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## Improving the Quality of Primary Education in Africa: What Has the World Bank Learned?

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## **ACRONYMS AND ABBREVIATIONS**

- NGO Non Gouvernemental Organisation
- **PASEC** Programme d'analyse des systèmes éducatifs des pays de la CONFEMEN
- SACMEQ Southern Africa Consortium for Monitoring Educational Quality
- SWAP Sector Wide Assistance Program
- **USAID** US Agency for International Development

## **1. EXECUTIVE SUMMARY**

1. This account of trends and new approaches in World Bank primary education projects in Africa attempts to show where the Bank's support has increasingly raised the level of quality and where and in what ways its efforts are stalled. It is based on education project design and evaluation documents produced between 1987 and 2003 for 58 projects in 30 countries and on interviews with Bank task managers of projects in Ethiopia, Guinea, Lesotho, Mali, Mauritania, Senegal, Uganda, and Zambia. Using these data we describe the "operational knowledge" acquired by the Bank, that is, the institutional changes in African education institutions that have put theoretical knowledge into practice.

2. During the period of this account the World Bank has moved from a focus on providing for construction and textbooks to a focus on the systemic issues of improving quality. It has shifted from an emphasis on the central ministry toward the classroom level. Its greatest successes have been in increasing financial support for basic education quality and in beginning to help countries tie their education policy frameworks to broader efforts to reduce poverty. Its greatest failures have been its inability to transform dysfunctional management systems and to help educators at each level of the system develop a sense of efficacy and take responsibility for improving quality.

## 1.1. School-based quality inputs

3. "Quality" interventions have historically been defined as the inputs and processes that produce learning. The basic inputs are classrooms, textbooks, and teachers, and the basic processes are curriculum and examination development and renewal. Though the Bank has begun to learn to provide textbooks more efficiently, by helping governments privatize the operations involved, most ministries still do not get books to schools in a reliable and timely fashion. It has also found that if all children are to have books, they will have to be paid for with public funds, as many poor families will not pay even minimal fees for books. Parents and other community members have, however, contributed to the construction of classrooms, mostly through in-kind support such as labor and land, and this has increased considerably the rate and which new classrooms are being built.

4. Providing schools with competent teachers continues to be a challenge. Progress has been made in bringing teachers' salaries in line with what countries can afford to pay and what teachers are willing to accept. In francophone Africa, this has come about through the use of contract teachers outside the civil service, an innovation that was introduced as a response to the immediate need for more teachers in a fiscal environment that could not afford to add teachers to the civil service payroll. Contract teachers have also provided a longer-term solution to the unbearable burden of teachers' salaries and benefits.

5. Recruiting unqualified teachers and giving them in-service training has become a promising strategy for meeting both urgent and longer-term needs for a larger teaching force. This strategy has not only helped to lower the cost burden of teachers, it has also broken the tradition of exclusively theoretical training and brought classroom practice into training programs. Reductions in the time spent in residence at pre-service training colleges have also proven to be cost-effective, and in most countries, ministries are beginning to integrate pre-service and in-service curricula and methods; some are extending these into continuing professional development programs. Thus, teacher education has been slowly reformed from two to four years of pre-service theory to courses that are more practical and that rely - often heavily - on in-service training.Much remains to be tested, however, in teacher education.

6. While it remains controversial, the use of the mother tongue as the language of instruction during the early years of school has been shown to be pedagogically sound; the constraints to this practice have been political and social, as well as logistical and managerial. In the realm of exams, Bank projects have given some support to improving validity, reliability, and use of public, end-of-primary cycle exams and to helping teachers use the tools of continuous assessment of students in the classroom.

7. Two sorts of innovations have been tested to complement the standard quality inputs. In a few countries the Bank has supported the use of radio as an instructional medium in the classroom, but the perceived cost of taking to scale this enterprise and the difficulty in changing teaching and administrative practices has usually discouraged its institutionalization. The other set of innovations is aimed at enhancing children's readiness for school. School-based health and nutrition activities have demonstrated in a few countries the feasibility of delivering services that increase students' energy levels and attentiveness, but the frustration of building inter-ministerial cooperation (with the health sector) to implement such activities has limited their spread. Early childhood development programs, which are widely believed to prepare children for primary school, have also received increased attention, but these efforts are too new and too small to have taught much yet about their actual impact on learning in African schools.

## **1.2.** Planning and managing quality

8. The Bank's efforts to improve quality have revealed that the planning for and management of quality inputs in terms of expected outcomes (improved learning) is critical. Fifteen years of project planning and implementation have reiterated the importance of a policy framework that guides programs and projects and of the value of broad participation in developing the framework and monitoring its implementation. Where policy frameworks have been taken seriously by both the government and external agencies, long-lasting improvements in quality appear to be more likely. In a few countries the Bank has seen capable ministries begin to take over responsibility for planning priorities, develop a medium-term budget framework to support those priorities, and – to some extent – hold officials accountable for the resources they are given to implement the plan. The Bank's current strategy is to move toward specifying outcomes rather than inputs and to help the government take the lead in defining the inputs and processes that achieve the agreed-upon outcomes.

9. Bank-supported projects have helped ministries build management systems. The past 15 years have seen the development of viable financial management systems and information management systems in some countries. Most recently, several countries have focused on building human resource management (personnel) systems that help ministries keep track of the deployment and salaries of teachers, inspectors, and other staff and institute career ladders based in part on their continuing professional development. Ministries have also become better at managing the distribution of textbooks and construction materials.

10. Many countries now have performance monitoring systems, some of which produce regular reports on the quality of education as measured by test scores among a sample of students across the country. These systems also allow ministries to detect variations in student performance from place to place and even to examine correlations between this and other variables, including inputs.

11. As most countries move toward decentralized education services, the Bank has begun to learn how to build managerial capacity at intermediate levels. At the school level, the Bank has helped convey the importance to quality education of a well trained and supported school director, and some projects now go beyond lip service in improving school-based management. The value of community support for schools has also received increasing attention, though no models have been tried and proven to the degree that they are widely accepted. Experience in some countries with community schools – initiated outside the government system with NGO support – has taught that communities can and will support their own schools. Ministries and external agencies have also agreed, however, that poor rural communities should not be asked to pay for classrooms, teachers, and textbooks when more affluent urban families do not. Based on this learning, the Bank has helped ministries take over the financing of key inputs in community schools.

## **1.3.** Financing quality

12. In financing improvements in quality inputs, one Bank strategy has been to urge governments to add a budget line for non-salary items, mainly textbooks. This has been accomplished, though in countries struggling to keep up with growing enrollments, it has more value as an institutionalized procedure than as a demonstrated means of improving quality. Another has been the shift to contract teachers, and a third the contributions of communities to classroom construction.

13. To increase the financing of basic education in a broader way – access as well as quality – the Bank has played a lead role within the international community in pressuring governments to reallocate more funding to basic education.

14. The international community is redefining objectives in terms of a primary school completion rate. Unlike the raising of enrollment rates, the raising of completion rates requires that the quality of schooling is good enough for students and their parents to continue paying the direct and opportunity costs of completing primary school.

## **1.4.** Constraints to improving quality

15. The achievements highlighted above are points of light in what has otherwise been a vain struggle. A number of constraints to improving quality persist.

- The persistent shortages of essential inputs and processes (teachers, textbooks, classrooms, curricula and exam systems) have thwarted efforts to improve learning in the classroom. The requirement of additional funding for quality inputs has continued to compete with the drive for universal enrollment. While enrollments have increased significantly, due to growing birth rates as well as the global campaign for Education for All, macro-economic performance has not improved across much of Africa. In addition, many governments have been unable to sustain their resistance to countervailing pressures from the university community for substantial funding and from other sectors, particularly the military. Thus the main indicators used to monitor quality ratios of students to teachers, books, and classrooms show significant deterioration in quality. This is one example of conflict between the Bank's knowledge of what contributes to quality in education and what is difficult to put into practice because of competing goals and scarce resources.
- In many countries assets are badly managed, including the delivery of textbooks, deployment of teachers, and maintenance of classrooms. This results in their inefficient and inequitable use. The absence of effective strategies for building capacity and strengthening management continues to constrain improvements in

quality. Although most Bank basic education projects include a component addressing management problems, these have not succeeded in lowering the barrier of poor management. The government, the Bank, and other external agencies supply an ever-growing amount of funding to increase the production of quality resources, but productivity within the ministry remains low. Little has been learned about how to institute good work practices and incentives to ensure their application. Little has been done to build consistent leadership within the ministry. During the tenure of a strong minister or other high-level officer, changes are visible, but often his or her departure brings a halt to progress. The Bank has not learned how to help ministries develop bureaucracies that outlive individuals.

- Improving the quality of education has to go beyond supplying essential inputs. It requires both systemic processes, such as continual development of curricula and instructional materials, and systemic capacity to take pilot programs to scale and diffuse ongoing reforms. With a few exceptions, the Bank has not succeeded in helping ministries transform dysfunctional offices into creative and supportive systems. Bank projects have not had much effect on primary school curricula or exams, in spite of consistent pushing for relatively more attention to core courses and to increasing the hours of instruction. While implementing these two policy measures might vastly improve quality, weak systems fail to do so. Until essential inputs can be provided and critical policies enforced, it may be too ambitious to ask ministries to implement more demanding pedagogical strategies, such as child-centered teaching or use of electronic media.
- Schools and their communities are ill-prepared to manage the new responsibilities that are being relegated to them. While governments' increased decentralization of administrative responsibilities and encouragement of school- and community-based management are welcome moves, there has been no large-scale demonstration of effective support strategies for these moves. Not enough attention has been given to preparing members of school management committees, school directors, and district and regional administrators in their significantly increased responsibilities.
- The neglect of evaluation components in projects has led to the absence of solid evidence on outcomes. Although ministries now have performance monitoring systems, these have often been built by outsiders and their potential for providing information is underused. Thus, policy-makers have no empirical base for allocating resources little knowledge of what combinations of inputs and kinds of strategies actually make a difference in the classroom. The Bank still knows little about how well teachers are trained in the use of textbooks and teaching methods and to what extent these tools become part of their repertoire.

16. Sector-wide approaches hold promise, provided they (1) place responsibility for identifying problems on those responsible for solving them, (2) emphasize management of implementation, and (3) address systemic issues, including those that go beyond the ministry of education. We conclude with three insights that elaborate on these provisions.

## 1.5. Underlying conclusions

17. Three conclusions underlie what has been learned about improving the quality of education and what can strengthen sector-wide approaches.

• First, learning how to improve quality is the job of those responsible for the task. As demonstrated at the school level in Guinea and the top level of the ministry in Uganda, those responsible for improving quality are best served by the facilitation of a process that helps them set meaningful goals or outcomes and define and manage the resources needed to reach the goals. Helping educators model this process is

perhaps the best means available to the Bank of improving the learning environment of the education system, including the classroom.

- Second, managing resources is as important as mobilizing resources. The most persistent weakness in Bank support has been its failure to transfer the knowledge and skills needed to manage good work practices, to develop leadership, and to help ministries and governments use their bureaucracies to hold officials accountable for the resources they are given.
- Third, improving the quality of basic education is a task that extends beyond the ministry of education. Though this is not a new insight, the extent of its implications has been underestimated. Providing classrooms, teachers, and textbooks to students requires the development and maintenance of complex systems within and beyond the ministry of education. Improving quality also requires interactions between schools and communities, and it benefits from complementary support for children's health, nutrition, and pre-school development.
- 18. In sum, improving quality is far more difficult than improving access.

## **2. INTRODUCTION**

19. What has the World Bank learned about improving the quality of basic education in Africa? This is an account of trends and changes in 58 World Bank education projects in 30 countries approved between 1987 and 2003. Its purpose is to show how the Bank's experience has led to a better understanding of strategies for improving quality, opened new directions, and abandoned fruitless approaches. It also reveals barriers to quality improvements that have not yet been overcome.

20. We are interested not in what researchers or others have learned about best practices, in theory, but in how this "learning" has been translated into practice. Publications in the late 1980s, such as *Improving Education in Developing Countries*<sup>1</sup>, reveal awareness among at least some Bank research staff members of then-current knowledge about education quality. But how much of what was put forth in that book has become institutionalized across sub-Saharan Africa? Where have the Bank's projects reinforced assumptions? What has worked as expected? What continues to frustrate efforts and require us to learn more? What else has been learned?

## 2.1. Conceptual framework

21. Our conceptual framework has three dimensions.

- One is a simple problem-solution scheme: How were the initial problems defined? What strategies were used to address them? To what extent have the strategies proven effective? And what have we learned about the nature of the problem and its solutions?
- The second dimension is an analysis of the components inputs and processes that comprise quality improvements. Following the general scheme of components used in the design of Bank education project (access, quality, equity, and management), we look at the quality component. We are not concerned with either access (strategies used to increase enrollment) or equity (strategies for targeting under-enrolled groups, particularly girls and children in rural areas). We also look at the management component, which proves to be highly relevant to quality.
- The third dimension is time. Our analysis is built on trends over the 15-year period of the review; thus it focuses on changes in quality components – or absence of changes – during this period.

## 2.2. Methodology

22. We have used an empirically based methodology, striving to ground findings and conclusions in project-related evidence.

23. We first compiled a set of documents on World Bank education projects in Africa: 58 Staff Appraisal Reports (1987-96) and Project Appraisal Documents (1997-2003). Every project approved prior to 1995 and some approved between 1996 and 1998 has an Implementation Completion Reports (ICR); altogether we read 33 of these. Performance Audit Reports were available for four projects. Project funding ranged from \$4.9 million for a 1999 Guinea project dedicated to improving pre-service teacher education to \$150 million for a 2002 primary education program in Tanzania. A list of

<sup>&</sup>lt;sup>1</sup> Lockheed, Marlaine E., and Adriaan M. Verspoor (1991), *Improving Education in Developing Countries*. Published for the World Bank by Oxford University Press.

project documents used in the review is presented in Annex B, and Annex C presents an analysis of component funding.

24. We used the information in these project documents to compile a database of components and activities, which became our main tool of analysis. The database is summarized in quantitative terms in Annex A, which is a series of tables depicting the nature of project interventions over time.

25. With the database we were able to detect changes in project designs and assessments of project achievements that indicate "learning," or changes in the Bank's understanding of how to improve quality.

26. The second phase of our study was a set of interviews with task managers of projects in eight countries: Ethiopia, Guinea, Lesotho, Mali, Mauritania, Senegal, Uganda, and Zambia. These interviews provided additional information about the current status of project activities and insights into how recent project experience has effected the approach to changing quality within the country and, sometimes, in other countries. We supplemented these interviews with other project documents suggested by the task managers.

27. We did not use any other studies as data. Nor did we use reports from other agencies – government or external. Although in many countries the government coordinates World Bank projects with one or more bilateral projects, and in many countries it is difficult to separate Bank components from government activities, we kept the focus on what the Bank has learned from its own projects of from activities and events integral to its projects.

28. Thus, our findings can be called "operational knowledge." They tell us not what Bank staff members know in theory should be done to improve quality but what the Bank has been able to support as institutional change that incorporates theoretical knowledge. The Bank is not a monolithic institution, nor are its client governments homogeneous. There has been no single formula for improving quality in education. Nonetheless, we have found patterns that reveal common intelligence and shifts in approaches to educational change, and this report is an attempt to define those patterns.

## 2.3. Organization of the report

29. The report is divided into three main sections:

- School-based quality inputs
- Planning and management
- Finance.

30. The first two of these sections are further divided into sub-components. For each of sub-component we describe the quality-related problems, trends over time in Bank efforts to address the problems, and redefinitions of the problems, following experience and increased understanding of their nature. A final section presents what we conclude to be the most significant findings, cutting across all project quality components.

## **3. SCHOOL-LEVEL QUALITY INPUTS**

31. Among these projects, the components used to improve the quality of education have not changed significantly over the past fifteen years, though there have been some notable shifts. The three inputs in which the Bank has invested most heavily are instructional materials (mostly textbooks), teacher education, and classrooms. The two quality-related processes have been curricula and exams. Some projects have introduced other – relatively new – inputs, including school readiness (school-based nutrition and health services and early childhood programs that prepare children for school), and interactive radio instruction, which directly delivers lessons into the classroom. Table 1displays the number of the 58 projects that had each component and the percent of the total represented by that number.

# Table 1Number and percent of projects with various quality<br/>components

	Instructional Materials	Teachers	Classrooms	Curriculum	Exams	New
Number of projects	53	50	35	25	12	26
% of total (58)	93	86	60	43	21	45

32. The most frequent quality input has been instructional materials, followed by teachers, and classrooms. Less than half the projects provided curricula, exams, or new inputs.

33. The average portion of the base total project cost that has gone to quality inputs (\$63 million) is 72.2 percent (\$45.4 million); of which classroom construction constitutes about half, at 34.6 percent of base total, and all other quality inputs the remaining half, at 37.6 percent of base total (see Annex C).

34. In this section we discuss each of these school-based quality inputs – the problems they addressed, trends over time in their nature, and the way in which the problems have been redefined – based on experience with project design and implementation.

## 3.1. Instructional materials

### 3.1.1. The problems

35. In the late 1980s intuitive thinking and some research findings dictated that textbooks were critical to improving quality. Summarizing pre-1990 basic education projects, one ICR concluded that "where IDA has supported [schools] with just physical rehabilitation and...without textbooks, the long-term impact of the inputs to students was diminished." The problem was defined largely as the need for financing the ministry's acquisition of books.

### 3.1.2. Trends over time

36. In the late 1980s – and even well into the 1990s – Bank projects supported the "emergency" purchase of textbooks needed to keep up with growing enrollments. In Angola, Cote d'Ivoire, Benin and Malawi, the government was able to meet – and even exceed – its procurement of textbooks. In many cases though, large increases in enrollment reduced the effectiveness of textbook-supply activities. After Malawi abolished school fees for all primary children and Benin abolished them for primary girls, the textbook-pupil ratio jumped dramatically. Schools needed textbooks, and the Bank responded.

37. Ninety-three percent of the projects reviewed had an instructional materials component. With few and very minor exceptions, these components aimed at providing textbooks; the provision of other instructional materials took a back seat. Annex A.1 displays these components in a chronological format.

38. Providing textbooks, however, has presented a series of challenges to every project. The most prominent one has been to get books from the headquarters of the ministry into the hands of teachers and students. As a description of the situation in 1995 in Mauritania illustrates, the problem had two dimensions. One was sales and cost recovery.

39. The present system of textbook distribution, sales and cost recovery is not working well. Although sales have increased, even at symbolic prices, sales of primary books have been low.... First, even at low prices parents cannot afford to buy a full set of books. Second, all but 16 of the sales points are located in Nouakchott, which limits access for rural parents. Third, sales points and prices have not been sufficiently publicized. Finally, receipts from textbook sales cannot finance book reprints in any significant volume, as the symbolic prices cover less than 50 percent of printing costs, to which must be added development, distribution and personnel costs. The other was logistic.

40. As for textbook distribution, the IPN delivers books to its kiosks and some schools but cannot cover the entire country with its small fleet of vehicles. Low sales and inadequate distribution have resulted in most rural pupils not having any books, while there are sizable stocks in the IPN warehouse.

41. New approaches to providing textbooks introduced during the past decade include privatizating one or more of the functions involved in supplying books to schools and changing the balance in private and public sharing of  $costs^2$ .

### **Privatizing supply tasks**

42. The tasks entailed in getting textbooks to the classroom are the development of the syllabi and text, procurement of the books, distribution, storage, and management. A more rational ordering of public and private tasks has allowed ministries to keep (or gain) control over the essential content of textbooks while turning the more technical and mechanized tasks over to the private sector. As late as the mid-1980s, the Bank typically supported textbook supply systems that were managed centrally by the ministry of education. Annex A.1 reveals that the majority of them are being privatized. The table also shows that some countries are developing textbook provision policies, which are likely to tend toward privatization.

<sup>&</sup>lt;sup>2</sup> A more detailed account of the current best practices in providing textbooks is presented in the Africa Region Human Development Working Papers Series (2002): *World Bank support for provision of textbooks in Sub-Saharan Africa, 1985-2000.* 

43. *Textbook development.* This is the function least likely to have been privatized, as ministries want to retain control of the basic content of syllabi and textbooks. Although no ministry has asked private publishers to develop syllabi, the publisher's role in elaboration of syllabi into text has varied. Some ministries had little say in the substance of the textbook, while others have written the text. In recent years, the move has been toward privatizing authorship but controlling content. By purchasing the copyrights, Niger was able to "avoid previous bottlenecks resulting from foreign ownership while also improving its capacity to design culturally appropriate books." Other countries have begun to contract with authors rather than use ministry employees to write texts. Some have learned the importance of remaining engaged in the process. Chad discovered the "absence of structures within the ministry to assess textbooks…led to procurement of books whose content did not correspond to the education level of Chad's students and failed to reflect Chad's ground realities."

44. *Procurement.* In some countries, textbooks were published and printed by the ministry. In most countries, however, the government purchased books through international competitions, usually resulting in a single award to a European supplier (with no small amount of corruption suspected throughout the process). During the past 15 years, procurement in many countries has been "liberalized," resulting in more competitive practices and multiple textbook suppliers. Experience has shown that "private sector publishers can and will respond to market deregulation, increasing book availability and quality." Guinea, Mali, Tanzania, and Uganda allow schools to select textbooks from a list of qualified suppliers. Some African publishers have won procurement awards. Bank investments in printing supplies (including large quantities of paper) have fallen over time, as book provision is managed by the private sector.

45. *Distribution.* With a shortage of vehicles at district and local offices, more countries now use private distribution services. Even so, government remains responsible for seeing that books reach schools and are kept there safely. Private sector distribution has now improved in Mauritania and works reasonably well in Guinea. One ICR, which is representative of a number of projects, outlined what the ministry has learned about the steps needed to ensure complete distribution and maintenance where the private sector is involved: (i) The unit responsible for distribution "must scrupulously plan the procurement processes and closely monitor the implementation of textbook contracts to ensure the delivery of the books on time." (ii) Books should be packed per school by suppliers and delivered to the schools by suppliers or private distributors. (iii) Books should be received in the schools by school/textbook management committees or school directors in the presence of teachers, students, parents, and other members of the community. (iv) During the reception, each copy should be stamped on several pages and recorded.

46. *Storage*. Projects have also supported innovations that reduce the loss of textbooks from schools. In Senegal "about 30 percent of the books were stolen, partly through organized efforts to break into storage areas." Others observed that this is a particular problem in rural areas. As a solution, the Bank has begun supporting the purchase of metal book lockers, which can be shipped to the schools as containers and then used as locked storage facilities. Ministries are working with school committees and sub-committees that allow parents to monitor the storage and maintenance of books. At the central level, the Bank has reduced its support to the warehousing of books, as this has become a function of the private sector.

47. *Management.* Other advances are in the management of textbook provision. A number of ministries have begun to computerize inventories and distribution tracking. Even so, no country yet has a comprehensive operational system for managing the development and continual flow of textbooks to teachers and students.

#### From private to public financing of textbooks

48. While textbook provision has moved from the public sector to the private, the trend in financing the costs of textbooks is moving in the other direction. In the early 1990s many governments paid for textbooks – clearly a recurrent expense – out of their development budgets, with funding from the Bank and sometimes bilateral donors. As school enrollments grew and many more books were required, ministries tried to instigate either sales mechanisms or rental schemes, but as the example of Mauritania (cited above) illustrates, most of these were not often successful. Parents in Nigeria resisted a textbook revolving fund, perhaps because it was not explained clearly, perhaps because they could not afford to contribute. The government began giving grants for books directly to schools, which has worked satisfactorily. In many countries sales and rental schemes failed when "leakage" was severe, at any level of the system.

49. Experience has also shown that poor families simply cannot pay for books. In Senegal "prices were hiked by two or three times above what many poor parents could pay, and eventually only 20 percent of students received books. After this experience the government decided to give the books to students, charging only a small fee to help with their maintenance." Similarly in Ghana, the targeted student-textbook ratio was not met because rural parents did not pay for books. Government eventually decided to provide free textbooks.

#### Using books in the classroom

50. The problem at the school link of the book-provision chain is that of helping teachers to use textbooks. Relatively little has been done effectively to address this challenge. Most teachers, especially those whose own education was weak, did not use textbooks as students, and their notion of teaching is to write on the chalkboard and to dictate. They can be intimidated by textbooks. Most projects that supply new textbooks now include a supply of teachers' guides as well, along with the intention to train or orient teachers in the use of books. But we know little about the usefulness of these guides or training.

#### **Supplementary materials**

51. Supplementary reading materials and other supplies such as pencils, paper, and maps have been supported in over a dozen projects during the period of our review. The logistical and finance problems of distribution and storage of these materials are no different than those of financing, distributing, and storing textbooks.

### 3.1.3. Redefining the problems

52. Though new and apparently more efficient approaches are being adopted, textbook supply and use is inadequate. There are three sorts of problems in using textbooks to improve quality:

- What was once seen as a simple problem of acquiring textbooks has become a much more complex challenge of helping governments establish and manage systems that ensure that textbooks and other instructional materials reach schools on a timely basis. In most countries textbook management systems are still fractured and inadequate.
- Ministries still need to find a workable balance between public and private financing of textbooks. Few countries have successfully established a secure allocation for textbooks in the recurrent budget, yet assumptions that all families will pay even a small amount for books have proven false.

• More needs to be learned about how to help teachers use textbooks. Mauritania will conduct a study on the current situation in preparation for training teachers in textbook use.

## 3.2. Teachers

### 3.2.1. The problems

53. The problems of providing competent teachers are to recruit young men and women who can be trained to teach, help them acquire the skills they need, deploy them equitably, and give them the incentives needed to keep them. As school systems have grown dramatically in size, many teachers who have been recruited have not had enough education to master the curriculum they are supposed to teach, and what they have learned about teaching methods, if anything, is out of date and not considered effective.

### 3.2.2. Trends over time

54. Fifty projects (86 percent) included components that aimed to improve teaching. Annex A.2 summarizes these interventions in a chronological framework. Most concerned the training of teachers. Many, however, have introduced solutions to the problem of managing the teaching force – recruitment, deployment, and financing of teachers<sup>3</sup>. Our discussion begins with these.

### **Financing teachers' salaries**

55. Ministries have begun to find ways to help countries lower the cost of the teaching force in the long term. One solution has been to move teachers off the civil service payroll. Another is to align teachers' salaries more closely with their skills and responsibilities. A third has been to shift some of the financial burden to communities;

56. *Contract (volunteer) teachers.* Teachers have usually been recruited into the teaching service prior to their training. This has burdened the civil service with employees that may not be suited to teaching but have taken up teaching for lack of a more attractive option. Several West African governments have addressed this problem by de-linking entrance into teacher education with civil service employment. This is expected not only to lower the cost of the teaching force but also weed out some candidates who seek only to find their sinecure.

57. In Benin, Burkina Faso, Chad, Cote d'Ivoire, Guinea, Mali, Niger, and Senegal, ministries have contracted with high school or college graduates who have not attended teacher education colleges but are without jobs and willing to teach. They do not enter the civil service; their salary is less than that of a civil service teacher, and they are not eligible for a pension. These "contract" or "volunteer" teachers are put into the classroom and given in-service training. In spite of fierce resistance from teachers' unions, the governments have reached an acceptable policy and affordable practice of employing additional teachers outside of the civil service, at significant cost savings to the government. In a short space of time in the Cote d'Ivoire, the wage bill was reduced 2 percent per year, permitting the recruitment of more teachers. Evaluations of comparative teacher performance in Senegal showed that contract teachers did as well or better than civil service teachers in the classroom. The solution has not occurred overnight.

<sup>&</sup>lt;sup>3</sup> Teacher support from school directors, inspectors, and other line-support functions are not included here; they are discussed in the section on planning and management – line functions.

58. The implementation of teacher recruitment reforms requires time, patience, and an adequate risk management strategy. The decision made by the government to recruit contract teachers required extensive open discussions with the main stakeholders, in particular with teacher unions. The reform had to be implemented by degrees, providing government time to build consensus and to consolidate the system. Though the short-term benefit of this reform lies in the economies resulting from the lower salary grid of the contractual teachers, the long-term benefit resides in the efficiency gains associated with the enhanced involvement of local community in teacher recruitment and management as well as the flexibility provided by the fixed-term contract<sup>4</sup>.

59. Not all governments have succeeded in this strategy. As part of an emergency response, the government of Togo began using a separate fund and pay scale to to pay these teachers who were outside of the civil service. "Each of these elements created problems of its own, due to lack of control mechanisms and weak management...Eventually the responsibility for personnel management shifted to the Civil Service Ministry and the payment shifted to the Ministry of Finance, where there was at least some authority and capacity." The ICR on this Togo project concluded that "recruitment and payment of auxiliary teachers should not have been considered an emergency measure but designed as a longer-term solution to the supply and costs of teachers, with recognition that central government would want to retain some financial and personnel management controls over teachers it was expected to finance."

60. Most West African countries appear to be succeeding, however, in using this approach to recruit and pay teachers out of the civil service.

61. *Adjusting teachers' entry-level requirements.* How much teachers are paid and how much is expected of them professionally are questions that must be answered together. During the past three decades, teachers' salaries in much of francophone Africa have fallen dramatically in terms of GDP, putting them more in line with salaries in anglophone Africa and other parts of the developing world. The move toward contract teachers helps. In contrast, the past decade in Uganda has seen a steep rise in teachers' salaries, which is generally perceived to reflect their professional worth. To continue moving teachers' salaries toward an optimal level, ministries must analyze more closely the academic skills required for teaching at each level of the system. Analysis in Mauritania had led educators to conclude tentatively that teachers with less than a tertiary level of education can become competent teachers of primary school. At the same time, educators in Ethiopia are finding that teachers who have not mastered the subject matter are less confident about experimenting with new teaching methods and more secure in teacher-centered methods, which they can control.

62. Bringing teachers' salaries in line with their professional worth has entailed reforms in incentive systems so that good teachers stay in the profession and those who cannot demonstrate the competence to advance in position or salary are not allowed to do so.

63. *Community participation in financing*. In Mali the education sector benefited from the movement toward community schools by, first, the willingness of communities to share in the cost of teachers' salaries and, second, the opportunity to test the elasticity of teacher costs – what rural villagers consider to be the remunerative value of their own primary school teachers. The NGOs in Mali that initiated community schools found that villagers with a primary-school education in rural areas were willing to teach at salary levels much lower than government teachers and without the benefits of a civil service sinecure. Eventually the government took over the payment of teachers and textbooks in community schools. Chad has approved new statutes for community teachers and is

<sup>&</sup>lt;sup>4</sup> Implementation Completion Report, Niger 1994.

beginning to use government funds to support teachers in rural areas that were previously paid by the communities.

64. Without intensive support from NGOs, community schools are often of low quality. If they are financed by the community, without government contributions, the rural poor end up paying for a low-quality school, while better schools are provided free to the urban middle class. In a matching-grant project in Tanzania, only the better-off communities participated until the community share was reduced.

### **Recruitment and deployment**

65. The problems of recruitment and deployment vary according to the size of the population and the diversity of conditions under which teachers are expected to live and work.

66. *Recruitment.* The shortage in some countries of men and women qualified for teacher education will continue to increase until education systems have expanded access to tertiary and secondary levels as well as primary. At present, low rates of enrollment in and graduation from lower and upper secondary restrict the pool of eligible and interested candidates for teaching. Mozambique has had difficulty finding qualified candidates for teacher education. In Niger, the problem occurred in recruiting lowersecondary teachers. The system failed to respond to the demand for teachers because, from among the already limited number of graduates from the various faculties, only a relatively small number choose the teaching stream and succeeded in passing the entrance exam to enroll in the college. Solving this problem requires stepping back from the concerted focus on primary education to include reforms in secondary education that will allow more students into that level of the system and improve the quality of their education. The move toward sector-wide financing will help to address this problem.

67. As they become better at keeping track of teachers, some ministries have learned that teacher candidates tend to disappear after completing their teacher education. Some use teacher education as an alternative to university. In Zambia, it has been reported that 30 to 40 percent of the teachers college graduates do not go on to teach. Guinea has had the same problem. Ethiopia has raised standards for entry into teacher education colleges in order to control the longer-term quality of teachers.

68. *Deployment*. The overstaffing of some urban schools and dearth of teachers in other urban schools and many rural schools is a perennial problem. Some ministries have addressed this by offering financial incentives and housing to attract teachers to rural areas. This incentive has not been entirely successful, because ministries have difficulty keeping track of individual teachers and their salaries, making it difficult to match pay rates and deliveries to individuals. Hiring auxiliary teachers to help in the classroom and substitutes for female teachers on maternity leave are other incentives that have been attempted.

69. Another solution, as described above, has been to hire untrained teachers from within their own or nearby villages and train them on the job. These teachers are not likely to leave their communities. The unresolved part of the problem is that many rural communities cannot find individuals with enough education to teach above the lowest primary grades and with second language – French or English – skills required for instruction at higher grade levels.

70. The reduction in "ghost teachers" has also helped solve deployment problems, as schools now have a better alignment of their teaching staff and student population, and the ministry has a more accurate picture of where teachers are needed.

#### **Teacher Training and Professional Development**

71. Teacher education components have been frequent in the projects of the past 15 years and have seen considerable reforms.

72. *Pre-service training.* Support for pre-service training has usually been fairly conventional: building, repairing, and/or equipping teacher education colleges; revising curricula, and improving the skills of teacher trainers. The most common change in approach has been to reduce the amount of time student teachers spend at residential colleges and increase their pre-service practical training. Mauritania, Uganda, and other countries have strengthened the links between teachers colleges and schools in order to improve the classroom supervision of student teachers.

73. Guinea has reformed pre-service teacher education by introducing a studentcentered pedagogy and improving the teaching of reading, in addition to other reforms. It now uses colleges year round, to maximize their use. Zambia has made better use of its college facilities by limiting residence to the first year; the trainee's second year is spent in a school, under supervision. In addition to these kinds of reforms, Mauritania has introduced a "teacher professional profile" as an individualized guide for teachers in training that they can also use in-service. The profile helps beginning teachers diagnose their strengths and weaknesses and their specific needs for training and professional development.

74. School-based training is a recent trend in pre-service programs. It has sometimes entailed building demonstration schools attached to colleges. In other cases, teachers colleges have intensified the school visits of trainers and/or strengthened the role of school directors as supervisors. Teachers in the reformed pre-service program in Guinea are given three months of practical experience mid-way through their course. Upon their return, many ask for more practical and less theoretical training.

75. *In-service training of unqualified teachers*. In-service training has seen innovations, because the large increases in numbers of teachers combined with the effort to improve teaching within a short timeframe has required non-traditional approaches. Early projects focused on upgrading the skills of teachers who were in the classroom but who had not completed formal teacher education. In-service training was intended both to improve their skills and to certify them.

76. Trends in in-service training are its systemization and decentralization. Inservice systems have been built around pre-service training colleges and around inspectorates. Uganda's system (the Teacher Development and Management System) centered first around clusters of schools networked with "core colleges," which were attached to pre-service colleges in venue only. Eventually the pre-service and in-service systems were more closely linked, as was the in-service system and the district education offices. Other ministries have also built in-service training networks around clusters of schools, and, as teaching services began to be decentralized, so did teacher education.

77. A persisting problem has been the difficulty in managing the logistics of non-traditional training programs. In Niger efforts to institute study groups of teachers being given in-service training was flawed when supplies, equipment (vehicles), and financial support did not arrive, failing to give needed incentives to teacher trainers. An innovative in-service program in Togo never got off the ground because the new training methods and approaches were not clearly identified and the textbooks arrived too late in the project. Other innovations have become bogged down because they were too complex. In Malawi, a new program had mixed success, especially when it was taken to scale, because it "depended heavily on timely, properly sequenced, and highly orchestrated inputs from an array of actors who were not necessarily used to working together in coordinated manner."

78. *Continuous professional development.* In a few countries, as in-service training systems have become established, their objective has expanded to include continuous professional development of qualified teachers. This function was rarely supported before 1997, but since then it has become a component of several Bank-supported projects and programs.

79. Disseminating information and skills to teachers has often been done through ad hoc training sessions. Used to introduce innovations, such as multi-grade classrooms or new textbooks, ad hoc training usually takes place outside any system that has been built to provide regular in-service training.

80. The most common approach to in-service training has been the "cascade model," whereby a small group of trainers is taught new skills, which they then pass on to other trainers, who ultimately – through varying numbers of levels – reach the teachers themselves. This traditional model has well-known flaws. Its effectiveness is watered down as new concepts and skills are transmitted to lower-level trainers who may not understand them well. Several project documents note that cascade training also suffers from its "top-down" perspective on what teachers need to learn, disregarding the differences among teachers in how they perceive their own competencies.

81. To get around the deficiencies of cascade and ad hoc training, Guinea offered small grants to teachers who proposed their own professional development activities. As part of an organized, Bank-supported program, the ministry trained education officers at the prefecture level in facilitation skills, which enabled them to help teachers conceptualize activities and write proposals for competitive funding awards. Those selected agreed to use the ministry's grants to carry out a systematic plan of activities to improve their teaching. The program was piloted in two regions and expanded to all other regions.

82. This school-based model of professional development was predicated on the theory that teachers can take responsibility for meeting their learning needs as long as they participate in a facilitated process of problem-solving and have access to modest resources needed to solve the problem. This intensively managed program has shown positive results in helping teachers take ownership of a problem and plan and implement a solution.

83. Ethiopia has also revamped its teacher education program to be more responsive to expressed teachers' needs.

84. Since the mid-1990s, most new training programs, whether pre-service or inservice, have emphasized practical teaching methods as well as theory. Some specify particular teaching methods, such as problem-solving or child-centered methods. Little beyond anecdote has been reported, however, on the effectiveness of these programs. And the debate continues over the relative amount of time in training that should be given to mastery of the subject matter and mastery of teaching skills.

85. *Distance education*. Distance education systems have also begun to be used as in-service channels, especially in Southern Africa. Lesotho is using distance education to raise to the diploma level, through a four-year course, certified teachers in the vast remote areas of that mountainous country. Ghana, Ethiopia, Mauritania, Mozambique, and Senegal have also introduced – or planned to introduce – distance education for inservice training.

### 3.2.3. Redefining the problems

- 86. We have noted two important changing patterns in teacher education.
  - The shift in West African countries toward contracting with teachers outside the civil service has opened up a set of issues. Will this new mechanism completely replace the former one? If not, how will the two systems coexist? If contract teachers become the norm, how will salaries be determined, and how will this affect the overall cost of the teaching force? What is the career ladder for teachers and school directors? At present, contract teachers do not attend established pre-service training institutions (though they often receive some training before entering the classroom). Can this continue? How can the pre-service competence of candidates be judged? What standards should be used to measure their performance in the classroom? The cost of the teaching force can be lowered through alternatives to civil service employment, but these must be carefully considered and slowly introduced with the involvement of all stakeholders, particularly the teachers' unions.
  - Teacher education has become a growing part of quality components and evolved into new forms. Yet the general impression conveyed by project documents is that, with few exceptions, the outcomes of teacher education have been disappointing. We still have little empirical evidence of the extent to which teachers act differently in the classroom as the result of one or another teacher education programs. Under what conditions does training make a difference? "Teachers teach the way they were taught; not easy to change this without intensive supervision and reward." This comment on a program in Niger was followed by the observation that young teachers, even with only rudimentary training, were those most open to using new teaching methods. When teacher education programs are undertaken, we need to know more about their effects. With what kinds of training and under what conditions do teachers change their behavior? One ICR suggested that "an interesting comparison could be made between the effectiveness of formally trained teachers, pre-service, and that of contracted teachers, recruited often at a higher academic level but trained on the job." Mauritania will commission a study this year to assess the effects of training on teachers' performance in the classroom.

### 3.3. Classrooms

### 3.3.1. The problem

87. An inadequate supply of classrooms is a barrier to both the goals of increasing access to schooling and improving the quality of schooling. It is considered a barrier to access goals on the assumption that children will not attend school if there is no school building within commuting distance to their home. It is considered a barrier to quality goals on the assumption that even if teachers and textbooks were available, learning could not take place without furnished facilities designed for the purpose of schooling.

88. A few project documents argue that a good-quality classroom is a critical condition for learning. The 1993 Ghana Sector Staff Appraisal Report quoted a Bank study that showed "that non-leaking roof and blackboard are the most significant determinants of cognitive achievements." The implementation and ICR of this project,

however, did not support out this argument, as there was no evidence that improving the state of classrooms increased learning.

### 3.3.2. Trends over time

89. In Bank education project design documents, classroom construction is generally included in access, not quality, components. Of the projects we reviewed, each of which had a quality component in addition to classroom construction, 60 percent included classroom construction and/or rehabilitation. The main new trend is the increased construction of wells and latrines. Annex A.3 shows that in 1995 the Bank began to support the addition of these facilities, including them in new construction and "retrofitting" existing buildings.

90. The past 15 years has seen a steady number of interventions in which communities are expected to contribute to the construction of schools. They have also seen persisting problems with this approach. An ICR on a Senegal project states that the capacity of communities and small NGOs to build schools is often overestimated. When construction programs rely extensively on community-financed materials or construction, the result may be delays or low-quality work. Communities may contribute to the expansion of education more effectively through quality-oriented tasks, such as managing the construction, monitoring teachers, storing books, coordinating student feeding programs, or secondary building activities.

91. A more positive experience in Ghana taught that properly directed interventions can succeed: in involving communities in construction, keep the level of effort low and commodities they must purchase to a minimum. Prepare instructions in a form they can use. Make communities provide assistance before government does. Once communities are ready, no delays or bureaucratic impediments must be put in their way.

92. Uganda and Mauritania have also had success in community-supported construction. In these countries the communities take responsibility for managing the construction with the support of substantial public financing. With high levels of subsidy and some technical support even the poorest communities appear able to manage classroom construction. This approach has helped raise gross school enrollment rates in Mauritania from 45 to 90 percent.

### 3.3.3. Redefining the problems

93. In some remote areas of other regions of the world, external agencies do not support construction of new school buildings until students have been convened and instruction has been underway in temporary quarters, demonstrating the commitment of the community, students, and teachers to establishing a school. In Bank-supported projects in Africa, however, conventional classrooms are still treated as essential to improving both access to and quality of education. The problem remains one of responding rapidly to large increases in enrollment. A new problem that arises from the commitment to build wells and latrines is the cost and work entailed in their maintenance. Early experience shows that maintenance cannot be taken for granted.

## 3.4. Curriculum

### 3.4.1. The problems

94. A ministry's curriculum integrates pedagogical and political views of what students should learn. External support agencies generally acknowledge that curricula are not subject to interventions by foreigners. Yet decisions made in developing curricula and extending them into instructional materials and teaching practices have cost implications that have pulled in the World Bank and other external agencies as stakeholders. The issues that have arisen are whether and how to use local languages in instruction, how to provide adequate hours in school and time on task, and how to allocate time and attention among a wide array of subjects in the curriculum.

### 3.4.2. Trends over time

95. A World Bank study published in 1989 on improving the quality of education found that curriculum change was the predominant instrument for quality improvement in Bank projects. "Nearly 90 percent of the educational change components included support for curriculum change, a considerably higher proportion than for teacher education (66 percent), organizational change (40 percent), or technological change (32 percent)."<sup>5</sup> The study questioned the predominance of this component, and, indeed, in the 15-year period of our study, its relative position among other components has fallen. Not quite half (43 percent) of the projects reviewed included a curriculum component, significantly less than either instructional-materials components (97 percent) or teacher components (86 percent). Annex A.4 displays curriculum components over time. Various activities are scattered throughout the time period, with no notable trends.

96. Activities are generally described as revising curricula, adapting curricula, and building capacity to develop curricula. The Bank has supported capacity-building activities, including the construction and equipping of curriculum centers, and training. Innovations are the use of local languages for instruction in the early grades and the adaptation of curricula and teaching methods to multi-grade schools (usually in remote rural areas) and double-shift schools (in crowded urban schools).

### Local languages

97. The most frequent, visible, and controversial innovation in curriculum components has been the introduction of local languages for instruction in the early grades. This occurred in 1990 in Mozambique and has taken place subsequently in many – if not most – other Bank-supported African countries. World Bank support for instruction in local languages, at first tepid, has become stronger. Though from a pedagogical perspective there is evidence that children learn to read and write more easily in their mother tongue – and that these children do better even in a second language than those who have not begun instruction in their mother tongue – opposition to instruction in local languages of the educated people and are required for secondary schooling. Whether or not it is so, the production of books in local languages is thought to be time-consuming, expensive, and requiring expertise that is not always available. Where the country has many local languages, the mother tongue of the teacher is not always likely to be the same as that of his or her students, confounding teacher

<sup>&</sup>lt;sup>5</sup> Verspoor, Adriaan (1989), *Pathways to change: Improving the quality of education in developing countries.* World Bank Discussion Papers Series #53.

deployment problems. The selection of one local language of instruction over another can become a political issue.

98. The Bank has begun to support the introduction of local languages in the first two or so years of primary school and to follow that program with an effective transition to a second language. Ethiopia has made a huge effort to do translate the curriculum into many local languages. Mali and Zambia have introduced bilingual programs with initial instruction in African languages on a large scale.

### Hours of instruction

99. The World Bank uses the estimate of 800 to 1000 hours of instruction during the school year as what is required to cover sufficient ground at each grade level. This can only be a rough estimate, and it is a function of the content of the curriculum – the number of courses taught, their complexity and intellectual demands – as well as the age of students, effectiveness of teachers, and other variables. Nevertheless it establishes the reasonable requirement that students attend school regularly for a solid block of time each school day and that teachers be present in the classroom as scheduled.

100. The goal of providing students with adequate hours of instruction has been compromised by a lack of incentives for teachers to teach their full schedule and weak management systems, which cannot enforce standards. In Senegal, test results indicate "a 0.2 percent mastery of basic skills,"<sup>6</sup> and Bank OED evaluators blamed this in part on estimates that instruction is limited to no more than 350 hours per year. "Policies that lead to reduced contact hours are likely to reduce the amount of information children acquire and ultimately detract from the value of school attendance." Bank discussions in 2001 with government officials, including inspectors, led to the conclusion that the combination of teacher absenteeism and strikes, double-shift classes, classroom work on skills that are not "basic," and "maybe ten minutes per hour" of time on task in the classroom, severely reduces children's mastery of basic skills. In Ghana, the ICR concluded that "policy to increase instruction time is rarely enforced; time is also low due to teacher absences, lateness, and extended periods of recreation."

101. The Bank has generally supported a policy of double-shifts in urban areas and multi-grade classrooms in rural areas as strategies for increasing enrollment, though the policy is often resisted during implementation. Where teaching methods are adapted to these situations and teachers receive adequate training in their use, double shifts and multi-grade classrooms may not demand much more work from teachers. But where this is not the case, valuable instruction time is lost when teachers resist adding to their workload.

### **Core subjects**

102. A related item of some contention is the number and nature of subjects taught in primary school. The term "basic education" is used almost universally to convey the importance of skills and knowledge in elementary reading, writing, mathematics, science, and social studies. The Bank has consistently limited its support for textbook provision to these core subjects. Yet ministries of education more often than not have been reluctant to eliminate, reduce, or make elective other subjects, including religion, agriculture, and other practical skills. They appear reluctant to say no to those in the government and community who have vested interests in the teaching of non-core subjects. Uganda's insistence on retaining these subjects has been a source of contention between the Bank and ministries.

<sup>&</sup>lt;sup>6</sup> World Bank (February 21, 2002), *A review of investments in education and performance assessment reports: Senegal Primary Education Development Project, Second Human Resources Development Project.* Sector and Thematic Evaluation Group, Operations Evaluation Department.

103. At the same time, the Bank has supported revisions to curricula that introduce health topics, particularly the prevention of HIV/AIDS, and environmental protection topics.

#### Sequencing curricula and textbook development

104. In a rational process, the curriculum – which we define to include a determination of what students will learn and in what sequence, development of syllabi in each subject at each grade level, and preparation of manuscripts for textbooks – would be undertaken in advance of publishing textbooks. The books would flow from the curriculum. In many countries, however, particularly after the Education for All declarations in 1990, the process of curriculum and textbook development has run in parallel with fast-track procurement of textbooks; Textbooks used in the schools may be only loosely related to the curriculum developed by the ministry.

105. In Lesotho, the ministry, with Bank support, long ago institutionalized a textbook procurement system that worked well, yet it has made hardly any progress in revising the curriculum. There seems to be a reluctance and caution in destabilizing what has been in place for many years. In 2000, the ministry of education in Uganda, in spite of opposition by major donors and lenders, decided to put textbook procurement on hold while it revised its curriculum and developed new syllabi. This became an issue, because the ministry had committed as a condition for budgetary support to improving its pupil-textbook ratio, which could not happen until curriculum revisions had been undertaken.

#### Major curriculum reform: Pédagogie convergente.

106. A curriculum change of major substance has taken place in Mali; it combines the use of local languages of instruction with a child-centered pedagogy. Both of these curriculum elements arose as indigenous experiments that had been tested on a small scale, gained widespread support, and are now in the process of being taken to scale nationally. The experiment in using local languages was supported by a bilateral project of Belgium, and child-centered pedagogy was part of a community-schools project supported by USAID. Pédagogie convergente became the official sector policy in the mid-1990s. The Bank supported the expansion of these small-scale efforts, with the goal of reaching 20 percent of the schools by 2004. The Bank has also encouraged other West African countries to adopt an approach like pédagogie convergente approach, but none have shown the enthusiasm of Mali. In Guinea, reluctance to using local languages for instruction appears to stem from experience with policies imposed during the previous, now despised regime.

107. Mauritania and other countries have moved to a competency-based curriculum, in which the skills and knowledge that students are expected to acquire are clearly defined and sequenced.

### 3.4.3. Redefining the problems

108. The problems of improving the basic education curriculum are not a matter of finding a theoretical solution but of finding strategies that are politically acceptable and practical.

• If children learn to read and write best in their mother tongue, what is the most efficient way to develop materials and train teachers in the use of these languages and to help students make an effective transition to a second language?

- If learning is in direct proportion to time on task, what incentives and management systems are required to get teachers into the classroom for the length of time required by the curriculum?
- What is the trade-off between access goals (addressed through double-shift schools and multi-grade classrooms) and quality goals (that would ease the burden on teachers' time and energy)? Double shifts and multi-grade classrooms harm quality are often instituted as measures to increase enrollment but without the curriculum adaptation and training needed to retain quality instruction.
- And what is the optimal balance between time spent on core subjects and other subjects? There still appears to be disagreement between the Bank and the government in some countries on this issue. Similarly, the Bank and other donors do not always see eye to eye on curriculum issues, particularly in francophone countries.

## 3.5. Examinations

### 3.5.1. The problems

109. Examinations play a critical role in maintaining the quality of education, and the lack of attention to examinations in African systems has been a barrier to improving quality. Formal (public) examinations are few and have high stakes. Most often, the end-of-primary-cycle exam is the first public exam to be given and scored at a national level, and those who do not pass often terminate their education. As noted in 1992 in Zambia, high-stakes exams drive teaching and learning. Exam agencies improve the learning process when exams are coordinated with the curriculum and classroom teaching. "It is only when these two are in place that efforts can be directed to enhancing the interaction between the exams agency and the schools system in support of quality improvement."

110. Contributing to the disjuncture between classroom activities and formal exams is the general failure of teachers to assess student progress continuously and accurately. The procedures used to monitor student progress from one grade to the next vary from country to country, but they usually affords students little feedback on their progress or awareness of what the standards are and how well they are being met. These conditions result in high repetition and drop-out rates.

111. Other problems facing most countries are the high costs of administering exams and corruption in the process. Corruption entails not only cheating on exams and irregularities in grading exams but also practices that prevent students from even sitting for exams. Another problem is that the examination system creates backlogs of students who fail, adding high repetition rates.

### 3.5.2. Trends over time

112. Twelve of the 58 projects reviewed (21 percent) had a public examinations component. Annex A.5 displays the kinds of activities introduced in a chronological format. Reforms in examination systems dwindled in the mid-1990s but picked up again at the end of the decade, though they have been sparse throughout the past fifteen years and do not give evidence of any exciting new approaches. The countries that have done the most work on examinations are Benin, Burkina Faso, Ethiopia, The Gambia, Ghana, Guinea, Mali, and Uganda. Except for The Gambia, no country appears to have made a concerted effort to improve exams.

113. One important trend in the area of assessment and examinations is the separation of systems used to promote students from one level to the next and of systems used to monitor performance of schools and districts and to study the relationship between "quality" inputs and outputs. In addition to the twelve projects whose quality components included improving public exams, an even larger number had activities focused on monitoring system performance (these are discussed in the subsequent section on management and leadership). At times a single component addresses both kinds of assessment, because it is often a single unit – the examinations or assessment unit – that handles both tasks.

#### Revising the end-of-primary exam

114. There have been no general trends among Bank projects in their approach to revising end-of-primary exams. Zambia introduced "competency-based" tests, and Ghana has used criterion-referenced tests. Recently, Guinea began to develop curriculum-based tests that teachers can use in the classroom. Other ministries have diversified and the content of exams and become more rigorous in assessing the validity and reliability of items.

#### **Reorganizing the exam system**

115. Other improvements in examinations have come in the more mechanical functions, such as upgrading test administration and computerizing exam data. These reforms have entailed both improving the efficiency of the examination services and building capacity to support assessment in schools. Ethiopia wrote a new end-of-cycle exam to correspond with its inclusion of grades 7 and 8 in the primary cycle; in doing so, it struggled with ways to decentralize the exam without sacrificing quality. This was difficult because of the technical expertise required to write reliable and valid exams.

### Improving continuous assessment

116. One aspect of school-based assessment is the administration of end-of-cycle exams. The other is continuous assessment by teachers. At least six countries have made plans to help teachers use continuous assessment methods, but we know little about how successful these efforts have been.

### 3.5.3. Redefining the problems

117. The separation of testing functions – one for examining students at the end of cycle for promotion and the other for monitoring system performance – seems to have decreased attention to end-of-cycle exams. The problem is now to revise these exams as part of the continuous assessment process, so that students who reach the end of the primary cycle are reasonably assured to passing them. In many countries further work needs to be done to make the exams valid, reliable, and manageable by schools.

### 3.6. New inputs

118. A number of projects have gone beyond conventional inputs, trying new strategies to attack persistent problems. The past fifteen years have seen the introduction of some non-conventional inputs. One of these, Interactive Radio Instruction, complements teachers and textbooks. Two others, nutrition and health programs and early childhood development programs, improve children's readiness to learn. Annex A.6 displays the timeframe in which these project components were introduced. While IRI has been present occasionally throughout the 15 years reviewed, school-readiness have become frequent in more recent years.

#### Interactive radio instruction

119. Radio has been used for over two decades as either a substitute for teachers or textbooks or to complement these. Interactive Radio Instruction, which is by far the most well developed use of instructional radio in primary education, has met with mixed success, not because of questions of its effectiveness, which seems to be demonstrated, but because of the difficulties in taking it to scale nationwide in African countries. In Malawi, a radio project was dropped after the pilot was deemed too expensive. In Guinea, however, IRI has been well received, successfully taken to scale so that 90 percent of the classrooms are receiving the radio broadcast 20 minutes a week. Other governments have been reluctant to try radio in the classroom.

#### Health and nutrition

120. Eight programs have included components for improving school-based health and nutrition interventions. The first of these was in 1990 in Madagascar, and they have been consistently present since that year. Some projects have introduced health content into the curricula, particularly information about HIV/AIDS. Others have provided for school snacks or lunches. Many have helped schools, especially newly constructed schools, have clean water and separate toilet facilities for girls and boys.

121. Guinea, Mali, Niger, and Zambia have introduced ambitious initiatives to deliver micro-nutrients and de-worming services to schools. Mauritania is preparing for such an intervention. Based on research that shows the strong connection between good health, nutrition, and readiness to learn, these programs have attempted to bring ministries of health into collaboration with ministries of education in delivering clinical services. Their success has been limited so far, mainly due to the difficulties of working across two ministries.

#### Early childhood development

122. Beginning in 1998, eight projects have introduced early childhood development activities for the purpose of helping children enter and stay in school. Some of these have been limited to policy reviews and frameworks. Others have constructed ECD centers, trained personnel, and improved management capacity. Most use community-based programs and partner with NGOs to support them.

### **3.6.1.** Redefining the problems

123. The attention given to school readiness has redefined the problem of poor quality education as not only one of inadequate inputs and processes but also one of children hampered by poor health and nutrition and by lack of intellectual and social preparation for school. Likewise, the experiment with radio in the classroom has redefined the range of means available to deliver the curriculum. These innovations suffer, however, from the scarcity of resources that makes them divert funds from accepted perceptions of education. Though they have succeeded on a small scale, they are difficult to institutionalize nationwide.

124. The current challenge is how to facilitate the mainstreaming of promising new solutions to persisting problems.

## 4. PLANNING AND MANAGEMENT FUNCTIONS

125. The previous section on conventional, school-based inputs and processes to improve quality suggested the importance of additional, more systemic changes. In this section we discuss other project components that have a - if not direct, then critical – impact on education quality: The importance of planning and management functions to delivering quality has become increasingly apparent.

126. Though planning and management components have been part of most projects surveyed, there is plenty of evidence that many ministries of education continue to struggle with weak planning and management capacity. The most recent ICRs sum up the impact of Bank projects on school systems at the turn of the century. While some had improved their capacity to plan and manage projects, others still lacked that capacity.

- "Where institutional capacity is weak, project design should not be complex."
- "The project was...ambitious within the timeframe and sector capacity."
- "Project design was complex and not scaled to existing institutional capacities."
- "The decision to mainstream project implementation within the regular ministry structures, despite their capacity limitations and without a clear capacity development plan, seems to have been guided by the Bank's deemphasis on using PIUs than by Malawi's realities."

127. Table 2 displays the number and percent of projects with activities supporting planning and management functions. The table also shows how many projects included community-support activities and how many supported decentralization activities. As we will discuss, both community support and decentralization have been important trends in planning and management.

	Support functions			Line functions			
	Policy and planning	Implementation management	System performance monitoring	School level	District level	Decentralization	Community support
No. of projects	35	45	28	32	33	25	29
% of total (58)	57	78	48	55	57	43	50

Table 2Number and percent of projects with various quality<br/>components

128. On the whole, the projects in our review<sup>7</sup> had nearly as many management components (shown in Table 2) as quality components (shown in Table 1). In particular, 78 percent of the projects had components intended to improve the management of implementation. This is a higher rate of components per project than that of several quality-related components, including classrooms (60 percent), curriculum (43 percent), and exams (21 percent).

<sup>&</sup>lt;sup>7</sup> Projects were included because they had at least one "quality" component. Thus, projects with only an access or an equity component were not included.

129. In terms of budget allocations, an average of 12.8 percent of project funds was used for planning and management.<sup>8</sup> This compares with an average of 72.2 percent of funds used for conventional quality inputs (Annex C).

130. Trends over time in the inclusion of each of these management components in projects are discussed below.

- 131. This section is organized in two sub-sections:
  - Support functions (policy-making and planning, implementation management, and performance monitoring)
  - Line functions (district-level and school-level planning and management).

## 4.1. Support functions

132. Table 2 shows that over half (57 percent) of the projects supported policy and planning; nearly half (48 percent) supported performance monitoring; and over threequarters (78 percent) supported implementation-management activities.

133. In this section we discuss each of these school-based quality inputs – the problems they address, trends over time, and the way in which the problems have been redefined, based on experience with project design and implementation.

### 4.1.1. Policy and planning

### The problems

134. Planning education programs requires a long-term view, but political realities within both government and external agencies make this difficult. Planning also requires a reasonable estimate of available resources, but when these are clearly inadequate, it is difficult to set priorities. Finally, planning requires technical skill, but here ministries are in short supply.

### Trends over time

135. Annex A.7 shows that support for policy studies and analyses has been consistent over the period under review. Support for education planning, however, fell off after 1995, with the exception of the most recent years.

136. In the late 1980s planning was seen as essential to improving both access and quality. The ministry's planning unit, which often housed the project's implementation unit, was considered the "brains" of the ministry and expected to provide overall guidance. During the 1990s, however, two shifts in interest occurred. The first was away from the technical tasks of "planning," narrowly defined as long-term projection of enrollments and mapping schools. The second was toward a comprehensive set of policies (or policy framework) that defined the education sector goals, placing basic education within a broader set of programs, and established priorities for investments of scarce resources. These shifts led to two interrelated trends: increasing support for policy reforms and participatory planning.

137. *Comprehensive policy frameworks*. The Bank has learned that education is a highly political domain and that what elected officials may see as their advantage in

<sup>&</sup>lt;sup>8</sup> This estimate is based on the percent of project funds budgeted for management, including the project implementation unit and preparatory studies. It does not include most structural adjustment credits, because these do not provide component budgets.

mandating reforms is not always what external agencies, such as the Bank, view as high priority. Politicians need to show results – attractive schools in urban areas, well paid teachers, and abolished fees. Moreover, as politicians and times change, so do their priorities. External agencies also want to see results, but more often in terms of input and output indicators such as lower student-teacher ratios and higher pass rates. The process of working together on a policy framework has helped politicians, ministry leadership, external agencies, and other stakeholders converse about and reach agreement on priorities.

138. Policy frameworks have also helped ministries take the lead in coordinating support from external agencies. Guinea has used a policy framework to expand and consolidate the positive elements of a number of innovative programs supported by bilateral donors. The ministry is deciding which activities will be brought to scale and how they will be integrated it its overall school-based reform strategy.

139. As the Bank moves from project assistance (investment credits) to budgetary support (adjustment credits and Poverty Reduction Support Credits), a policy matrix can no longer be a scattering of policies aligned with particular activities, such as a policy that creates a budget line item for textbooks in a project that supports textbook procurement. The matrix has become sector-wide and includes a comprehensive set of internally consistent policies that reflect available resources. The policy matrix in Uganda has moved from a list of more than a dozen or so "process" indicators to less than half a dozen "outcome" indicators, including pupil-textbook ratios, pupil-teacher ratios, and pupil-classroom ratios. This kind of indicator puts the full burden on the ministry for devising strategies to achieve objectives.

140. As governments become more responsible for meeting broad objectives, the Bank has learned that policy frameworks and indicators must be grounded in accurate and thorough studies of the sector conditions and goals that are feasible. This is particularly important when projects provide only budgetary support and sets conditions for release of funds. Yet the frameworks must also be flexible to respond to changing conditions and have mechanisms that allow an adjustment of goals and strategies when changes so demand.

141. *Participatory planning*. The ICR on a 1991 Cote d'Ivoire project refers to the "critical importance of ownership" in project design and planning. Among ICRs, this is perhaps the most frequent conclusion: Project problems are attributed to weak ownership and commitment:

- "Less than optimal government commitment and ownership."
- "Lack of government commitment caused momentum of the international community...to dwindle."
- "Ensure ownership within the concerned ministry."
- "Strong and broad government ownership is key."
- "Ministry staff was not involved, so ownership was not high."
- "Inadequate involvement of ministry officials in project design."

142. Experience has taught that ownership of project activities is required during implementation as well as design, but that without participation of stakeholders during the design phase, it is less likely that they will take an interest in implementation. Ownership and commitment need to extend beyond a small circle of ministry officials, as political leadership is not likely to change during the course of the project. In Ghana, changes in ministry leadership after three years weakened commitment to policy changes. This

setback demonstrated the importance of bringing community members, teachers and their representatives, and the middle ranks of ministry staff into the policy-making process, making it more likely to weather political changes.

143. In Senegal, an ICR concluded that "programs that include policies which governments are reluctant to implement are likely to fail. Mere letters of assurances from governments are often meaningless. To make needed policy changes, project designs should include dialogue, delineation of various special interests, and a process to understand how they are likely to interact."

144. Countries that receive budgetary support have improved participatory planning and monitoring of implementation through semi-annual reviews of progress, attended by representatives of all stakeholder groups. The review serves as a forum – a *facilitated process* through which government and external agencies agree upon priority problems. The government then takes responsibility for resolving selected problems over an agreed-upon timeframe.

#### **Redefining the problems**

145. If governments are to take responsibility for improving the quality of education, they must be the architects of policies and programs for change, and they must foster broad participation in their policy frameworks and programs. This is not a new lesson, but its importance has been reinforced over the past decade.

146. The Bank's role is changing to help governments specify outcomes, not procedures, to facilitate decision-making processes and to help provide the resources needed to implement solutions that governments devise. The challenge for the Bank is to learn how to facilitate these processes more effectively than it does now. This dialogue may be enhanced by well defined indicators, which can help force analysis and discussion of why goals are not being met.

### 4.1.2. Managing implementation

### The problems

147. "Projects will fail if little attention is paid to implementation," concludes one ICR. Successful implementation depends heavily on competent management. Yet the financial, material, and human assets that government and external agencies have dedicated to improving education quality have been so badly managed that a substantial amount of them have either never reached their intended beneficiaries – the students – or have been rapidly depleted.

148. Project reports attribute poor management to three causes. First, ministries are overburdened and constantly operate in an emergency mode. In Benin, for example, during the early years of its reform the ministry was usually "overwhelmed with high demand for resources from important political constituencies and badgered by striking teachers and disruptive university student unions." Next, systems reforms have focused at the central level and often had little or no effect at the school level. As described in Ethiopia, "the software components did not get fully implemented, resulting in resources only trickling to schools." The other source of management problems is the weak level of management skills and poor work practices in many ministries.

#### **Trends over time**

149. The main approaches supported by the Bank for improving implementation have been to build management systems, improve work practices, and reorganize systems

of authority and of external support. The latter include linking education reforms to interventions outside the education sector, decentralization of authority and financing, and coordinating external support through Sector-wide assistance programs (SWAps).

150. *Building management systems*. About 45 projects have included a component designed to improve central management functions, including budgeting and financial management, human and material resources management, and information management (Annex A.7). These components are of two types.

- One type builds a management system: information management (approximately 25), budgeting and financial management (approximately 15), personnel or human resources (approximately 12), and material resources facilities, textbooks, equipment (approximately six)<sup>9</sup>.
- The other type, of which there are about 30 projects, improves management through training and/or restructuring units within the ministry.

151. For the most part descriptions of management components are extremely sketchy and do not reveal strategies or methods. The overall impression given is that while the need for good management is recognized, ministry staff are expected to acquire this expertise mainly through unsupervised experience, with a modicum of training. When management systems are built, much of the work is done by external technical assistants. The trend persists throughout the 15 years covered by this review, with a few exceptions, which are described here.

152. Twelve projects have included activities to improve personnel management. Only in recent years, however, are these activities described in any detail. Senegal, Guinea, and Mauritania began about 2000 to focus on improving their personnel management systems. They have devised a career path for teachers, given support to the national pedagogical institute staff and to inspectors. Starting at the central level, they have worked downward to the department (district) and school levels. Efficiency measures are being introduced, including the use of teachers for more than one subject at the basic education level and the redeployment of teachers from overstaffed to understaffed positions. The new personnel management systems are accompanied by changes in other administrative and financial management systems.

153. The project design for Mauritania describes the steps being taken to reform the personnel system: (i) reorganize the human resource management unit, define its mission and responsibilities, and upgrade the managerial skills of it personnel; (ii) consolidate personnel data into a single comprehensive and reliable database; (iii) expand the teachers' career development system to include performance incentives; (iv) rationalize teacher deployment by introducing hardship compensation and rotation periods, and (v) improve staff professional behavior by developing and enforcing guidelines for teachers, school directors and inspectors.

154. Ethiopia, Guinea, Mauritania, Senegal, and Uganda have strengthened the capacity of their human resources management systems so that teachers are paid on time and ghost teachers are eliminated from the payroll. Uganda has also reduced from 16 the number of actions involved in initially employing a teacher. Mauritania has developed job descriptions for teachers, which will be published and given to every teacher. Ministries have also devised or revised career ladders for contract teachers as well as civil service teachers, allowing teachers to get credit for training that moves them toward higher pay rates. (Career ladders also sometimes include tracks for school directors, encouraging them to take courses in school management and leadership.)

<sup>&</sup>lt;sup>9</sup> This number is low because it does not count the management activities that fell into non-management components, such as textbook components and teacher components.

155. *Improving work practices.* With few exceptions, design documents omit descriptions of how work practices will be improved, either for implementation of the project or for longer-term management of a broader set of functions.

156. One exception is Ghana. Following the mid-term review, the Bank provided technical assistance to help the ministry meet its schedule for developing curricula and books. The ministry badly needed to improve the management of its existing textbooks, including inventory and fleet management. Similarly, inspectors were not visiting schools because the central allocation of petrol funds did not follow any plan and was dispensed on a first-come, first-served basis, with little control over priority or even legitimate uses. The Bank made an analysis of the organizational units responsible for managing these functions and introduced to the Supplies and Logistics unit some simple management tools. Based on the finding of the analysis that low productivity was resulting in wasted resources, the forthcoming education project is focused primarily on building capacity. It broadens the concept of management from one of sporadic training, equipment supply, and heavy technical assistance to one that includes incentives, procedures, accountability mechanisms, and systematic transfer of knowledge so that each unit of the system will manage assets competently.

157. The Gambia and Burkina Faso, at the time of project appraisal, analyzed the capacity of each organizational unit within that ministry that has project implementation responsibilities (planning, budgeting, information technology, human resources, and quality assurance). The analysis looked at whether the unit had: *(i)* the right organizational home for tasks assigned to it, *(ii)* effective leadership, *(iii)* the needed financial and human resources (level and mix of skills), and *(iv)* adequate work practices (techniques, methods, and procedures).

158. In Burkina Faso, this major set of activities was in preparation for the shift to budgetary support. It began with organizational and methods studies aimed at improving productivity in the ministry (optimizing the division of labor and deploying resources – teachers, textbooks and instructional materials, physical resources). These were followed with the development of systems (the organization of people with selected skills, hardware, software, information, and rules of operation.)

159. The current projects in Guinea, Mauritania, and Tanzania also have large management components. Mauritania is aiming to improve the management of pedagogy (teachers, inspectors, the national pedagogical institute), administration, and finance. Tanzania's attention to management and capacity building has facilitated its transition to budgetary support.

160. *Decentralization*. Toward the end of the 1990s governments and the World Bank began to view decentralization of education services to regional and district offices as a solution to the seemingly intractable problems of getting resources to schools, reducing waste, and maintaining material assets.

161. Of the 32 projects approved between 1987 and 1997, only seven planned for a significant move to decentralization. Between 1998 and 2003, 16 of 20 did so (Annex A.7). Not only did the rate of these activities increase, but the nature of their support changed. Early projects aimed at gaining managerial efficiencies by transferring some tasks – but little authority or funding – to district- or region-level units in anticipation of decentralization. Later projects had to train and equip these offices for the responsibilities that were rapidly coming their way, whether they were ready or not, as decentralization gained currency. Financial management, teacher recruitment, training, and management, textbook selection and management are the main functions that are supposed to be transferred to districts, though there is not much evidence of the extent to which this is happening.

162. Decentralizing the hiring and paying of teachers is the most common measure being taken to improve management of the teaching force. Where centralized hiring and payment systems have failed, decentralized systems are expected to make the transactions more manageable by reducing their number and the logistics of delivering payments. Uganda has decentralized funding for some school supplies and activities by making "capitation grants" directly to schools.

163. The glaring problem created by decentralization is the weak capacity of district-level and local level units to manage resources. In Ethiopia half the educational planner positions at the district level are unfilled, and the district office has never been asked to plan. Most countries are scrambling to build local capacity, sometimes on a sector basis, sometimes through projects that train across sectors. Much remains to be tested in decentralized management of teachers, particularly as district-level agents have never been involved in these processes.

164. Linking education reforms to interventions outside the education sector. It has long been known that ministries of education have limited authority over the resources they need to fulfill their functions<sup>10</sup>. Teachers are usually paid by the ministry of finance or another ministry. A review of hiring procedures in Uganda revealed strong interference in the regulatory environment outside of the ministry of education.

165. The expectation is that Poverty Reduction Support Credits (PRSCs) will help governments transform such interference into support. In countries that have adopted PRSCs and other forms of multi-sector budgetary support project components often include cross-sectoral capacity-building activities. Even in countries where education sector projects are autonomous, some Bank education projects are expected to coordinate activities with Bank projects outside the sector. Mauritania is attempting to deal with the government's management difficulties through a country-wide project in economic management. A similar effort is taking place in Senegal.

166. Sector-Wide Adjustment programs (SWAps). SWAps are a response to the recognition that the ministry of education and its partners must take into account activities and allocations of funding throughout the sector and from every source. SWAps have taken different forms. In some countries, lenders and donors - though not all - contribute to a pool of funds; in others, government and external agencies fully coordinate their activities but do not have a pooling of funds. Where there is a full-blown SWAp, as in Uganda, all large donors and lenders contribute resources to a program that includes activities from early childhood through university programs. Of the 48 countries in sub-Saharan Africa, about 15 are regarded as active participants in SWAps. These are Ethiopia, Uganda, Tanzania, and Zambia in East Africa; and Benin, Burkina Faso, Ghana, Guinea, Mali, Mauritania, Niger, Nigeria, and Senegal in West Africa, Mozambique and Lesotho in Southern Africa. By actively engaging for several years in a SWAp, these countries have set national priorities for quality improvements in the context of the equitable distribution of sector funds. They have also committed to taking the lead in partnerships with international agencies and broadly accepted targets and strategies. The World Bank has not done a comprehensive review of the impact of SWAps on the education sector or on improvements in the quality of education. Such studies have begun to appear outside the Bank, but the full effect of SWAps as a new approach to international assistance will take more time to fully assess.

<sup>&</sup>lt;sup>10</sup> Lockheed and Verspoor's 1991 study (work cited above) already recognizes this situation: "The administrative structure of education reflects and is intricately linked to the wider system of public administration, which complicates attempts to reform the education system."

#### **Redefining the problems**

167. Three ICRs conclude that achievement of management objectives was the least successful aspect of the project. Projects have been designed to increase the production of outputs by increasing the quantity of inputs, but they have not been designed to increase productivity, so they do not succeed in increasing outputs<sup>11</sup>. More often than not ministries have failed to provide competent management of project resources.

168. The main tools used to improve management have been technical assistance and training. Technical assistance has often been misused by allowing external agents to do the required task rather than help ministry staff acquire the skills and knowledge needed to do the task. Training has often meant sending a few people to courses outside of the country, without help, once they have returned to the job, in putting into practice what they have learned. Technical assistance and training, however, have had limited effectiveness when unaccompanied by incentives for the desired organizational behavior, leadership, and productive work practices.

169. As the Bank moves from education projects that feature conventional quality inputs to multi-sector projects such as PRSCs, it expects ministries of education to have adequate capacity to manage not only projects but their entire education systems. Thus, the problem of weak management capacity has become even more critical than it used to be.

170. The comprehensive capacity-building components being tested in The Gambia, Ghana, and Burkina Faso deserve close support and scrutiny. Successful efforts at building capacity at decentralized levels of the education system also deserve publicity.

### 4.1.3. Monitoring system performance

#### The problems

171. Although ministries have built capacity for monitoring system performance, most still lack the data needed to measure progress in improving quality. Are students mastering the skills and knowledge set out in the curriculum? To what extent? Under what conditions? Without this information, the ministry and its partners cannot know whether their investments in classrooms, teachers, materials, and other quality inputs are returning better educated students. They cannot detect the parts of the system – districts, schools, teachers – that are achieving expected results, nor can they determine which particular inputs and approaches contribute to hoped-for outcomes. They have no way of calculating the cost-effectiveness of various measures to improve quality. ICRs from Kenya, Uganda, and Zambia, among others, have noted that the absence of data still makes it difficult to rate accurately the projects.

172. While these kinds of problems are not as urgent as the lack of classrooms, trained teachers, and textbooks, they receive much attention, because without regular production and reporting of accurate data and analyses, the results of investments in quality components are difficult to demonstrate in terms of quantifiable indicators.

<sup>&</sup>lt;sup>11</sup> A thorough discussion of this issue is presented in an undated World Bank paper by Eliezer Orbach (TTL) and Gedion Nkojo, at the request of Operations Support and the Capacity Building Unit, "Assessing the treatment of capacity in Africa region projects."

#### Trends over time

173. Twenty-eight of the fifty-eight projects reviewed (48 percent) included a component for monitoring system progress. Annex A.8 displays these activities in a chronological framework. In recent years, as the activities become better understood, they are described in greater detail in design documents. More attention has been given to the use of indicators of quality and to refining assessment models and monitoring systems.

174. Distinguishing between public examinations and performance monitoring. Perhaps the main advance in the assessment of quality is the separation of tests used to promote students (public exams) from those used to monitor the performance of the education system. The Bank has helped educators understand the differences between these two kinds of tests and their uses<sup>12</sup>. Following pioneering activities in Burkina Faso, Ethiopia, and The Gambia, at least 20 countries have initiated an assessment for monitoring performance, and many of these have begun to build capacity to do this kind of assessment on a regular basis. As we noted in the discussion of public exams (previous section), Bank interest has shifted away from them and toward performance monitoring.

175. Using indicators and targets. The most favored indicators of quality are students' test scores and the ratio of students to teachers, textbooks, and classrooms. in some countries ministries have agreed to targets they were unlikely to meet, so there were not reasonable indicators of achievement of objectives. In Senegal and Uganda, for example, ICRs observe that targeted ratios of pupils to teachers, textbooks, and classrooms are nowhere near being achieved. Though this is not primarily a weakness of the monitoring system, it has tended to reduce confidence in the system. In Senegal, the assessment unit has "faced a permanent challenge convincing administrators and staff that evaluation is a reliable and useful tool – many are upset by the results, which they see as criticisms of their own performance – and in terms of overcoming the natural inertia and conservatism of the school system when it comes to accepting and acting on new and important information." The increasing use of sectoral adjustment credits has placed more importance on indicators and targets that are grounded in thorough and accurate sector assessments. As the World Bank has given up more control over inputs, it expects to rely more on outcome indicators.

176. *Piloting assessments.* The development of monitoring systems may have benefited from two conditions. First, unlike textbook delivery systems and teacher education systems, they did not exist in most African ministries before 1990, so they are not burdened with dysfunctional precedents. Second, they are not politically visible goods, so they need not be implemented everywhere simultaneously. These circumstances have allowed monitoring systems to pilot activities – at one grade level and/or within a limited number of districts – and expand from small-scale starts while technical and managerial capacity is being strengthened. Some countries are taking these systems to scale.

177. *Measuring the impact of innovations*. In Mali and Guinea, the Bank and bilateral donors have engaged the ministry in an assessment of the impact of *pédagogie convergente*. In Mali, the assessment included an extensive cost-effectiveness comparison of two NGO-supported community-school projects and the public schools. (This is the

<sup>&</sup>lt;sup>12</sup> Selection exams are designed to distinguish between students' performance, in order to provide evidence for selecting some to advance and others to remain behind. Thus, test items exclude those that are easy and likely to be answered correctly by most students. The primary school leaving exam, for example, tests material presented at the upper grades. National assessments, in contrast, are designed to cover the entire curriculum and to determine what students do not know as well as what they do know. An assessment of primary school students, for example, would include items to find out which students at any grade level lack even basic literacy skills. See Vincent Greaney and Thomas Kellaghan (1996), *Monitoring the learning outcomes of education systems*. The World Bank

only noteworthy cost-effectiveness study of the past 15 years, which should be of some concern in a region where financing for education is inadequate.) In Mozambique as well as Mali the evaluation of local-language instruction was politically controversial, highlighting the importance of technically sound evaluations, which, however, are likely to be disregarded if they are politically unsound.

178. *Regional organizations*. Two regional organizations have instituted programs in Africa to improve national assessments. These are SACMEQ (the Southern Africa Consortium for Monitoring Educational Quality) and PASEC (the *Programme d'Analyse des Systèmes Educatifs des Pays de la Confermen*). A consortium of ministries of education, SACMEQ was launched in January 1997. The aim of SACMEQ's initial project was to help countries use test scores to guide educational policy and decision making. SACMEQ projects administer a reading test and collect data on classrooms, teaching practices and working conditions as well as demographic data. Bank-supported countries that participate are Zambia, Tanzania, Kenya, and Malawi. Zambia in particular has benefited from its association with SACMEQ. The Dakar-based PASEC is operating a network for information and follow-up on evaluation instruments and results. Ministries of education in these countries are assessing the learning of students in grade 2 and grade 5 in mathematics and French. Bank-supported participants in this program are Burkina Faso, Cote d'Ivoire, Mali, Madagascar, and Senegal.

### **Redefining the problems**

179. The problem of using empirical information to formulate policies has also become more acute. Project documents occasionally note that monitoring results get little attention from policymakers.

180. As ministries improve their performance-monitoring assessments and their Education Management Information Systems (EMIS), they have increasing capacity and opportunities to not only monitor trends and associations but also to assess the cost-effectiveness of interventions such as instruction in local languages, multi-grade classrooms, double-shift schools, and various teacher-training programs.

### 4.2. Line functions

181. Line support systems are those hierarchal units that convey information between schools and top-level managers, implement policies and enforce regulations, and move resources to their destination. In African education systems the line extends from the minister and secretary to the teacher and students. All countries have intermediate units at the district level (department level, in francophone countries), and many have another intermediate unit at the state, provincial, or regional level. At the district level, most systems have an inspectorate, responsible for enforcement and reporting to a chief district education officer. Some countries also have pedagogical counselors, who are supposed to support teachers (as opposed to enforcing regulations).

### 4.2.1. The problems

182. In terms of improving the quality of education, the problem apparent in line support systems is their weakness and near incapacity to perform their functions. This problem has been exacerbated by the prevailing movement toward decentralization of education services.

### 4.2.2. Trends over time

183. Of the projects we reviewed, thirty-three provided some kind of support to district-level (and sometimes regional) functions, and thirty-two to school-level line functions, that is, to the school director. Over time, support moved much more toward school-level managerial support. Annex A.9 displays these components.

184. A trend that goes beyond the education sector is the decentralization of government services, usually including health and social protection as well as education. The notion of decentralization has been hovering since the early 1990s, but by the latter part of the decade it had begun to be firmly institutionalized in some countries – the most notable is Ethiopia – and is on the agenda of almost all sizeable, stable countries in Africa.

185. We will look at three aspects of changes in line-support functions: changes in district-level functions, changes in school-level functions, and the increased velocity across the continent toward de-concentrating authority and financing.

### **District-level functions**

186. *District offices (inspectorates).* The Bank has continually supported the intermediate managerial function of district offices (mostly comprised by inspectors), trying to help ministries change the function of this office from one that strictly regulates and enforces to one that advises and supports schools. In a few West African countries, the Bank has encouraged the ministry to give a larger role to pedagogical counselors.

187. Bank support has aimed at helping inspectors establish regular visiting schedules, work more closely with teacher education institutes, and prepare for the decentralization of education services. Support for inspectorates has been mostly given in the form of training to improve their supervisory skills. In many instances Bank support has also helped furnish inspectorate offices and provide equipment and vehicles. One project raised inspectors' salaries.

188. Support for inspectorates has dropped off since about 1997, reflecting a lack of impact on improving school quality. One problem seems to be that inspectors do not find it easy to change their role from one of administrative enforcement to one of pedagogical support. An ICR from Senegal observes that "inspectors became better able to train teachers and keep track of enrollments, but their role did not change. Inspectors may be useful as teacher trainers, but as they are currently used, they cost a lot and provide little value added to the system."

189. This is not always the case; there are anecdotal reports of inspectors providing effective support to schools. In Guinea, pedagogical counselors became effective facilitators of the school-based professional development process. In Mauritania the current project is preparing job descriptions for inspectors. Without these, their time is likely to be poorly managed. The problem common to many systems is that even with increased material support, inspectors have not been well managed. Often they do not have adequate transportation to schools, because cars, trucks, or motorcycles are commandeered for other purposes or petrol has not been rationally allocated.

190. *School-support centers.* A relatively new approach to providing pedagogical support to schools is the school-support center for continuous professional development of teachers. These are linked to school clusters or networks, sometimes based at a school. A few are associated with local teacher education colleges or in some way bring both trainers and administrative support staff together.

191. The most firmly established and well-known support center is Uganda's Teacher Development and Management System, which was created as an in-service training mechanism but is evolving into a center for continuing support of schools. Cote d'Ivoire, Lesotho, and Mozambique have also tried to use cluster-based centers for teacher support.

### School-level functions

192. *School-based management.* A striking trend is the increased use of schoolbased management. This is one aspect of decentralization, but it is being done in a manner that shifts the locus of responsibility from central and even district offices directly to schools and their communities. The role of the inspectorate is, theoretically, reversed from enforcing centrally driven policies and regulations on schools to linking central support to schools, which are give substantial authority to decide how to regulate their operations and use resources.

193. *Small grants.* Since 1995 at least eight ministries have introduced schoolbased management. About that same number have accompanied the transfer of authority with small grants for improving schools, sometimes given in response to competitive proposals for project support, sometimes given as part of a pilot in selected districts. The latter have been used as transition mechanisms, in anticipation of full-blown decentralized funding and authority. In Tanzania and Uganda, the ministry makes capitation grants to schools. Based on the number of students enrolled in the school, the grants have prescribed uses that offer some choice, such as instructional or recreational materials. Early problems in Uganda with the flow of grants from government through banks to schools were addressed by a tracer study and resolved by public announcements at each level of the system of the amount distributed. This public information reduces the leakage of funds by revealing exactly where it takes place. Guinea's experience with giving small grants to teachers as part of a professional development strategy seems to have succeeded in encouraging many teachers to find ways to improve their teaching.

194. School directors. The trend toward school-based management and community schools comes in part from the efficiency-orientation of decentralization: The school, as a decentralized organizational unit, is the most efficient locus of management. But it also comes from the recognition that a school is more than a sum of its parts – classrooms. This is not a new concept, but it has become more prominent in Bank projects during the past decade. It implies a much more important role for the school director. Though their importance has long been widely recognized, the lack of resources and authority available to them has diminished their authority.

195. About ten projects have included training for school directors. Such training has often been "academic," in the sense that directors have had little opportunity to exercise leadership or make decisions, or they are limited to routine procedures such as the preparation of monthly reports. Recently, ministries have become more serious about giving authority to school directors. Mauritania is instituting an extensive training program for school directors, based on the expectation that their responsibilities will increase significantly.

### **Increased community engagement**

196. The trend toward decentralization, which began in earnest in the late 1990s, has raised interest in community support for schools. It is not possible to look at the decentralization trend without also studying the increasing support that goes to school communities. When the education system is decentralized, education agencies – in this case schools – become governed by local authorities, elected and appointed, as well as by central agencies. The community has more potential for influence.

197. *Community support.* In response to this emerging circumstance, the World Bank has helped governments initiate mechanisms of support to communities. Prior to 1996, fewer than ten projects had community-support components. Since then, there have been close to thirty, notably those in Cote d'Ivoire, Madagascar, Malawi, Mali, and Tanzania. These activities are aimed at persuading parents and other community members that the school is there to serve them, not some distant government agency. Projects have tried to help community members contribute labor and local materials to the construction and maintenance of schools. They have engaged district offices in helping schools activate or create support bodies, particularly school management committees and parent teacher associations. They have supported campaigns to raise awareness of community members of their rights and responsibilities toward schools.

198. Parent teacher associations, while sometimes useful in engaging parents in their children's education, have not always garnered active community support, because they do not include community leaders who have the clout to do this. The weak links between schools and communities are exacerbated by the fledgling authority and low level of resources of most local governments.

199. *Community schools.* In Mali, bilateral donor projects, with subsequent Bank support, have helped the government allocate resources to community schools – schools started with the help of NGOs and financed largely by the communities. The community school model (which also thrived in Malawi but has not had active support of the government) has helped communities and government agencies learn about alternatives to top-down education systems and find viable alternatives that build on both community initiative and government support. The quality of community schools varies from place to place, and many, especially those that do not benefit from NGO support, are of extremely poor quality.

200. Studies of community schools show that while the cost of a community and a public school is about the same, their allocations are different. In public schools, nearly all of the cost is for teachers. In community schools, where teachers are paid much less, more is spent on teachers' training and supervision and on instructional materials. A big debate over community schools (discussed in the next section, on Financing) is over the inequitable contribution to education of rural and urban families.

### 4.2.3. Redefining the problems

201. The transformation of line support systems from top-down enforcement agents to bottom-up support offices is still mid-stream in rapid waters, and it is difficult to know now the conditions under which support is effective or to spot flaws and ways to improve. It is not too soon to say, however, that strengthening the managerial capacity of a large number of education agencies will be more challenging than strengthening only central agencies. The problem is to find efficient means of doing this.

202. The critical role of communities in governing, managing, and lending other kinds of support to schools has gained broad acceptance. The Bank has not tested extensively, however, mechanisms for connecting community support to systemic changes in basic education. More attention must be given to anchoring the governance and management of schools in their communities.

203. Interventions intended to help communities take responsibility for supporting their schools are still fresh and their effectiveness is not well understood. The present problem is to learn more about the fundamental dynamics between under-resourced schools and very poor communities and how to use these to benefit both parties.

# **5.** FINANCING

204. Although financing issues are critical to improving the quality of education, they are also complex and mostly beyond the scope of this inquiry. Our discussion of financing issues is limited to a brief summary of five trends that stood out in the project documents reviewed.

## 5.1. The problems

205. The overall financing issue is that teachers' salaries, textbooks, and the maintenance of classrooms are a huge part of a government's recurrent cost budget, and most governments in Africa find it extremely difficult to pay for them.

## 5.2. Trends over time

206. While the *average* portion of the base total project cost that has gone to quality inputs is about 72.2 percent (\$45.4 of \$63 million), there is no consistent trend over time in either a rise or fall of this rate (see Annex C). This suggests that goals of access and quality have not been treated as sequential; nor has quality gained higher priority over time.

207. Bank projects have assisted governments in trying various solutions to the problem of financing quality inputs. Some address quality inputs specifically: the non-salary budget line, and community contributions. Others are not specific to quality improvements, as they also help to pay for increasing access: budget shifts into basic education and improved management of resources. Another trend has been in the World Bank's financial support strategy, which has moved toward multi-sectoral budgetary support. Finally, perhaps the most significant impact on the financing of quality inputs has been the push for increased enrollment and free primary education.

208. Non-salary budget line. In the late 1980s, the World Bank was financing the cost of textbooks as part of governments' development budgets, turning a blind eye to the eventuality that books wear out and need to be continually replaced. More recently, the Bank has urged governments to add a "non-salary budget line" for the continual replacement of textbooks. Uganda, which has improving macro-economic conditions and budget increases, has complied. Burkina Faso, Cote d'Ivoire, Ghana, Mali, Mozambique, Senegal, and Tanzania are also working toward this objective, though it has been more difficult to meet in countries without rising revenues. The other condition that facilitates this strategy is a good relationship between the ministry of finance and ministry of education, so that both can look at the larger picture of government priorities and financing. In most countries, students at the secondary level are still asked to pay for their books.

209. *Community financing*. As described in earlier sections, communities have been asked to help finance construction, instructional materials, and teachers' salaries. Some of these schemes have failed because communities could not contribute. In other instances, communities have contributed significantly to financing, but this has raised criticism. Community schools in Mali and elsewhere also asked poor rural communities to pay a much larger share of the primary education bill than wealthier urban communities paid. Though community schools made a significant contribution to the improvement of quality of rural schools, the initial financing arrangements received criticism because of this inequity. The Bank has assisted the government in taking over the costs of teachers and textbooks.

210. An equitable system of centrally and locally funded financing of education with broad application has yet to be worked out. The decentralization of social services usually anticipates that local authorities will increase their revenues through local taxes, but this is not yet often happening. A report on Togo describes what happened in one such case:

211. The whole project was premised on the financial support of parents and communities –almost 9 percent of project costs –in a continuing economic crisis, with falling family revenues during the period. Parent and community financing capacity should have been carefully assessed at the outset and monitored throughout the project, with adequate attention to beneficiary wishes. The expectation that consumption taxes could be levied at the grassroots to support the fund proved unrealistic, and government came close to jeopardizing community voluntary contributions of public school fees…by trying to raise the level of school fees without careful assessment.

212. Financing issues continue to be a key ingredient of decentralized authority and community engagement in education.

213. Shifting budgetary allocations toward basic education. This goal has seen mixed success. Until 1990, there was little pressure on governments to allocate funding to primary and secondary education. The commitment made my most governments in 1990 in Jomtien to Education for All should have been a huge boon to basic education. Indeed, in many countries, international political pressure encouraged governments to move funds out of other sectors into education and, within the education sector, out of tertiary education into primary. Yet resistance to this shift remained strong in some countries. As reported in one West African country, "the political strength of university special interests could not compete with that of the rural poor." Governments have also been unwilling to reduce their military budgets. And, as Jomien in 1990 and follow-up events fade in memory, some countries' budgetary reforms have also faded.

214. *World Bank financing strategies.* The fifteen years covered by this review have seen a move from sector investment financing to sector adjustment credits and, most recently, Poverty Reduction Support Credits (PRSCs). Sector adjustment credits are now used in Burkina Faso, The Gambia, Kenya, Mali, Senegal, Niger, and Uganda. Mauritania is preparing to move to budgetary support in 2006. Over ten countries have a PRSC, and more are preparing for these credits.

215. These credits support experiments with Sector-Wide Approaches (SWAps) that call for more extensive analysis of conditions and needs and more involvement of local officials and other experts in those analyses. They shift the task of defining inputs from the Bank and other international agencies to the government, and they hold the government accountable for achieving outcomes rather than providing specific inputs.

216. Early reports on the use of sector-wide approaches and budgetary support are positive. In Uganda, the switch to a budgetary support mode became a "catalyst" in the reform process. It "galvanized" the new ministry staff. Bank staff in Tanzania have found that "the traditional project approach may not be appropriate to address certain sector issues when the policy framework is unclear and institutional capacity is weak." The sector adjustment approach has been more satisfactory.

217. Bank Task Managers interviewed agree that a government needs to have made certain achievements before sector credits replace investments as financing modes.

- Sound, demonstrably proven financial management must be in place at all levels of the system where there is some financial autonomy.
- A viable sector plan must be accepted by the government.

- A medium-term budgetary framework must indicate what programs are affordable and sustainable.
- An accountability system within the ministry must reward officials who follow procedures and invoke sanctions against those who do not.

218. Universal primary education. The trend with the biggest impact on the quality of basic education is the push toward universal enrollment. The Jomtien meeting urged governments to raise enrollment rates in primary school by raising awareness of the importance of education, building more schools and staffing and furnishing them. A monumental growth in enrollment has also come from the reduction or abolition of primary school fees, first in Benin, where girls were excused from paying school fees, and then in Uganda and Malawi, where, within one year, primary schools were forbidden from charging school fees to virtually all children. Free education policies were discouraged by the Bank and other international agencies, but governments instituted them for political reasons. The Tanzania sector adjustment credit is designed to phase in universal primary education over three years. Free primary education has also become policy in Lesotho, Kenya, and Zambia.

219. Governments and the international community seemed to give access priority over quality. They do not limit access to a level at which they can manage to provide a good-quality education, even by minimum standards. Our review found repeated instances of quality suffering from increased enrollments. The effect on school quality of floods of new students (mostly at the first-grade level) has been crushing. In Uganda and Malawi, pupil-teacher ratios, pupil-textbook ratios, and pupil-classroom ratios have fallen dramatically and remain far from ideal. In Uganda, a government committed to improving access and quality has used the time since the 1997 policy to strengthen its institutional management of resources. In Malawi this has not happened, and expectations of improvements in quality in the near future are low.

220. The recent interest in raising primary completion rates is an attempt to merge access goals and quality goals. But we have not yet learned how to improve quality in rapidly growing systems where resources are inadequate and not well managed.

## 5.3. Redefining the problems

221. The problem of securing adequate financing for good-quality basic education throughout Africa has not changed significantly. As birth rates and enrollment rates rise, funding for primary schools lags behind. The problem continues to be addressed by asking governments and the international community to give more money to education.

## 6. SUMMARY AND CONCLUSIONS

222. In this section we summarize the findings from our analysis of project components that have been used by the World Bank to improve the quality of education. We also present three overarching conclusions.

223. We preface this summary with the observation that the context in which education projects take place has changed significantly since the late 1980s. Some of this change has causes outside the education sector: the continuing growth of poverty, the invasion of HIV/AIDS, and the attention that these two phenomena have attracted within the international community. Because of their impact on the resources available for solving education problems, poverty and HIV/AIDS have required new strategies within the sector, especially with the increasing belief that education is a powerful variable in reducing inequity and poverty. Other changes have resulted from government policy decisions about education: abolishing fees for primary education, which has raised enrollments dramatically; allocating more money to primary education; and decentralizing education services to the local level; which is making a sea change in the institutional make-up of the education system.

224. The interrelationship among external agencies and the government seem to be evolving. The Bank's supervision of its projects has become less focused on technical matters, particularly the nature and amount of inputs, and more on policies and outcomes. Bilateral agencies remain engaged in implementation, but the impact of their projects on ministry functions – at least from the Bank's perspective – are limited. The optimal condition now seems to be appearing in Guinea and Uganda, where the ministry, the Bank, and the bilateral agencies work together to incorporate tested strategies into the education system and take them to scale.

225. Thus what we have learned about improving the quality of education is not a straightforward set of lessons achieved in a stable setting but a current set of perceptions on an evolving environment.

### 6.1. Summary of findings

226. The operating assumption of early Bank projects was that if enough money was made available, ministries of education would improve the quality of education. Experience has shown that improving quality is not so simple. The World Bank has not strayed from the belief that teachers, textbooks, and classrooms are the critical requirements for good-quality basic education. Most support for quality improvements is for providing these three inputs. Yet in most countries there are still too few teachers, textbooks, and classrooms for growing numbers of students. Pre-service teacher education has become more efficient in some countries, and in-service training has become more pervasive, but not much is known about the effectiveness of training on teachers' performance in the classroom.

227. Curriculum and examination reforms vary across the region and receive less attention than other quality measures. While the Bank continues to stress the importance of policies that would focus on core subjects and increasing the number of hours spent in the classroom on task, political restraint and weak management systems block implementation of such policies. In small-scale attempts to complement these traditional components of quality, the Bank has introduced school-based health and nutrition interventions and early childhood development programs to help make students more ready to learn and interactive radio instruction to assist teachers. These innovations have not gone beyond the pilot stage.

228. In helping governments reach their education goals, the Bank has learned the importance of broad participation in developing a policy framework and of viable systems for managing human, material, information, and financial resources. In most cases, however, Bank projects have not improved leadership, work practices, or incentives. Thus, resources are not well managed, and productivity is low.

229. As most countries move toward decentralized education services, the Bank has begun to learn how to build capacity at intermediate levels, but these efforts evidence the same shortcomings as management activities at the central level. At the school level, the Bank has little success in helping teachers take responsibility for learning how to improve the quality of their teaching. It has begun to improve support for school directors and to help schools engage communities in their work, though these activities have not yet resulted in any viable, transferable models.

230. In financing education projects, the Bank has shifted decidedly away from support for particular *inputs* that improve the quality of basic education toward support for sector-wide planning and management of resources to reach specific *outcomes*. Sector-wide approaches are expected to encourage better inter-ministerial coordination and cooperation among international agencies and the government. They should also make government agencies more accountable to their own leadership than to the Bank and other international agencies. So far only a few countries have made this shift, but others are in the early stages.

## 6.2. Underlying conclusions

231. The move toward sector support holds promise, provided that sector programs (1) place responsibility for identifying problems on those responsible for solving them, (2) emphasize management of implementation, and (3) address systemic issues, including those that go beyond the ministry of education. We conclude with three insights that elaborate on these provisions

# 6.2.1. Learning how to improve quality is the job of those responsible for the task

232. At the school level, quality has improved when the teachers and school directors have identified problems and taken responsibility for solving them. At the ministry level, quality improves when top-level officials set their own priorities, plan interventions, and manage their implementation based on their own perceptions of what can be done and how. Throughout the education system, each unit – the district office, the curriculum development center, and so on – has made quality improvements when it has had the skills to define a problem and the efficacy to solve it.

233. Within the unit, there must be a shared understanding of the problem and of who has responsibility for solving it. The role of insiders is to take the lead in the problem-solving process. The role of outsiders is to facilitate that process. Experience with school grants in Guinea has taught that teachers are able and willing to solve problems but that they need to acquire problem-solving skills and, often, modest financial resources. Experience with budgetary support in Uganda has taught that education officials and their colleagues in other ministries are capable of setting priorities and managing the use of resources to meet them, yet they benefit immensely when their local and external partners also sit at the table and discuss problems and solutions.

234. The practical implications of this insight are the need for effective models for facilitating problem-solving and decision-making process. In project agreements the

Bank is ceasing to specify technical procedures and helping to specify policies and outcomes. The Bank must ensure that its ideas and recommendations on both outcomes and procedures are put on the table in an honest dialogue, so that those who own the problem are exposed to alternatives, have the chance to test them and to decide on what is acceptable.

235. Improving quality by facilitating these processes may be the only way that the Bank can influence the processes of teaching in learning within the classroom. It can help education officials model a learning environment that, if given enough time and attention, will effect change in classroom practices.

# 6.2.2. Managing resources is as important as mobilizing resources

236. A new World Bank book on financing universal primary education points out the failure to improve management.

237. Achieving better management of education resources – at the central level, at the school level, and in the classroom – is as large a challenge as mobilizing more resources<sup>13</sup>.

238. Even though nearly all education projects we reviewed have a management component, evaluations of these same projects point to "lack of capacity" as a critical weakness of its implementation. Our analysis makes it clear that quality improvements do not result simply from the provision of funds for textbooks, teacher education, and classroom construction, yet no small portion of programs continues to rely on the supply of resources as the solution to growing enrollment. Projects aim to increase production without improving productivity<sup>14</sup>.

239. Persisting weak capacity is a result of narrow definitions of management and of faulty methods used to strengthen it. In many projects the management component is confined to building a new system – to "manage" finances, information, or another resource. If ministry staff cannot build the system, outside consultants are brought in. The project does not build and support internal leadership or offer incentives for or training in good work practices. Where capacity is still weak, projects need to help develop explicit, sound strategies for improving leadership, management, and good work practices. Burkina Faso, Ghana, and The Gambia have taken the lead in this movement.

# 6.2.3. Improving the quality of basic education extends beyond the ministry of education

240. Education cannot be improved by the ministry of education without the active and continual participation of other parties. Though this is not a new insight, its significance has become increasingly obvious. Within government, the ministry of finance plays a critical role in education, as does the ministry of civil service and – as decentralization rolls out – the ministry of local government. Each of these has strong control over what happens within the education sector, perhaps more control than the ministry of education has. Decentralization will increase the importance of local officials, elected and appointed.

<sup>&</sup>lt;sup>13</sup> Bruns, Barbara, Alain Mingat, Ramahatra Rakotomalala (2003). *Achieving universal primary education by 2015: A chance for every child*. The World Bank.

<sup>&</sup>lt;sup>14</sup> Eliezer Orbach, work cited.

241. To exclude all but the primary education sub-sector from serious consideration in investments has proven to be short-sighted. Expanding school systems require graduates from good-quality secondary schools and universities who can become teachers.

242. The importance of communities in improving quality is also becoming more apparent, as is the role of parents in supporting their children's formal education. We have also learned more about what effect a child's health and nutritional status has on his or her readiness to learn.

243. Improving the quality of basic education thus depends upon enhancing the performance of the broad government system, the entire education sector, and the whole child.

# 7. ANNEXES

### **Annex 1: Timelines of interventions**

Annex 2: Projects reviewed

Annex 3: Funding of quality and other components

# Annex 1: Timelines of interventions

### Instructional materials

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
Privatization													
•Development	х	х		х	XX	х	х		х	Х	XXX		
•Writing		XX	х	XX	XX	XX	XX		XX	х	XXX	х	
•Producing	XXXX	XXXX	Х	XX	XX	XX	XXXX	Х	XXX	XX	XXXX		
•Distributing		XX		х	XXX	XX	XXX		Х	Х	XXXX	х	
Cost sharing/ recovery													
•Sell			Х	X	XXX	XX	х		Х	х			
•Rent	х	XX		Х		Х	XX	XX	XX	х	Х	Х	
•Free	х	XX	Х	XX	XX	X	XXX	XX	XXX	х	XXXX	XX	X
Other													
Warehouse improvement	Х			х			х			х			
Print books		х	xx	xx		х				х			
Strengthen publishing unit		х								х			
Financing policy and plan		xx		х	XX								
Line item for instructional materials			xx			х			х				
Train teachers in textbook use		xxxx	х	х	х	xxxx		XX	xx		xx	XXX	х
Library and/or library books		х		х	х							х	х
Supplemental classroom materials		х		xx	xx			xx		х	xx	XX	
Control quality of textbooks					х			х			х		
Storage at schools						х	х	х					
Parents monitor use							х					х	
School committees manage								х					
Computerize distribution operations								х				х	
Improve fund/operations management										xxxx			
School-based procurement, management											х	х	х

### Teachers

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
Training													
In-service	х	XXXX	xx		XXX	х	XX		х				
Pre-service		х	х	х	XXX	х		х	х		х	х	
Upgrade untrained teachers			XXX			XX	х			х	х	х	х
Continuous professional development		х						х	xx		х	XX	х
Inputs													
Build, equip teachers colleges	х	XX	XXX	XX					XX	х	xx		
Reform, upgrade curricula, materials		xxxx					х		х		xx	х	
Train training staff					х		х			х			
Training curriculum													
Orientation in use of books, curricula, multi- grade, etc.		x	х	х	х	xxxx			x		xx	xxx	x
Practical skills			х			х	х	х		х		х	
Methods (child-centered, problem-solving, etc.)							х	х	xx			х	
Systemic changes													
Decentralize		х	х					х	х				
Coordinate pre-service and in-service		х							XXX				
Build networks, clusters					х	х	XX	х				х	
School-based							х		xx	х		х	
Expand the system									XXX	х	х		
Use distance education									х	х			
Incentives													
Raise teachers' salaries	х									х			
Improve conditions							х					XXXX	х

### Classrooms

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
Construct and/or rehabilitate classrooms													
	XX	XXX	XX	х	XXXXX	XXX	XX	XXX	XXXXX	XXXX	XX	х	х
Engage the community in construction and maintenance													
mannenanee	XX	х	XX		Х		XX		х	XX	XX	XXX	Х
Provide wells and/or latrines							xxx	х			XX	xxx	

### Curriculum

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
Build central capacity		х	х				х						
Develop new textbooks			xx										
Evaluate and revise curriculum and materials				х				XX		х		х	
Adapt materials ("relevance")				х					х		х		
Train authors/ writers			х		х								
Integrate curriculum and assessment									х				
Core subjects		xx		х				х	х			х	Х
Science	х		х		х		х						
Reading/literacy	х	х			х		х		х	х	х		
Local languages		х							х	х	х		
Math			х		xx		х		х	х			
Environment				х	х								
National values									х				
Life skills									х				
Competency-based						х							
New methods (child-centered, etc.)							х		xx				
Add hours of instruction		х							х				

### Exams

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
Upgrade test administration	х												
Computerize the exam system	х			х				х					
Reorganize the exam system		х											
Continuous assessment in the classroom		х			х				х		XX	х	
New examinations organization			х						х			х	
National end-of-primary exam			xxx						х		х		х
Competency-based tests				х									
National committee to monitor exam validity					х								
Reduce costs of tests											х		
Curriculum-based tests for teachers' use in the classroom												х	

### **New Inputs**

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
Interactive Radio Instruction	х								х			х	
School-based health and nutrition interventions		xx	xx			xx	х	х	х	xx	xxxx	xxxx	х
Early childhood development programs									х	х	XXX	XX	

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
Strengthen management	xx	xxxx	XX		xx	xx		х	xxxxx	XX	х	XXX	XX
Train managers		х	х	х								х	х
Restructure							х	х	х	х		х	
Planning and monitoring													
Policy studies and analyses		xx	xx	х	xxxx		х		х	xxx	xxx	xx	х
Planning	xx	xx	xx	xx	xx	х	xx		х	х	х	х	xxx
Measure progress		х			х	х	х					х	х
Management													
Budget, finances	х	х	х	х	х		xx	х	х	XX	х		xx
Information		xxx		xx	xxxx	xxx		х	xx	XXX	х	XX	XX
Materials		х	х								х		х
Teachers, personnel				х	xx		х	xx	xx		xx		xx
Decentralization		х	х	х	х	xx	х	xx	xxxx	xx	xxxx	xx	xxxx

## Planning and management : Central functions

### Monitoring system performance

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
National system to assess school performance		х	х	xx	xxxx	xxx		х	xxx	х	xx	х	х
New examinations organization			х						х			х	
Improve school -level monitoring of achievement				xx		х	х		х				
Periodic sampling						х	х		xx				
Indicators of input and output quality							х						
Measure student mastery of material to improve curriculum and teaching								x					
Produce annual performance monitoring reports								х				х	
School/teacher self-assessment									х		xx		х
Use exams to provide information to policy makers											xx		x

### Line functions

	87/89	90	91	92	93	94	95	96/97	98	99	00	01	02/03
District level													
Train district officers and inspectors to support teachers	х	xx	xx	xxx	xx	xx		xxxx	xx	xxx		x	
Equip inspectorates for decentralization	х		х	х							х		х
Pay inspectors' salaries		х											
Strengthen inspectorate offices		xx	х	х	XX	х	х	х					
Train pedagogical counselors						XXX						х	
Network of support centers					XX			х	х	х	х		
Train district officers to support school-based management								х	xx	х	х	х	х
School level													
Train school directors		х	х		х				х	х	XX	х	х
School-based supervision of teachers							х						
School/ community grants													
Small grants to schools for staff development					XXX		XX	XXX		х	XXX	xxxx	x
School-based reforms		х			х			XXX	х		х	XXX	
Community support													
For schools and teachers		х		х	х	х	х	xxxx	х	х	х		
For construction and maintenance	х	х					XXX		XX		XXX	х	xx
Management committees, PTAs				х				х	XX	XX	х		xx
Campaigns to increase community awareness of school programs								х		х			х
Government support for community schools											х	х	
School committees hire teachers/ manage resources												xxx	х

Project ID	Country	Project Name	Project FY	Lending instrument
P000042	Angola	EDUCATION I	1992	SIL
P000103	Benin	EDUCATION DEVELOPMENT PROJECT	1994	SIL
P000282	Burkina Faso	EDUCATION IV	1991	SIL
P072106	Burkina Faso	BF PRSC 1	2002	PRC
P000309	Burkina Faso	BASIC EDUCATION SECTOR PROJECT	2002	SIL
P075378	Burkina Faso	BF PRSC 2	2003	PRC
P000426	Cape Verde	BASIC EDUCATION	1995	SIL
P055468	Cape Verde	EDUC. & TRAINING CONSOLID. & MODERNIS.	1999	SIL
P000517	Chad	BASIC EDUCATION V	1993	SIL
P000603	Comoros	EDUCATION III	1997	SIL
P001172	Cote d'Ivoire	HUMAN RESOURCES ADJ	1992	SAD
P001209	Cote d'Ivoire	HRD MANAGEMENT SUPPO	1993	TAL
P035655	Cote d'Ivoire	EDUCATION & TRAINING SUPPORT	1998	SIL
P000721	Ethiopia	EDUCATION VII	1988	SIL
P000732	Ethiopia	EDUCATION SECTOR INVESTMENT	1998	SIM
P000821	Gambia, The	EDUC SECTOR CREDIT	1990	SIL
P035643	Gambia, The	THIRD EDUCATION	1999	APL
P000964	Ghana	PRIMARY SCHOOL DEVELOPMENT	1993	SIL
P000975	Ghana	BASIC EDUCATION SECTOR IMPROVEMENT	1996	SIM
P000426	Guinea	EQUITY AND SCHOOL IMPROVEMENT	1995	SIL
P057188	Guinea	PRE-SERVICE TEACHER EDUCATION	1999	LIL
P050046	Guinea	EDUCATION FOR ALL PROJECT	2002	APL
P001015	Guinea-Bissau	BASIC EDUCATION	1997	SIL
P001327	Kenya	EDUCATION SECT.ADJ.C	1992	SAD
P056416	Lesotho	SECOND EDU SEC DEVP, PHASE I	1999	APL
PO56416	Lesotho	SECOND EDU SEC DEVP, PHASE II	2003	APL
P001515	Madagascar	EDUC SECT REINF	1990	SIM
P001559	Madagascar	EDUCATION SECTOR DEV	1998	SIL
P001649	Malawi	EDUC.SEC.II	1990	SIM
P042305	Malawi	PRIMARY EDUCATION PROJECT	1996	SIL
P035662	Mali	EDUCATION SECAL	1995	SAD
P058770	Mali	IMPROVING LEARNING IN PRIMARY SCHOOLS	2000	LIL
P040650	Mali	EDUCATION SECTOR EXPENDITURE PROGRAM	2001	APL
P001857	Mauritania	MR GENERAL EDUCATION V	1995	TAL
P071308	Mauritania	EDUCATION SECTOR DEVELOPMENT PROGRAM	2002	APL
P001920	Mauritius	EDUCATION SECTOR	1993	SIL
P001776	Mozambique	EDUCATION II	1991	SIL
P001786	Mozambique	EDUCATION SECTOR STRATEGIC PROGRAM	1999	TAL
P001980	Niger	EDUCATION III - SECA	1994	SIL
P069569	Niger	PUBLIC EXPENDITURE ADJUSTMENT CREDIT	2002	SAL
P002134	Nigeria	PRIMARY EDUCATION	1991	SIL
P066571	Nigeria	SECOND PRIMARY EDUCATION PROJECT	2000	SIL
P071494	Nigeria	UNIVERSAL BASIC EDUCATION PROJECT	2003	SIL

# Annex 2: Projects reviewed

Project ID	Country	Project Name	Project FY	Lending instrument
P002242	Rwanda	RWA-EDUCATION SECT. CR	1991	SIM
P045091	Rwanda	HUMAN RESOURCE DEV.	2000	SIL
P002542	Sao Tome and Principe	HEALTH & EDUCATION	1992	SIL
P002357	Senegal	HUMAN RES DEV'T II	1993	SIL
P047319	Senegal	QUALITY EDUCATION FOR ALL PROGRAM	2000	APL
P074642	Sierra Leone	ERRC II	2002	SAL
P002790	Tanzania	EDUC PLANNING & REHA	1990	SIM
P002789	Tanzania	HUMAN RESOURCE DEV 1	1998	SIM
P071012	Tanzania	PRIMARY EDUCATION DEVELOPMENT PROGRAM	2002	SAD
P002889	Togo	EDUCATION REHABILITATION PROJECT	1995	SIL
P002953	Uganda	PRIMARY EDUC. & TEAC	1993	SIL
P002972	Uganda	EDUC SECTOR ADJ CRED	1998	SAD
P050438	Uganda	UG:PRSC1	2001	PRC
P073671	Uganda	UG-PRSC II	2003	PRC
P003200	Zambia	EDUCATION REHAB. I	1993	SIL
P003249	Zambia	BASIC ED SEC INV PRG	1999	APL

Country	Date	Total quality	Construction, rehab	Planning, management	Other	Base	Total	Quality as % of Base
Ethiopia	12/8/87	14.4	51.4	6.9	9.5	82.2	95.2	17.5%
Malawi	11/13/89	10.3	7.0	0.4	3.9	35.1	41.0	29.3%
Madagascar	1/11/90	21.8			26.8	48.6	55.0	44.9%
Tanzania	4/26/90	15.0	15.6	4.7	12.8	48.1	67.5	31.2%
The Gambia	4/30/90	2.4	9.1	0.8	3.4	15.7	23.4	15.3%
Mozambique	11/15/90	6.1	28.8	0.0	11.9	46.8	67.9	13.0%
Nigeria	11/20/90	99.4	0.0	0.0	23.4	122.8	158.4	80.9%
Rwanda	3/1/91	7.6	0.8	1.9	7.3	17.6	26.9	43.2%
Burkina Faso	4/24/91	15.5	17.9	3.4	0.7	37.5	46.4	41.3%
Kenya	8/5/91						23.3	
Cote d'Ivoire	11/22/91						125.0	
Sao Tome and Principe	2/20/92	1.2	0.0	0.2	8.8	10.3	12.0	12.0%
Angola	5/4/92	2.7	12.5	5.5	6.6	27.3	31.2	9.9%
Zambia	9/22/92	13.5	13.7	6.4	2.3	36.0	42.8	37.7%
Mauritius	1/1/93	7.5	39.6	4.1	15.5	66.7	78.7	11.2%
Senegal	2/11/93	14.9	35.9	0.0	5.2	56.0	72.8	26.6%
Uganda	3/19/93	59.4	23.9	5.6	3.3	92.2	104.1	64.4%
Chad	4/16/93	14.0	9.6	0.0	10.2	33.8	33.8	41.4%
Cote d'Ivoire	5/10/93	3.5	0.0	1.6	1.9	7.0	7.9	50.0%
Ghana	5/17/93	4.8	53.3	0.0	7.0	65.1	7.0	7.4%
Benin	3/29/94	9.3	3.2	4.4	2.4	19.3	22.9	48.2%
Niger	5/5/94	17.5	27.1	3.9	20.1	68.6	76.0	25.5%
Mali	12/6/94						50.0	
Cape Verde	12/19/94	3.5	5.7	2.4	4.2	15.8	15.8	22.1%
Mauritania	3/10/95	25.1	7.5	6.5	6.5	38.60	42.6	55.0%

# Annex 3: Funding of quality and other components

Country	Date	Total quality	Construction, rehab	Planning, management	Other	Base	Total	Quality as % of Base
Guinea	4/7/95	17.3	24.7	3.1	0.5	45.6	53.0	37.9%
Togo	6/7/95	31.7	7.5	2.8	0.4	42.4	46.6	74.8%
Malawi	12/21/95	5.0	5.7	0.2	0.0	10.9	12.4	46.4%
Ghana	5/24/96	125.4	44.9	28.8	13.9	213.0	241.6	58.9%
Guinea-Bissau	5/13/97	6.6	7.2	0.6	2.4	16.7	18.8	39.3%
Comoros	6/5/97	1.8	2.8	0.8	1.8	7.1	7.5	25.2%
Tanzania	8/26/97	5.0	0.0	31.0	64.0	21.8	24.0	22.9%
Madagascar	2/13/98	31.5	62.5	0.0	48.8	142.8	153.0	22.1%
Uganda	2/27/98						155.0	
Ethiopia	5/4/98	77.5	22.0	0.3	0.2	100.0	100.0	77.5%
Cote d'Ivoire	5/6/98	24.4	32.1	9.0	9.4	74.9	82.8	32.6%
Guinea	6/26/98	3.6	0.0	0.0	0.3	3.9	4.3	92.3%
The Gambia	8/7/98	1.0	23.2	4.7	14.3	43.2	51.2	23.5%
Mozambique	1/22/99	25.8	31.8	8.3	1.1	67.0	71.0	38.5%
Zambia	3/5/99	7.5	22.6	8.5	1.4	40.0	40.0	18.8%
Lesotho	3/25/99	7.1	9.8	5.5	2.8	25.2	26.7	28.2%
Cape Verde	4/30/99	1.0	1.3	0.8	3.8	6.9	7.3	14.5%
Senegal	3/20/00	242.0	637.0	45.6	0.7	926.0	926.0	26.1%
Nigeria	4/12/2000	14.4	22.5	8.2	2.7	50.6	61.1	28.4%
Rwanda	5/8/2000	17.8	6.6	0.3	5.6	31.2	37.1	56.9%
Mali	11/27/2000	139.6	154.5	198.9	1.1	494.0	541.2	28.3%
Guinea	6/18/2001	109.69	93.26	190.35	0	393.30	420.14	27.9%
Tanzania	8/22/2001						150.00	
Mauritania	9/26/2001	97.95	125.56	16.04	55.92	295.47	323.65	33.2%
Burkina Faso	12/7/2001	21.5	59	7.4	0	87.90	96.2	24.5%
Mali	1/21/2002	4.2	0.0	0.5	0.5	5.2	5.5	81.3%
Nigeria	8/15/2002					120.80	120.8	