innovations
India	Uttar Pradesh District Primary Ed. (3)	Dec-99	X	X	X	X	X	2 school models, depending on village size
India	Rajasthan District Primary Education (01)	Jun-99	X	X	X	X	X	ECD; health interventions
India	District Primary Education (03)	Dec-97	X	X		X		ECD; women's groups; IST; school grants
Pakistan	Northern Education		X	X		X		Comm. schools; TT; materials; school committees
Pakistan	Sind Primary Education Development Program	Mar-90	X	X	X			Local T recruitment & training; flexible calendar; free books; school feeding; no uniforms; assistant Ts
Pakistan	North West Frontier Primary Education	Mar-95	X			X		Village Education Committees; T incentives
Pakistan	Social Action Program	Mar-94	X			X		Female teachers
Pakistan	Social Action Program (02)	Mar-98				X	X	Locally recruited teachers; fellowships

Local = Local participation or management or decentralization
School = School construction
Curric = Altered curriculum, including multi-grade curriculum
Teacher = Incentives for teacher
Finance = Customized financing arrangements
T = Teacher; TT = Teacher training
EDC = Early childhood development program, or pre-school
IST = In-service training
NFE = Non-formal education

The overall picture that Table 5 presents is one of various strategies planned for a number of countries in every region. Table 5 does not highlight components common to many education projects that are intended to have system-wide effects: building management and administrative capacity, information systems, teacher training institutions, textbook development and publication, monitoring and evaluation, and project management. Project designs are often limited to such systemic reforms, preoccupation with systemic, central administrative reforms and pay less attention to the differences in physical, social, and economic environments throughout the country. Unfortunately, though systemic reforms are expected to reach all schools, they often fall short in rural areas.

Nonetheless, Table 5 and the foregoing discussion demonstrate the range of strategies in place to improve education in rural areas. The focus of the World Bank and other agencies on developing effective schools, improving the quality of education for girls, examining language and other curriculum-related policies, supporting experiments in distance teaching and cross-sectoral interventions all help move projects toward better rural schools.

A common feature of basic education projects is the scant data provided in project design papers on differentiated characteristics of populations *within* rural areas. This, while a project design is likely to note a distinction between rural and urban areas and—less often—to design strategies with rural populations in mind, it is unusual to find projects that distinguish between schools suitable, for example, for rural towns and for remote rural areas. There are notable exceptions. Basic education projects in India have different models of schools, depending on whether villages are large or small, and they have provisions for special groups such as nomads. A Mongolia project is designed specifically for nomad children. Basic education projects in Latin America that use the Escuela Nueva multi-grade model are aimed specifically at remote rural areas (though, ironically, the success of this model caused the government of Colombia to make it national policy). Beginning with a project in the Ivory Coast, a number of World Bank basic education projects in West Africa have adopted a ten-year strategy for building support for existing community schools in rural areas neglected by the ministry of education. Because the strategy behind this support encourages communities to play a strong role in school policies and programs, the exigencies of rural life are reflected in the schools.

In sum, there is a definite trend in World Bank basic education projects toward balancing community leadership and government support for rural schools. This strategy requires the exploitation of local knowledge of the rural political economy and social dynamics. And because this expertise is generally not found in the urban-oriented ministry of education or its advisors, collaboration between educators and rural development specialists would greatly benefit rural education projects.

Summary and recommendations

The World Bank's Rural Development Family is taking a broad perspective on rural development and integrating the various facets of rural life into its policies and projects. Basic education is one of these facets and must be included in an integrated perspective. During the past decade, World Bank and other education specialists have learned that rural areas require basic education strategies that are different from the national model, which is often based on assumptions more attuned to urban schools. Because effective rural schools—like all rural institutions—depend heavily on the support of rural communities, both rural development projects and education projects would benefit from stronger collaboration in planning and supporting rural schools. Such collaboration is in line with the Community-Driven Development (CDD) approach that the World Bank is advocating.

We are not proposing that rural development specialists bring education into their portfolios and design education components in their projects. Our report has shown how difficult it is, in fact, to plan and manage effective schools. It requires detailed technical knowledge and experience, which education specialists are best positioned to provide. Nor are we arguing for the return of integrated rural development projects that attempt to merge various sectoral activities, including schools, under one administrative umbrella. Basic education, even in rural areas, is best left to the ministry of education and its advisors.

As education specialists learn more about rural schools, the potential contribution of other specialists in rural areas becomes increasingly apparent. Education specialists have learned that it is not cost-effective to build in Timbuktu schools designed for the children of Bamako. But there are other models of cost-effective schools that can serve the children of Timbuktu. A key ingredient of effective rural schools appears to be strong community support. Yet community support is not enough. Under-served rural communities need and deserve resources from the national education system. The challenge to development workers—educators and others—is to support rural schools that meet the particular needs of rural children, allow communities to maintain a strong voice in what these schools do, and at the same time ensure that government education resources reach rural areas.

While rural schools should not look like urban schools, they must offer the same opportunities as urban schools for children to advance through the school system to higher levels. Rural schools cannot be stark alternatives to urban schools. Parents are quick to recognize that the value of education is undermined if children are denied the right to continue their education after primary school. Though the national curriculum is often poorly suited to rural schools, modifications must be acceptable to all stakeholders, including ministry officials and parents. Teachers musts be able to teach, or parents will know that the opportunity cost of their children's help at home is too high, and they will pull their children out of school.

The challenge of developing and maintaining cost-effective rural schools presents a set of technical problems that must be solved in each local context. The most pressing of these problems are finding and keeping good teachers, and sharing costs fairly between central government, local communities, and parents. We have seen some workable strategies for getting good teachers—particularly female teachers—in rural areas, including local recruitment, in-service training, support through school clusters, and incentives such as monetary benefits and housing. We have also seen several strategies for cost-sharing, including targeted government grants, contracts between government and school-community organizations, and decentralized financing. Financing problems are not limited to finding the funding required to build and maintain good-quality rural schools. Problems also arise in getting funds to the teachers and schools in a timely manner. Investments in large-scale one-time-cost interventions, such as constructing a school or creating a distance learning system, have severe implications for recurrent costs.

Persisting issues

Two issues remain on the table. The first is whether to prioritize investments in rural areas where modernizing activities are generating more need for educated workers and where return on investments in education is high, or to concentrate on more traditional, backwater areas, where poverty is more pervasive. Our position is that while this growth vs. equity debate may be a concern at higher levels of education and training, it is irrelevant to rural primary schools. We have found that even the most remote communities want education for their children enough to build and maintain schools with the most meager of resources. It hardly seems a viable policy choice to ignore these and direct national resources to more economically developed areas, where communities can better afford to support their schools. The solution, it seems, is to distinguish between various rural conditions and to support the various models of schools that meet those conditions, including the poorest, most difficult to reach. This position is in keeping with the poverty-alleviation focus of current Bank policies.

The second issue is how to advocate and foster cross-sectoral partnerships in rural areas when national bureaucratic structures work against them. How can local rural development specialists collaborate with local education specialists on improving rural schools when they have no structural incentive to do so? The same question can be asked about their international advisors and funders. Why should World Bank specialists work across sectors when the organizational structure is not encouraging? We would argue that the remarkable payoff to rural communities from the education initiatives of rural development organizations, such as those demonstrated by Bangladesh's BRAC and Mali's Save the Children, should compel those in rural development and in education to reach across bureaucratic boundaries. The Bank's own successful efforts in school health activities in West Africa also demonstrate the potential for success in cross-sectoral collaboration.

How can rural development specialists help improve rural schools?

We have discussed that, in order to contribute to economic growth and to improve their own quality of life, people living in rural areas need at least a basic education. Rural development suffers when levels of primary school enrollment are low. Conversely, rural schools and their students suffer when rural development programs fail to take notice of their potential for developing human capital and for reducing poverty. People with a basic education need opportunities for jobs, credit, and/or land, if they are to put their new skills and knowledge to use. Thus, rural development and basic education are a two-way street. Those who work in education can benefit through collaboration with those who work in rural development, and vice versa.

We conclude by offering recommendations for initial steps that rural education specialists at the World Bank and their clients can take with their colleagues in education to improve rural schools.

- Help educators define what is "rural." Bank documents reveal that those who plan education projects do not generally look at quantitative or qualitative data that would demarcate rural areas and that would reveal variations within rural areas that are important for supporting rural schools. Rural development specialists might help education specialists analyze the rural space, both the physical and social/cultural environment, so that either national or targeted rural education projects take the particular rural environment into account in project design and implementation. School mapping (determining where new schools should be built) is a particular exercise that would benefit from input of individuals that know the rural areas being mapped.

- Collaborate in the preparation of World Bank required planning documents, including the Country Assistance Strategy and the Poverty Reduction Strategy Paper (PRSP). The PRSP, in particular, includes a focus on Community-Driven Development (CDD), which is the process shown to be effective in providing access to those public goods that are within the management capacity of community organizations. The CDD process encourages cross-sectoral activities and provides a procedural opportunity for Bank staff and their clients to consider improvements in primary schooling in plans for developing and sustaining the rural space.

- Make available to schools people and other resources for teaching children about their rural environment, agricultural skills, and other practical skills and knowledge that complements the academic curriculum. Help schools connect children to their environment.

- Partner on straightforward, well-defined interventions, such as mounting solar-power panels on schools or providing well water to schools. Satisfactory cooperation on visible projects might then point the way to other kinds of collaboration.

- Encourage communities to use the school as a center for education and social activities beyond primary school. Make the school hospitable for adult literacy classes, extension activities, women's groups, community functions, and other activities and events. This not only brings parents into the school, it also helps transform the school into a multi-function learning and meeting center and puts it at the center of the community. The CDD process lends itself to exploring community uses of school facilities.

- Collaborate to train extension agents and primary school teachers to listen and respond to expressions of needs and problems outside of their own professional setting. Extension agents can learn to deal not only with agriculture and teachers not only with schools, but instead, both can deal with the broader rural space.

- Promote political support. Effective schools, like other rural institutions, require broad-based support at the local level. Projects in all rural sectors, including education, often have components designed to increase support for their activities. Rural development and education specialists might pilot activities that foster local political support for a wide array of development activities, including school improvements as well as other rural development activities. Again, the CDD process provides opportunities for this kind of cross-cultural cooperation.

In sum, rural schools need more attention than they can get from the ministry of education. Genuine partnerships between education and rural development specialists can go a long way toward making rural schools effective. Our primary recommendation is that World Bank staff develop these partnerships in project planning and implementation as well as through continued sharing of information about their common needs and interests.

Annex 1. World Bank education projects with rural components, 1989-99

Country	Project name	Board Date	$US
AFRICA			**1058.2**
Benin	Education Development Project	05/17/1994	18.1
Burkina Faso	Education Project (04)	05/21/1991	24
Cape Verde	Basic Education and Training (BET) Project	01/19/1995	11.5
Chad	Basic Education Project	05/25/1993	19.3
Comoros	Education Project (03)	06/30/1997	7
Cote d'Ivoire	Education and Training Support Project	05/29/1998	53.3
Ethiopia	Education Sector Development Program Support Project	05/26/1998	100
Gambia, The	Education Sector Project (02)	05/24/1990	14.6
Gambia, The	Education Sector Project (03)	09/10/1998	20
Ghana	Basic Education Sector Improvement Program	06/18/1996	50
Ghana	Primary School Development Project	06/10/1993	65.1
Guinea	Equity and School Improvement Project	05/09/1995	42.5
Guinea-Bissau	Basic Education Support Project	06/10/1997	14.3
Kenya	Education Sector Adjustment Credit	01/14/1994	42.2
Kenya	Education Sector Adjustment Credit	12/23/1992	52.1
Lesotho	Education Sector Development Project (02)	04/15/1999	21
Lesotho	Education Sector Development Project	07/09/1991	25.2
Madagascar	Education Sector Reinforcement Project	02/13/1990	39
Madagascar	Education Sector Development Project	03/10/1998	65
Malawi	Primary Education Project	01/25/1996	22.5
Malawi	Education Sector Credit Project (02)	12/21/1989	36.9
Mauritania	General Education Project (05)	04/18/1995	35
Mozambique	Education Project (02)	12/20/1990	53.7
Mozambique	Education Sector Strategic P roject	02/18/1999	71
Niger	Basic Education Sector Project	05/31/1994	41.4
Tanzania	Human Resources Development Pilot Project	10/07/1997	20.9
Uganda	Primary Education and Teacher Development Project	05/13/1993	52.6
Zambia	Basic Education Subsector Investment Program Support Project	04/08/1999	40
EAST ASIA/ PACIFIC			**1299.33**
Cambodia	Education Quality Improvement Project	08/31/1999	5
China	Basic Education Project (04)	05/27/1997	85
China	Basic Education in Poor and Minority Areas Project	09/06/1994	100
China	Basic Education Project (03)	03/21/1996	100
China	Education Development in Poor Provinces Project	03/10/1992	130
China	Southwest Poverty Reduction Project	06/15/1995	247.5
Indonesia	Primary Education Quality Improvement Project	03/24/1992	37
Indonesia	Sulawesi and Eastern Islands Basic Education Project	04/08/1999	63.83
Indonesia	Sumatera Basic Education Project	04/08/1999	74.6

Lao People's Dem.	Education Development Project	04/27/1993	19
Malaysia	Education Sector Support Project	03/30/1999	244
Mongolia	Poverty Alleviation for Vulnerable Groups Project	07/06/1995	10
Philippines	Third Elementary Education Project (TEEP)	11/26/1996	113.4
Vietnam	Primary Education Project	10/26/1993	70
EUROPE/ CENTRAL ASIA			**396.8**
Macedonia	Education Rehabilit ation Project	09/02/1997	5
Moldova	General Education	11/12/1997	5
Moldova	Social Investment Fund Project	02/16/1999	15
Moldova	General Education Project	04/22/1997	16.8
Romania	Education Reform Project	04/05/1994	50
Tajikistan	Education Reform Project	05/13/1999	5
Turkey	Basic Education Project	23-Jun-98	300
LATIN AMERICA/ CARIBBEAN			**2842.71**
Belize	Primary Education Development Project	12/05/1991	7.1
Bolivia	Education Quality and Equity Strengthening Project	06/16/1998	75
Brazil	Parana Basic Educat ion Quality Project	06/28/1994	96
Brazil	Basic Education Quality Improvement Project	05/17/1994	150
Brazil	School Improvement Project (02)	06/08/1999	202
Brazil	Northeast Basic Education Project (03)	11/23/1993	206.6
Brazil	Northeast Basic Education Project (02)	05/13/1993	212
Brazil	School Improvement Project FUNDESCOLA (01)	04/02/1998	62.5
Chile	Primary Education Improvement Project	10/03/1991	170
Colombia	Pasto Education Project	11/06/1997	7.2
Colombia	Antioquia Education Project	11/06/1997	40
Costa Rica	Basic Education Rehabilitation Project	11/12/1991	23
Dominica	Basic Education Reform Project	12/21/1995	6.14
Dominican Republic	Primary Education Development Project	06/20/1991	15
Dominican Republic	Basic Education Development (02) Project	11/09/1995	37
Ecuador	Social Development Project (01) - Education and Training	12/17/1991	89
El Salvador	Basic Education Modernization Project	09/28/1995	34
El Salvador	Education Reform Project	05/07/1998	88
Grenada	Basic Education Reform Project	12/21/1995	7.65
Guatemala	Basic Education Reform Project	05/20/1997	33
Honduras	Basic Education Project	03/28/1995	30
Mexico	Basic Education Development Project	06/04/1998	115
Mexico	Primary Education Project	09/26/1991	250
Mexico	Primary Education Project (02)	03/31/1994	412
Nicaragua	Basic Education Project	03/16/1995	34
Nicaragua	Basic Education Project (02)	08/31/1999	52.5
Panama	Basic Education Project	03/28/1996	35
Peru	Primary Education Quality Project	12/15/1994	146.4

St. Lucia	Basic Education Reform Project	01/24/1995	6.72
Trinidad and Tobago	Basic Education Project	11/16/1995	51
Uruguay	Basic Education Quality Improvement Project	05/03/1994	31.5
Uruguay	Basic Education Quality Improvement Project (02)	07/30/1998	28
Venezuela	Basic Education P roject	11/04/1993	89.4
MIDDLE EAST/ NORTH AFRICA			**148.7**
Egypt, Arab Rep	Education Enhancement Program Project	12/24/1996	75
Morocco	Social Priorities Program - Basic Education Project	05/30/1996	54
Yemen, Republic	Basic Education Project	07/09/1992	19.7
SOUTH ASIA			**2991.6**
Bangladesh	Primary Education Development Project	04/09/1998	150
Bhutan	Education Project (02)	03/03/1998	13.7
India	Uttar Pradesh Basic Education	06/10/1993	165
India	Andhra Pradesh Economic Restructuring Project	06/25/1998	543.2
India	District Primary Education Project (02)	06/06/1996	425.2
India	Uttar Pradesh District Primary Education Project (03)	12/16/1999	182.4
India	District Primary Education Project (03)	12/04/1997	152
India	Rajasthan District Primary Education Project (0 1)	06/08/1999	85.7
India	Uttar Pradesh Basic Education Project (02)	12/04/1997	59.4
India	District Primary Education Project	11/22/1994	260.3
Nepal	Basic and Primary Education Project (02)	03/30/1999	12.5
Nepal	Basic and Primary Education Project	04/21/1992	30.6
Pakistan	Northern Education Project	10/30/1997	22.8
Pakistan	Balochistan Primary Education Project	04/13/1993	106
Pakistan	Sind Primary Education Development Program Project	03/13/1990	112.5
Pakistan	North West Frontier Primary Education Pro ject	03/14/1995	150
Pakistan	Social Action Program Project	03/31/1994	200
Pakistan	Social Action Program Project (02)	03/24/1998	250
Sri Lanka	General Education Project (02)	12/09/1997	70.3
TOTAL			8737.34

Annex 3. Escuela Nueva and BRAC

The Escuela Nueva and BRAC models of schooling began in rural areas, where they achieved remarkable success and worldwide notoriety. The models feature flexible elements suited to rural children and their families. They also involve parents in school affairs.

Escuela Nueva

Colombia's Escuela Nueva program was created to overcome curriculum, training and administrative deficiencies in rural schools. In the early 1980s about 55 percent of five to nine-year-olds and 45 percent of ten to fourteen-year-olds in rural areas had never attended school, and one-third of first-graders dropped out. The schools are multigrade, with one or two teachers per school. The Escuela Nueva is the best known model of multigrade schools and has been observed by educators from around the world. Students work at their own pace, and individual assignments are supplemented with work in small groups. Self instruction books guide them in identifying examples, cultural elements from their own experience, and local materials to be accumulated in the learning centers. The more advanced students help slower students. Children also participate in health, sanitation and nutrition activities. In this way, the school gradually becomes a resource center for teachers, for agencies operating in other sectors and, eventually, for the community itself.

Teachers are trained on-the-job in three one-week courses during the first school year. They have detailed manuals, similar to the students' instruction books. Thus, teachers learn by practice instead of through extensive pre-service lectures. Teachers also attend workshops held at "micro-centers," where they are encouraged to exchange ideas and questions with other teachers.

Students participate in school government; they organize into committees to take care of discipline, cleaning, maintenance, sports, school garden, newspaper and library. Teachers are encouraged to organize meetings with parents and discuss the material prepared by the students. In this way, communities participate in designing and supporting the school curriculum.

Evaluation of the program, which has expanded rapidly to some 20,000 schools, suggests that educational achievement and civic behavior compare favorably with the output of traditional schools, at similar costs per pupil.

BRAC

The Bangladesh Rural Advancement Committee launched a project in 1985 to educate children in rural areas. With successful projects in rural development, credit, and health, BRAC began by providing basic literacy and numeracy to eight- to ten-year-olds in 22 villages, but the success of the endeavor led to a rapid increase in schools. By 1998, about 34 thousand schools were serving over 1.2 million children. BRAC targeted girls but did not exclude boys.

A BRAC school has about 30 children who live within a few kilo meters. They are taught in a rented room by teachers from the local community who are paid modest wages. Teachers receive 15 days of initial training and one or two refresher days each month. Though parents do not pay for schooling, they are expected to attend regular meetings. Costs are kept low by employing teachers on a part-time basis and eliminating capital costs. Students are taught in a rented room by teachers from the local community who are paid modest wages. The school has simple materials, and students receive writing materials and books. The annual calendar and daily schedule are flexible, and parents select the time of day classes are to be held.

The ministry of education allows those who complete a BRAC school program to enter the fourth grade in government schools.

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Rural Development Courses in Indian Universities, USA, New Zealand, What is the scope of rural development? What is MA in Rural Development (MARD) course?Â -Master of Rural Development -MA Rural Development -MBA in Rural Management -PG Diploma in Rural Management -PG Diploma in Rural Development. MPA: Master of Public Administration. Courses Abroad. Bachelorâ€™s Level Courses. Masterâ€™s Level Courses. -Bachelor in International Rural Innovation and Development -BSc (Hons) Wildlife Conservation.Â For those who are in seek of quality education, it is important to thoroughly research your chosen institution. Here is a list of prominent universities and colleges that offer Rural Development courses in India and Abroad. Improving education in rural areas: Guidance for rural development specialists. For Charles Maguire: The World Bank. MuÃ±oz, J. (2010).Â A materials development guide for EFL pre-service, novice, and in-service teachers. BogotÃ¡: Editorial Universidad Externado de Colombia. Parada, C., & Espitia, A. (2008). Unit design combining the English Discoveries software and the eclectic approach. An experience in a rural secondary school. Proceedings from 43rd ASOCOPI Annual Conference on ELT Materials: Possibilities and Challenges for the Classroom. Tunja, Colombia. PatiÃ±o-CÃ¡rdenas, L., Bernal-Vera, M., & CastaÃ±o. E. (2011). CaracterizaciÃ³n de las dinÃ¡micas de la educaciÃ³n rural en sus primeras etapas (AnÃ¡lisis de caso Escuela Rural de Caldas). Vet.zootec. 5(1), 69-86. Instead, improving Polish education in general and rural education in particular will in large measure have to be made through increasing the efficiency of the sector. Achieving these gains in efficiency will probably require new investments in the sector. More importantly, they will require significant changes in how money in the sector is spent, points that we will return to at length throughout this report and which, in fact, constitute the foundation of its recommendations.Â Rural poverty and unemployment in turn complicate the challenge of improving rural education in a number ways. First, they make it difficult for parents to contribute additional funds to the education of their children.