

Education NOTES



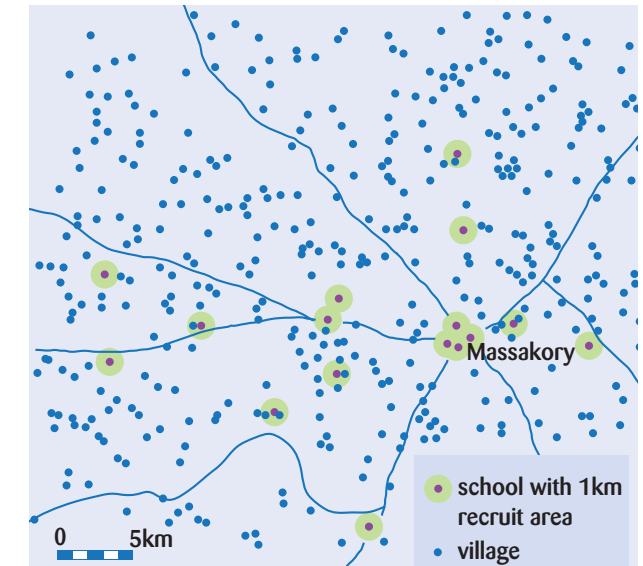
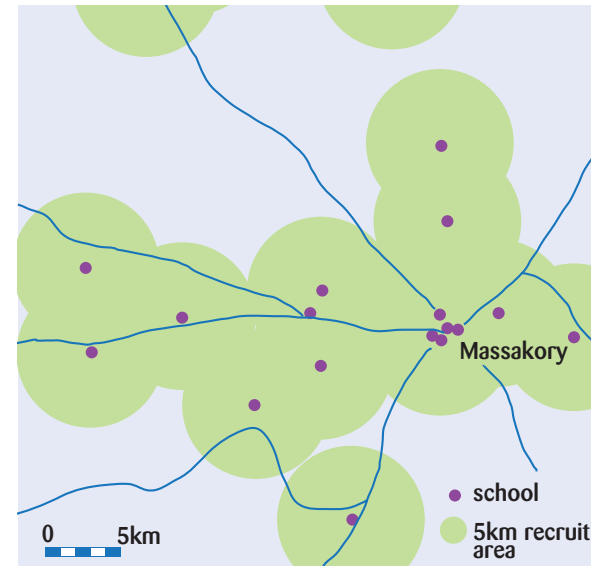
Bringing the School to the Children: Shortening the Path to EFA

Recent education planning initiatives in West and Central Africa show that the path to EFA may be shortened considerably by reconsidering the way basic education is delivered in isolated rural communities. Since independence, education systems have been expanding rapidly and are now serving most of the easy-to-reach population. [For progress to continue, the focus must be shifted toward the sparsely populated areas, which means adjusting the type of schools used, and building them close to where children live.](#)

Most out-of-school children live in rural areas. Unfortunately, few rural schools offer the complete primary cycle. A number of factors contribute to the incomplete-cycle phenomenon. The most significant is that the potential student population is insufficient for a three- or six-teacher school. Having children walk to school from neighboring villages also contributes to low enrollment and low student-teacher ratios. Since teachers generally do not teach more than 1 or 2 grades at a time in a classroom, rural communities usually have low student-teacher ratios, and education system administrators cannot justify sending additional teachers to the school. In addition, schools with incomplete cycles tend to have extremely low survival rates.

As with any public service, the proximity to point of delivery is a factor in determining whether the client will make use of the service. In education systems across the region, this issue is poorly understood. A World Bank program in West Africa (the Rural Access Initiative, or RAI) uses simple Geographic Information System (GIS) technology to help education planners understand and take ownership of education supply and demand. Three dimensions of incomplete access are identified and subject to analysis: (i) the proportion of the population residing outside of all school recruitment zones, (ii) the effectiveness of school coverage within official school recruitment zones, and (iii) the extent to which rural schools offer incomplete cycles.

The resulting analysis gives a much more complete picture of how difficult it can be for a child in a rural community to complete the entire primary cycle. Problems that initially seem to be a result of low community interest in basic education actually prove to be more an issue of insufficient supply. Field research in 179 villages in 2002–2003 in the western Sahelian region of Chad gave education officials insight into the challenge of education in an area considered to be in the “low demand” category. Prior to this research, education officials knew the approximate location of most of the schools. Each school theoretically covered a zone extending 5km. The field study found that village enrollment rates dropped off sharply for satellite villages officially served by the



local school. Results suggest that when the distance is greater than 1km, schools offer negligible coverage. Proportionally, girls enrollment drops off more quickly than boys’ for distances of less than 1km.

The distance issue includes several dimensions:

- physical distance as measured in kilometers
- cultural distance, or the drop-off that occurs when children are expected to leave their own community to go into a community that may be considered foreign or unfriendly; and
- time distance, which takes into account the physical barriers such as mountains, rivers, forests or other obstacles that lengthen the travel time.

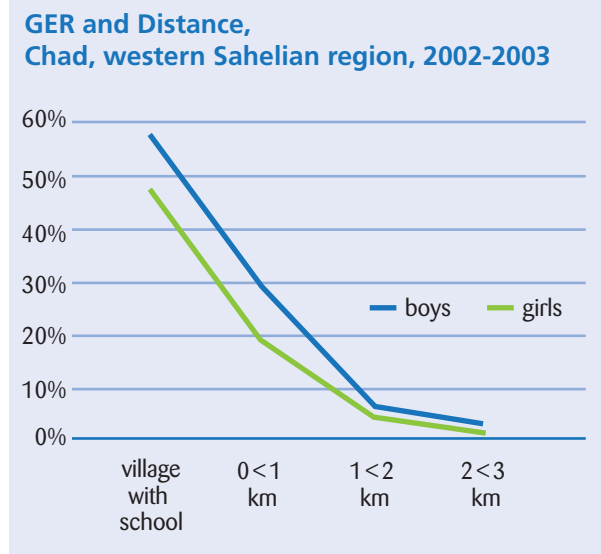
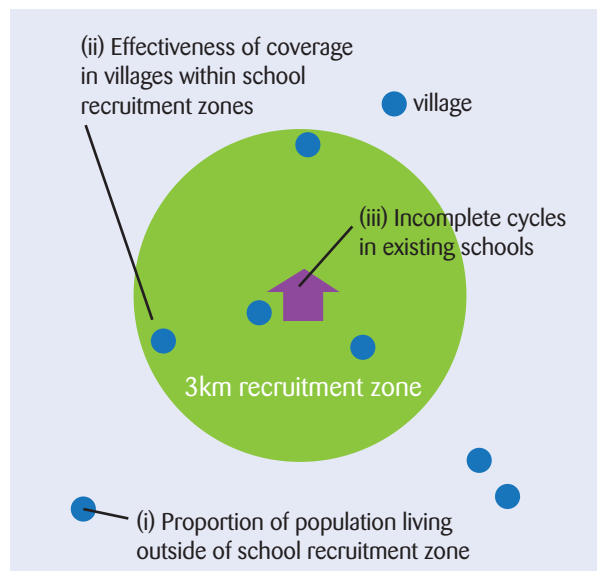
A limited GIS application also showed education planners where people lived in relation to the schools. It was found that only 8% of the villages have schools, and an additional 23% were within a 3km radius of a school. The remaining 69% were at a distance greater than 3km. The maps below contrast the way education coverage looked to the Ministry before the study (above left), when there was little information on where people lived and how far children, in reality, would walk to school, and after the GIS mapping was conducted (above right).

Another way of understanding the issue of uneven access is to look at which villages are sending children to school: In the western Sahelian region of Chad, 80% of enrolled children come from the 8% of the villages that have schools located in them. Even in villages with schools, only 28% of students have access to a school offering the full primary cycle.

With the relatively low density of population in the Sahelian region, it will be almost impossible for enrollment rates to reach EFA targets if the smallest full-cycle school requires three teachers. Schools in remote areas will need to be smaller to ensure sustainable student-teacher ratios. As official recruitment areas decrease in size, the population per school will also decrease, reinforcing the need to develop one and two-teacher school models. Education systems in more developed areas of the world relied heavily on small rural school models prior to the development of modern, rural transportation networks; the United States still has 463 single-teacher primary schools, and once had tens of thousands of such schools, so a similar pattern may be effective in Africa. These schools need not be low quality or costly, but they do need support, and teachers need specialized training.

Education decision-makers and planners have responded positively to analysis generated by the RAI. Several countries are implementing field data

School year 2001-2002	Senegal (Sahelian region only)	Chad
Total number of schools in rural areas	3,933	1,145
Rural schools with incomplete cycles	3,111 (78% of total)	792 (69% of total)
Average number of grades taught	2.68	3.10
Average number of grades taught in schools open for more than 6 years	3.39	3.62



collection, and three have started exploring options for developing rural school models. As consensus emerges for a smaller school model, pedagogical institutions will be called upon to prepare new teachers for classroom settings where several grades are taught together. The widespread frontal teaching techniques, which constitute perhaps the greatest quality challenges for primary education in Africa today, are incompatible with the one-teacher school model.

Developing a sustainable rural school model also means breaking down the barriers that currently limit a community's involvement in basic education. These barriers range from centralist approaches to teacher recruitment, assignment and salary payment, school calendar, classroom construction, and the opening and closing of schools to such politically charged issues as language of instruction and religious training. While countries are already working on most of these issues, it is vitally important that they view their offerings to rural communities as a "package." Bringing schools closer to children can significantly reduce uneven coverage, but other issues, relating primarily to the quality of education, must also be addressed to cover the remaining distance to EFA. What residual demand-side issues would remain once the distance and quality problems are resolved? The only way to answer this question is to isolate for the other factors. Over the medium term, several countries will pilot a comprehensive rural-friendly strategy that would be cost-effective for nationwide application. The availability of EFA Fast-Track funding provides an excellent opportunity for some of the poorest countries to close the education gap between their rural and urban areas.

Lessons Learned

- Distance to school cannot be measured only by physical distance, but must take into consideration cultural, time and natural/physical barriers.
- Enrollment drops off dramatically when children, particularly girls, are asked to attend school in a village other than their own. In rural Chad, when the distance to school is greater than 1 km, enrollment rates are negligible. Bringing schools closer to children can significantly reduce uneven education coverage.
- Simple GIS technology can provide valuable information previously unavailable to education planners.
- All children should have access to the complete primary cycle; smaller one and two-teacher rural schools can be effective for areas with small numbers of students.

Remaining Challenges

- Cross-sectoral support will need to be provided so that education planners gain access to georeferenced population data.
- Teacher education programs must be redesigned to make the rural school model possible, including courses in multi-grade teaching.
- Sufficient support must be available to ensure timely supply of materials and training opportunities in the rural multi-grade context.

This note series is intended to summarize lessons learned and key policy findings on the World Bank's work in education. The views expressed in these notes are those of the authors and do not necessarily reflect the views of the World Bank. For additional copies of Education Notes, please contact the Education Advisory Service by email at eservice@worldbank.org or visit the web site: <http://www.worldbank.org/education/>

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