Abstract

Primary school expansion in African countries during the independence period has exacerbated a dilemma confronting educators and policymakers since colonial times: should the purpose of primary schooling be to educate an elite for secondary schools, or should it be, instead, to prepare students for self-employment? Findings are reported from a series of studies of primary schooling conducted in Burundi and Kenya since 1985. Both countries employ selective examinations for admission to secondary schools that emphasize academic achievement in subjects taught in metropolitan languages, notwithstanding reforms that promote vernacular language instruction and prevocational studies. As long as some children go on to secondary school, primary schooling will not be reformed on the sensible premise that it is the terminal stage of schooling for most children. Nevertheless, the opposition between prevocational and academic education may be a false dichotomy; academic instruction can be organized in ways that facilitate self-employment, whereas prevocational training can be strengthened by linking its objectives and content more closely to subjects that are central to preparation of students for secondary education.

Students completing primary school this year in many African countries will sit for national examinations that few North American students could pass. How well African students perform on these examinations will determine whether they will be among the few going on to secondary school or among the many leaving school for work. The school-leaving examinations include items such as this one taken from the 1987 concours national administered to grade 6 students in Burundi: "A cyclist leaves Bujumbura at 7:00 am for Rumonge at an average speed of 15 km per hour. An-
other cyclist leaves Rumonge for Bujumbura at 7:45 am at an average speed of 20 km per hour. The distance between these points is 72.5 km. At what distance from Bujumbura will the two cyclists meet?"

Like primary school students in other African countries, students in Burundi will have to comprehend and correctly answer this question in a metropolitan language, French, which is not their mother tongue but which is used for instruction in the upper primary school and in secondary schools and institutions of higher education as well.

Our analysis focuses on primary schools in two East African countries, Burundi and Kenya. The two countries represent some of the variations that may be found between francophone and anglophone African countries, though neither country can be considered typical. A Belgian trust territory after the First World War, Burundi was educationally disadvantaged compared to many British and French colonies and especially compared to the neighboring Belgian Congo where a majority of school age children were attending primary school before independence (Malengreau, 1955). Kenya, settled by Europeans at the turn of the century, experienced more intense modernizing influences than most African colonies, not the least of which were land privatization, plantation production, wage employment, and expansion of government and missionary schooling. All this was seen by colonial authorities as a prerequisite for a prosperous market economy. At independence in 1963, about 60% of Kenyan children were in school, more than twice the rate of Burundi at the same time (Eisemnon, 1988a; Eisemnon, Schwille, & Prouty, 1989). Nearly all primary schooling in Burundi during the colonial period was provided by religious orders, and this situation persisted for several years after the country's independence in 1962. By the 1980s, the Burundian government had assumed complete responsibility for primary schooling and began rapidly expanding school enrollments. Today, perhaps 70%-80% of the primary school age cohort is in school (Ministry of Primary and Secondary Education, personal communication, 1988). That is still below the school participation rate in Kenya, which was more than 95% in 1985 (Eisemnon, 1988a).

School expansion in Burundi and Kenya has exacerbated a dilemma confronting educators and policymakers: should the purpose of primary schooling be to prepare an elite for secondary education or, instead, to provide a terminal education to prepare students for self-employment? As long as African governments lack the resources needed to increase opportunities for secondary education and cannot significantly expand formal employment, they will have to find ways to use primary schooling to increase the productive capacities of the rural population and impart skills for self-employment on and off the farm.

Findings are reported from a series of studies of primary schooling conducted in Burundi and Kenya since 1985. In Burundi, pilot studies of three primary schools in different regions of the country were begun and completed in 1988 in preparation for a national sample survey of 48 primary schools that was carried out in 1989. Data have been collected from classroom observations and interviews with teachers, school directors, and school-leavers. The research in Kenya has been more narrowly focused on case studies of nine schools during the period 1985-1987, when the system of primary schooling was being reformed.

Political and Social Contexts of School Expansion

Quantitative Growth

At independence (1963), fewer than 1 million (840,677) children were enrolled in Kenyan primary schools (Eisemnon, 1988a). When the country celebrated its second decade of independence in 1983, enrollment had increased fivefold to more than 4 million (4,323,811). Enrollments greatly expanded after 1974 when tuition fees were...
gradually abolished. Each step taken to increase school participation and raise educational attainment has had serious and sometimes unanticipated consequences for school instruction. The most recent of such steps was the lengthening of the primary cycle to eight grades in 1985. In order to implement this reform, more than 13,000 new classrooms had to be constructed and furnished, and instructional equipment was obtained for the teaching of woodworking and other practical subjects. Few schools outside Kenya’s principal cities and towns had marshaled the instructional resources necessary for the new 8-year program when it was finally introduced; even the syllabus was not available in many rural schools in time for the first session (Eisemon, 1988a). Eighteen thousand untrained teachers were eventually employed to staff the new grade 8 classes.

An important objective of the reform, and the reason for lengthening the primary cycle, was the teaching of skills for self-employment. Numeracy and literacy were to be emphasized for the first 6 years. The last 2 years of primary schooling were to have a practical bias, providing children with the skills necessary to improve rural life. In a radical step to promote self-employment, agriculture and craft subjects were made compulsory papers on the primary school-leaving examination, as was Kiswahili, the national language and the lingua franca of much commerce in rural areas. Since these subjects were previously not examined, they were often not taught. Having raised educational expectations, the government felt it necessary to strengthen practical training since the majority of primary school leavers could not be accommodated in secondary schools.

In Burundi, there has been still less effort to increase access to secondary schools and higher education. The proportion of primary school graduates admitted to secondary schools in 1988, about 10%, has changed little since the 1970s and is not likely to increase in the near future, although the school participation rate may soon catch up with Kenya’s. Government resistance to popular pressures for greater access to secondary and higher education is rooted in continued adherence to the colonial distinction between practical training for the masses and academic education for an elite.

Resistance to educational expansion is also the result of tensions between the country’s two major ethnic groups, the rural Hutu majority and the minority Tutsis, who dominate the armed forces and until recently monopolized almost all important positions in government. Fearing the implications of majority rule, which in neighboring Rwanda resulted in the imposition of quotas restricting Tutsi educational and economic advancement, governments in Burundi until very recently have been reluctant to expand educational opportunities in ways that might foster demands for meaningful equality. Ethnic turmoil in the late 1960s and in the early 1970s led to postponement of plans adopted shortly after independence to provide universal primary schooling. Renewed turmoil in 1988 produced a government committed to national reconciliation but, to date, no changes in the structure of educational opportunities. In Kenya, ethnic tensions have had the opposite effect. Groups disadvantaged in the colonial period have clamored for and received greater access to education, though differences in educational attainment between various groups remain large and a source of serious concern (Ole Sena, 1987).

Qualitative Consequences

In comparison to Kenya and perhaps most other African countries, large enrollment increases at the primary level in Burundi have not been accompanied by a decline in conspicuous indicators of educational quality such as employment of many untrained teachers. Much of the increase in primary school enrollments has been brought about through the introduction of double shifts resulting in more ef-
ficient use of existing staff and facilities. Where new facilities have been constructed, most government schools have been built with permanent or semipermanent materials: brick, concrete, or cinder block with metal or tile roofs. A high proportion of community-constructed rural schools in Kenya, in contrast, are made of mud and wattle. And unlike many primary schools in Kenya, those in Burundi are provided with at least a minimal number of teaching materials. Since it would be too expensive to provide textbooks for all students in all subjects, textbooks are limited to French and the vernacular language, Kirundi. In other subjects, a detailed teacher's guide is used. Likewise, almost all primary school teachers in Burundi have specialized teacher training. Finally, expansion has not brought about a collapse in the government's ability to manage the educational system as is so often the case. Relative to other African countries, Burundi, according to the World Bank (1988b, p. 6), has been able to "maintain the quality of education at an acceptable level." Its internal efficiency ratio, a calculation the World Bank uses to measure how efficiently facilities, teaching, and other resources are used to produce graduates, taking into account attrition and repetition, is very high: 71% (World Bank, 1988b, p. 6).

Although reliance on double shifts to increase school participation has produced higher efficiency in the use of resources, that has been achieved at considerable instructional cost. Double shifts have reduced the school day to 3½ hours and increased teachers' work day by about one-third.

Since 1973, government policy in Burundi has emphasized the role of primary schooling in rural development. Kirundization of instruction and ruralization of the primary school curricula were the twin objectives of the 1973 reform. The content of primary schooling was to reflect the fact that it would continue to be the terminal stage of schooling for most children. That is sensible for a country where more than 85% of the population is engaged in agriculture and agricultural commodities account for about 90% of its foreign exchange earnings (U.S. Agency for International Development, 1983). The rationale for linking primary schooling to rural development in Kenya is similarly compelling. Indeed, this has been a feature of educational policy since the colonial period in both countries, although in Kenya the reforms adopted during the first years of independence diminished the importance of practical studies and vernacular language instruction.

Aspirations for Secondary Education

Yet large discrepancies between rural and urban incomes, between wage and agricultural labor, favor student aspirations for secondary education, which remains the gateway to paid employment in the government-dominated modern sector as well as to the amenities of urban life. In Burundi and Kenya, as elsewhere in rural Africa, parents do not send their children to school to become better farmers or to learn vernacular languages and practical skills that will suit them for rural life. They want an education for their children that affords them an opportunity for a much better life off the farm (Foster, 1965).

Inasmuch as access to secondary school is dependent on performance on national examinations, which are given chiefly in metropolitan languages and, in Burundi, only in academic subjects, there has been strong parental and teacher resistance to practical studies and vernacular language instruction. In 1988, for example, the government of Burundi indefinitely postponed implementation of a decision to use Kirundi for instruction in the final 2 years of the primary cycle. After 15 years of planning, Kirundi teaching guides were still not available for distribution nor, the government explained, had teachers received sufficient training for mother tongue instruction (Bureau d'Education Rurale, personal communication, 1988).
In order to appreciate popular pressures for access to secondary education, it is necessary to take into account the great sacrifices that parents make to educate their children. Although tuition fees are about U.S. $1.70 per year in Burundi, and in Kenya primary schooling is now free, tuition represents but a small proportion of school expenses. In Kenya, textbooks must be purchased for home study, and in both countries, parents must buy pencils, exercise books, and the required uniforms. In addition, parents are responsible for payment of extra fees. In Burundi, fees are sometimes assessed for paying school guards. In Kenya, parents contribute to the cost of furnishing classrooms and of school construction and repair.

In studies of rural households carried out in western Kenya and in Burundi, we have shown that school expenses typically represent a high proportion of household expenditures. In Kenya, it is the largest item of expenditure. In the poorest households in which parents have the least formal education, 30% of disposable income is spent on schooling, more than is spent on fertilizers, new varieties of crops, agricultural implements, and other modern resources (Eisemon & Nyamete, 1988). Although more well off farmers spent slightly less on schooling (22%), their investments in children’s education still exceeded all other investments.

In Burundi, school expenses were found to account for a slightly smaller proportion of household expenditures, about 20% (Eisemon et al., 1989). Purchasing school uniforms was the largest single educational expense of parents. As a proportion of household expenditures, clothing and other school-related expenditures rank well below food and health care but above expenditures for farming. Given the substantial investments parents make in their children’s education and the higher economic returns that accompany higher levels of schooling in these and other developing countries (Psacharopoulos & Woodhall, 1985), it is not surprising that academic, metropolitan language studies that lead to secondary schooling are more highly valued than the kinds of practical training for rural development that governments wish to encourage.

**Changes in the Curricula of Primary Schools**

Primary school curricula in Burundi and Kenya are broad in scope and demanding for teachers and students. They are broad because primary schooling is terminal for most students; they are demanding in order to keep the school systems highly selective. For purposes of comparison, we focus on the upper stage of the primary cycle, that is, on grades 5 and 6 in Burundi and 7 and 8 in Kenya. This is the period during which students prepare for the school-leaving examinations. Unlike primary schools in countries that do not employ national examinations for admission to secondary schools, schools in these countries place much greater importance on the final years than on the early years of instruction. In distributing teachers’ guides, textbooks, and other instructional materials, priority is given to students in the upper stage of the primary cycle. Classes are usually smaller, and classrooms are better furnished. The most experienced, mostly highly trained teachers are usually assigned to teach the final years.

Schools in Burundi offer fewer hours of instruction, give relatively more importance to metropolitan language teaching and mathematics, and somewhat less to science and science-related subjects than schools in Kenya where the curriculum is broader (see Table 1). Although both countries emphasized agriculture and prevocational education in their most recent education reforms, the content of primary schooling is primarily academic, particularly in Burundi. Agricultural instruction is allocated only ½ hour per week in Burundi from the third grade, compared to almost 2 hours per week.
Table 1. Curricula of Primary Schools in Burundi and Kenya

<table>
<thead>
<tr>
<th>Subject</th>
<th>Burundi, Grades 5–6 (in Hours per Week)</th>
<th>Kenya, Grades 7–8 (in Hours per Week)</th>
</tr>
</thead>
<tbody>
<tr>
<td>French/English</td>
<td>7.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Kirundi/Kiswahili</td>
<td>2.0</td>
<td>2.25</td>
</tr>
<tr>
<td>Mathematics</td>
<td>5.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Social studies</td>
<td>0</td>
<td>2.25</td>
</tr>
<tr>
<td>Science</td>
<td>0</td>
<td>1.75</td>
</tr>
<tr>
<td>Social studies/science</td>
<td>2.25</td>
<td>0</td>
</tr>
<tr>
<td>Agriculture</td>
<td>.5</td>
<td>1.75</td>
</tr>
<tr>
<td>Home economics/health</td>
<td>.5</td>
<td>2.25</td>
</tr>
<tr>
<td>Physical education</td>
<td>1.0</td>
<td>1.75</td>
</tr>
<tr>
<td>Art and crafts</td>
<td>0</td>
<td>4.0</td>
</tr>
<tr>
<td>Business studies</td>
<td>0</td>
<td>1.75</td>
</tr>
<tr>
<td>Music</td>
<td>0</td>
<td>1.25</td>
</tr>
<tr>
<td>Religion</td>
<td>.25</td>
<td>1.75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19.00</strong></td>
<td><strong>28.25</strong></td>
</tr>
</tbody>
</table>

In Kenya from the fourth grade (Eisemon, 1989).

In Burundi, science is part of the "étude du milieu" syllabus that covers geography, history, and civics as well. The science taught includes topics from biology, ecology, and physics. Together these science subjects account for 75 periods of instruction in grade 6 (Bureau d'Education Rurale, 1984a). Geography, history, and civics account for 108 periods. In other words, only about 40% of "étude du milieu" consists of science.

Practical Instruction

Before the 1985 reform, the science syllabus in Kenya covered general science subjects with an emphasis on agriculture and health. In grade 7, for instance, 44% of lessons were given in general science, 34% in agricultural topics, and 22% in health (Jomo Kenyatta Foundation, 1984). The new syllabus redistributed subjects so that agriculture became first in importance. Work in the school garden was made integral to instruction; school gardens were to have demonstration plots set aside for experiments relating to "use of fertilizers, and pesticides" (Jomo Kenyatta Foundation, 1986, pp. 4–5).

In Burundi many of the agricultural topics that in Kenya would be taught in science classes are taught as a separate subject known as "practical agriculture" (travaux pratiques agricoles). In this class, younger students study such topics as line planting. Older students are given instruction in composting, how to improve soil structure, and other topics that are presumed to require more maturity (Bureau d'Education Rurale, 1984a). Thus the new agricultural practices that schooling is supposed to impart are not, as in Kenya, closely connected to science; only 10 lessons in "étude du milieu" in grades 5 and 6 deal with agriculture at all, and only two of these require demonstration in the school garden. The combination of science and agriculture and the emphasis given in Kenyan schools to teaching students how to use modern production technologies may partly account for the strong contribution of schooling to agricultural productivity that we found in our Kenya research (Eisemon & Nyamete, 1988).

In neither country is there any effort to connect the content of agricultural instruction to indigenous practices. For example, traditional cropping practices such as intercropping are not mentioned either in lessons dealing with cultivation practices or in those on cultural practices and control of crop diseases. Moreover, in Kenya as well as in Burundi, agriculture is supposed to be taught in the metropolitan language, which further emphasizes the discontinuity between modern and traditional practices.

In Kenya since the 1985 reform, emphasis has also been given to teaching prevocational skills that would be useful outside agriculture. This trend is responsive to the growing importance of the informal sector in rural as well as urban areas of Kenya. The most novel and most recent addition to the list of prevocational subjects in the school curricula is business studies. The intent is to facilitate entrepreneurship through compulsory instruction in simple accounting, use of credit, and other topics relevant to establishing and operating small busi-
nesses. Students will in the future elect an additional vocational subject. Home science, art, craft, and music will become optional subjects (Republic of Kenya, 1988).

Craft training includes subjects like carpentry and construction as well as instruction in the production of traditional crafts like basket making and soapstone carving. Dressmaking and tailoring are taught in home science. The wide range of prevocational training reflects, in several respects, characteristics of the informal sector. Most individuals in the informal sector in rural areas hold multiple jobs: they combine farming with trading, petty manufacturing, and various service activities (Shiundu, 1986). Much research has shown that the configuration of occupations changes frequently during an individual's working life (e.g., Shiundu, 1986). Primary schools, if they are to be effective in providing instructional experiences that enhance opportunities for self-employment, must provide a broad program of prevocational training.

Compulsory instruction in Kiswahili is also conceived as a way of facilitating self-employment. Kiswahili is the lingua franca of the informal sector even though it is not the mother tongue of most Kenyans. English is a secondary but important language of commercial activity; it is also a language linking urban and rural areas and government with the population (Eisemon, 1988a). Thus, unlike Burundi, the metropolitan language is important not simply because it is the medium of secondary education and the language of paid employment. In Burundi, French is little used outside the modern, urban sector (Eisemon et al., 1989). Hence the emphasis on French in the upper primary school has to be defended on the narrow grounds that the 10% of primary school graduates admitted to secondary schools will continue their studies in French.

Coverage of the School Curricula

In both countries, the attempt to reconcile preparation for secondary education with education for self-employment has led to a curriculum in upper primary school that is too broad to follow. In Burundi, covering the school curriculum is difficult in part because the number of hours of instruction has been reduced due to the introduction of double shifts. Also, students must adjust to a new language of instruction in grades 5 and 6; subjects like étude du milieu and mathematics are to be taught in French to students who have studied French as a subject for only 2 years. Furthermore, the concours national examines performance only in academic subjects. When faced with difficulties in covering the curricula for academic subjects in the time allotted, teachers are tempted to adopt various expedients to shrink the curriculum to manageable proportions, notwithstanding ministry policies for school inspection and classroom supervision (e.g., requirement for school directors to make 150 classroom visits per year). Our studies of primary schools in Burundi have revealed that teachers in the upper grades are likely to reduce instruction in subjects like agriculture and home economics in order to give more attention to academic subjects. They also combine morning and afternoon shifts to increase instructional time.

In Kenya, grade 7 and 8 teachers cannot so easily reduce the scope of the school curriculum. It is not that teachers are more carefully monitored by school inspectors and headmasters. Remote rural schools are almost never visited by district school inspectors (Ole Sena, 1987; Shiundu, 1986). School headmasters in Kenya, unlike their counterparts in Burundi, usually have full teaching responsibilities and little time to observe or advise teachers. Since the Kenya Certificate of Primary Education examination covers all subjects in the primary school curriculum and weighs them equally, they must all be taught. Nevertheless, there are large variations in how much of the primary school curriculum is actually covered. This variation is due in part to the fact that primary school instruction is more dependent on instructional materials in Kenya than in Burundi. Student textbooks, for example,
exist for almost all subjects. But their distribution to rural schools is highly uneven because of variations among districts in their capacity to manage instructional resources and even to ensure that teachers in remote schools receive their salaries on a regular basis. Moreover, communities in Kenya are responsible for providing schools with classrooms, facilities, and equipment needed to teach many subjects, particularly prevocational subjects. Communities vary in their capacity to provide these resources. In short, in neither country are resources sufficient to enable primary schools to do all that governments are asking them to do.

High Standards and Poor Performance

Recent literature on the educational systems of African countries is replete with assertions that the quality of schooling has suffered as a consequence of increasing school enrollment, though these are sometimes expressed as qualifications to support of further expansion (e.g., Colclough, 1980). Evidence of the poor academic performance of African students in relation to others in Western industrialized countries as well as in Asian and Latin American countries has been provided by international studies of educational achievement. African secondary school students rank at or near the bottom of all participating countries in tests of achievement in mathematics, reading, and science (World Bank, 1988a); these results occur despite the fact that African students are generally older and more carefully selected for academic secondary education.

Since many characteristics of schooling affect student performance, it is difficult to identify key characteristics that can be manipulated to improve instruction. In countries like Burundi and Kenya, factors affecting student performance can usefully be grouped into five categories: (1) the management and supervision of schools at the local and national levels, (2) the adequacy of facilities and the distribution of instructional materials, (3) the training and other characteristics of teachers, (4) the characteristics of critical examinations used to select students for further education, and (5) the importance of metropolitan or second languages as languages of instruction.

Management and Implementation of Educational Policies

After independence, Burundi and Kenya established highly centralized systems of education in which government control over education at the local level is exercised through national financing or cofinancing of school construction and maintenance, a national curriculum to guide instruction, national policies for teacher recruitment and remuneration, national production of textbooks, and national examinations to assess student learning. Centralization responded to demands that the state provide greater access to education to improve the skills of the labor force, foster national integration, and correct inequalities in educational opportunity inherited from the colonial period. But centralization and expansion have also greatly strained the management capacity of the ministries of education in the two countries.

In Burundi and Kenya, the ministries in charge of primary education are among the largest, most influential ministries and function under close political supervision. Ministers change frequently, and ministerial reorganization is an ongoing process. This chronic ministerial discontinuity promotes paralysis throughout the educational system and encourages political intervention. Thus, for instance, although the government of Kenya announced its intention in 1982 to lengthen the primary cycle, serious planning did not begin until a year before the new curricula for grades 7 and 8 were to be introduced. The practical concerns raised by the task forces created to study the reforms were perceived, probably correctly, as bureaucratic resistance and simply swept aside by the president, who ordered immediate implementation (for an account, see Eisemon, 1988a).
School administrators and teachers have been left to implement such decisions as best they can. The consequence is that, despite the centralized characteristics of the educational systems in Burundi and Kenya and "command and control" educational decision making, there is much room for variation in policy implementation at the school level and, thus, in what students learn. Both countries attempt to ensure school compliance with ministry policies through inspection and supervision. In Kenya, however, inspectors rarely visit remote schools chiefly because of lack of suitable transportation (improving this situation is now an object of World Bank lending in Kenya and other countries).

In Burundi, the role of instructional leader is assigned to principals, not inspectors. A document on the tasks of a school principal mandates these responsibilities as follows:

—Make class visits (a minimum of 150 visits per year
—Give demonstration lessons (a minimum of 30 lessons per year
—Administer monthly tests and do a critical analysis of the results
—Give regular attention to syllabus coverage so that, insofar as possible, the syllabi can be finished by the end of the school year

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Unfortunately, because school directors without vehicles are often responsible for managing two or more primary schools separated by 6–10 kilometers or more, they may limit their classroom visits mainly to core schools. Still, our field research indicates that the ministry's efforts to prescribe the content and method of instruction are much more than rhetoric. Principals frequently visit classrooms, and much attention is given to demonstration lessons and other forms of in-service training. The enactment of lessons tends to follow the teachers' guide closely. If the curricula were not so extensive and demanding, and if the teaching were in a language that students could understand, much learning could be expected to result.

Adequacy of Facilities and Resources

In both countries, per-pupil expenditures are extremely low ($63 for Burundi and $78 for Kenya). Little of this is spent on instructional materials (only 1.4% of recurrent expenditures in Burundi and 2.6% in Kenya). Yet, even these disquieting figures fail to reflect the difficulties that schools, teachers, and students face (World Bank, 1988a). Consider, for example, the importance of school facilities such as all-weather classrooms, clean water, and hydroelectricity. In the high-altitude, most populous regions of Burundi and Kenya, rain is to be expected during a good part of the school year. Students, teachers, and headmasters, almost all of whom walk to school, often cannot get there during heavy rains. At school, instruction sometimes cannot take place in the poorly constructed classrooms. Even well-constructed classrooms with corrugated iron roofs are often almost unusable for instruction because of the din produced by heavy rains. Many rural schools, particularly in lowland or semiarid areas in Burundi and Kenya, do not have wells or piped water. Only schools in cities and towns have treated drinking water. Hygienic and sanitary conditions of a large proportion of rural schools, especially those in Kenya, are inadequate by almost any standard. Much attention is being given in African educational research to the effects of malnutrition on cognitive attainment and the need for school food programs to supplement the inadequate diets of many children in rural areas (Eisemon, 1988b). Less well recognized is the role of the primary school in the spread of infectious and gastrointestinal diseases (Eisemon, Patel, & Ole Sena, 1987). Many schools in rural areas likewise do not have hydroelectricity or any other source of lighting. Because Burundi and Kenya are situated along the equator in regions where rains are heavy, classrooms are constructed to reduce tem-
peratures and keep out moisture, not to let in natural light. Consequently, away from doorways and windows, there is little light for reading. And because classrooms are crowded—students are often grouped in bunches of three or four at desks meant for two—there are few opportunities for self-study.

Instruction is organized to cope with the lack of these and other resources for learning. Teachers present material orally and write summaries on the blackboard for transcription by students into their exercise books. The result is that many primary school students have little occasion to study printed texts. In such schools literacy is a skill largely acquired from choral recitation in much the same way that literacy is taught in Koranic schools, except that in the Muslim schools children always work with printed texts (Eisemon & Hallett, 1988). Such variations in availability of texts have important implications for the development of text-comprehension skills that are a critical component of successful performance on the examinations for admission to secondary school.

In practical subjects, the lack of instructional resources may be even more critical. Craft subjects in Kenya, for example, are sometimes taught without any tools for student use. In the Kisii district in western Kenya, well known for its soapstone carving, students learn how to carve soapstone with spoons they bring from home (Eisemon, Hart, & Ongessa, 1988). The lack of space and tools for agricultural instruction is another example. In only one of the primary schools we have studied in Burundi were students equipped with the tools they needed for practical agriculture (Eisemon et al., 1989). That school was a fortunate recipient of Chinese-manufactured tools donated by Unicef. In other schools, students brought hoes from home to work in the school garden. Although this is sufficient for reteaching skills that most children have already learned at home, it does not enable schools to teach various practices associated with "modern" agriculture, such as use of inorganic fertilizers and pesticides.

Many factors produce this variation among primary schools in Burundi and Kenya. These include wealth of local communities, proximity to district or cantonal offices responsible for the distribution of textbooks and other school supplies, the administrative ability of school directors and headmasters, and in some instances, the influence of powerful political patrons. In neither country is it clear how sufficient resources will be obtained to bring about both universal access and adequate quality in all primary schools.

Teachers and Their Training

There is much controversy regarding the importance of training teachers to promote student achievement in Burundi, Kenya, and other developing countries. A recent World Bank report summarizes the enthusiastic view of donor agencies: "There appears to be a minimum level of basic education needed if training for primary school teachers is to have any effect on student achievement. Beyond this threshold there appear to be diminishing returns on the degree to which teacher training can be expected to be effective" (Chang, 1983, quoted in Heyneman & White, 1986, p. 49).

Nevertheless, countries like Burundi and Kenya make substantial investments in teacher training. When educational reform and expansion retard progress in qualifying primary school teachers (e.g., the 1985 reform in Kenya that required hiring large numbers of untrained teachers), serious efforts are made to rectify the situation through in-service training programs. In Kenya, these are carried out by teacher advisory centers attached to district education offices. In Burundi, most in-service teacher training takes place in schools where it is the responsibility of school directors and senior teaching staff.

Many other teacher variables directly influence student performance, perhaps more so than teacher training. One such factor is
teacher absenteeism and lateness. We mentioned previously that teacher absences in most rural schools in Burundi and Kenya may result in suspension of instruction, sometimes for long periods. Estimating the incidence of this teacher absenteeism and lateness is problematic. However, one recent study of three Kenyan primary schools in which observational data were collected indicated that more than one-third of primary school teachers were absent on any given day, and between 45%–70% of the teachers arrived for work late (Shiundu, 1986). This absenteeism may be due in part to weak supervision of the teaching staff. Other factors include the distance many teachers have to travel to school and the poor infrastructure for public transportation in rural areas.

Few schools have access to substitute teachers to cover, for example, absences due to maternity. In such cases, other teachers may hand out assignments and periodically look in on students without teachers, but their heavy teaching loads do not permit them to monitor the work of other classes closely. In a grade 6 class at one of the satellite schools in Burundi where we were pretesting instruments in early 1989, students had missed about 2 months of instruction when the regular teacher took maternity leave.

Primary school teachers in Burundi are relatively well paid; they receive a salary representing about seven times the average per capita income, which reflects the slower pace of educational expansion since independence and the concern for maintaining the privileges of the civil service. In Kenya, a richer country, teacher salaries are substantially lower, four times the per capita income (World Bank, 1988a). Low teacher salaries in Kenya are often seen as contributing to high rates of absenteeism. Teachers, according to regulations of the Teacher Service Commission, are not allowed to accept any other form of employment during the school year. Many do, despite warnings from the country’s president, who has urged wananchi (ordinary citizens) to monitor the activities of teachers. Private tutoring is a significant source of extra income for many teachers in the upper primary school. This also contravenes Teacher Service Commission regulations.

Examinations

Among the many teacher factors likely to enhance student achievement are teachers’ knowledge of and experience with the national examinations. From the point of view of participants in the system, a good teacher is someone whose students do well on these tests.

The expansion of primary schooling has led to increasing reliance on multiple-choice examinations in many African countries. Kenya has probably had more experience with such testing than most countries, though a large proportion of the examination papers administered by the National Examinations Council are set in the more conventional essay mode and marked by trained evaluators. In the early 1970s, major efforts were made to increase the proportion of items requiring "reasoning" as opposed to descriptive information (Somerset, 1988).

Because of year-to-year variation in selection of examination items and differences in the scope of the primary school-leaving examinations, it is difficult to compare the Kenya Certificate of Primary Education examination with Burundi’s concours national in terms of the cognitive skills required for successful performance. Both still place much importance on students’ recall of factual information, especially in subjects like social studies. They differ, however, in the way in which writing skills are assessed—multiple choice in Burundi versus essay writing in Kenya.

In Kenya, a great deal of information is made available to teachers about the content of the school-leaving examinations. The National Examinations Council publishes sample papers and sends newsletters to teachers, and many teachers are selected to mark the examination scripts under the
council's strict supervision. There is, in addition, a flourishing indigenous "cottage industry" in the production of examination guides containing questions used in previous examinations. Primary school teachers in Burundi do not have as much such information nor are they allowed to mark the examinations.

Our experience in both countries suggests that teachers share other strategies for preparing students for these examinations. Teachers screen topics for relevance to the examinations and spend little time on topics not likely to be examined. They find ways to increase their teaching time. In Kenya, increasing the instructional day by an extra half-hour in the morning and afternoon and adding Saturday classes is a common practice in successful schools. In Burundi, shifts are combined to increase time for examination drills.

Teachers often do not vary either the form or the content of previous examination items in their drills. It is not that teachers assume that students understand important principles and concepts from previous instruction. As far as we can tell, teachers give little explanation under other circumstances. Understanding is considered to be incidental to expert performance on the examination.

The object of the national examinations is to reduce the number of students eligible for secondary schooling. Hence the examinations do not provide much insight into what students have learned or have not learned from primary schooling. This is especially true of the concours national. No information is released on the distribution of scores for the subjects included in this examination or for students' total scores. However, scores are probably very low. A recent (1988) examination comparable in difficulty to the concours national produced average scores of about 10% in mathematics and 20% in French in a sample presumed to be representative of the sixth-grade population (Bureau d’Éducation Rurale, personal communication, 1989). These scores are below the results that could be expected by chance. They point to the difficulty of the content as well as to additional difficulty students may experience in answering questions in French. The high "floor" in such examinations precludes using them to find out how much students have actually learned. Students might be able to answer easier items, however, if such items were used.

Results from the Kenya Certificate of Primary Education examination, though it is more comprehensive and less selective than the concours national, are still poor in relation to the yardstick being used. Traditionally, English and mathematics (and in recent years, Kiswahili) are the most difficult sections. Marking is rigorous, especially of students' English compositions. In most years, more than three-quarters of the students taking the examination receive less than a third of the highest possible score for the English composition.

One consequence of the difficulty and selectivity of the Kenya Certificate of Primary Education examination is high repetition rates for grade 8. These cannot be estimated with any precision since ministry regulations forbid repeating. The extent of repetition can be inferred, however, from the fact that some districts like Nairobi have school participation rates of more than 100% of the age cohort because of student transfers and reregistration, often under assumed names (Eisemon, 1988a). In Burundi, repetition at the grade 6 level is estimated to be about 43% nationally, with rates in many rural schools above 50% (Ministry of Primary and Secondary Education, personal communication, 1988). Student repetition seems to increase achievement. Repetition was found to have more impact on grade 6 achievement in Burundi than other student background or instructional characteristics (Eisemon et al., 1989). This is due in part to the fact that repeaters become more proficient in French and, thus, benefit more from instruction.
Difficulties of Using Metropolitan Languages

Testing of primary school students in a metropolitan language contributes to the low performance, at least that is what is suggested in Kenyan studies that have examined the influence of language of assessment on demonstration of lower- and higher-order cognitive skills. These studies indicate that inferential reasoning is much more likely to be exhibited when assessment tasks are presented in the mother tongue (Eisemon, 1988a; Eisemon & Halllett, 1988; Frederiksen & Chitepo, 1987). To be sure, national examinations in Burundi and Kenya are not designed as comprehensive measures of how well students think or what they have learned from the instruction they have received. Instead, the examinations are intended primarily for selection, and the choice of language of assessment is influenced primarily by the use of a second language as the language of instruction in secondary and higher education.

Unless students develop facility in the metropolitan language, they have virtually no chance of continuing their education. Opportunities to develop metropolitan language proficiency are dependent on the kind and quality of primary education. In Kenya, there is much variation in these respects. Schools may select the language of instruction for the lower stage of primary schooling: English, Kiswahili, or the mother tongue. Kiswahili tends to be used in peri-urban schools with students from different ethnic and linguistic backgrounds and in coastal districts where it is the mother tongue of most students. Other mother tongues are used in most rural schools (Cleghorn, Merritt, & Abagi, 1989; Eisemon, 1988a). English is used in urban schools and in an increasing number of rural schools (Scotton, 1988). It is also used in a large number of preschools in both urban and rural areas. In Burundi, all primary schools must teach in Kirundi for the first 4 years.

The quality of metropolitan language instruction is also important. The metropolitan language is used for primary teacher training, which takes place in secondary schools in both countries. Young people enter teacher training programs after lower secondary education and receive about the same number of years of training, generally, 2 or 3 years. Because of more limited opportunities for secondary education, Burundian primary school teachers are perhaps more likely to have demonstrated high performance in the metropolitan language than teachers in Kenya. Many Kenyan primary school teachers failed to obtain entry into elite secondary schools, did not do well enough on the O-level examination to go on to A levels but obtained marks sufficient for entry into primary teacher training colleges. They may have been instructed for many years in English; nevertheless, many teachers are not proficient in the language (Eisemon, 1988a; Eisemon, Cleghorn, & Nyamete, 1990).

Use of Metropolitan Languages in the Classroom

In Burundi, French is used as the language of instruction for all academic and practical subjects (except Kirundi), starting in fifth grade after only 2 years of instruction in Kirundi. Therefore much emphasis has to be given to increasing French language proficiency in the last 2 years of primary school. Not only are there 7.5 hours of French language instruction per week, but even subjects like mathematics, social studies, and science are taught in such a way as to facilitate second-language proficiency and discourage reversion to Kirundi. The teachers’ guides provide many opportunities for what are, essentially, vocabulary-building exercises. For instance, a fifth-grade lesson on mammals starts with an exercise intended to teach the classification of mammals according to their diet: vegetarians, carnivores, and omnivores. Another purpose of this exercise is to teach a large number of French words, ostensibly as ex-
amples—carnivores: *chien, chat, mangouste, loutre, civette, genette, hyène, serval, léopard, lion, oiseaux rapaces, grenouille*, and so on (Bureau d’Education Rurale, 1982). The primary objective of this lesson seems to be to teach French through the medium of biology.

In contrast, Kenyan syllabi and teachers’ guides for most subjects in the upper primary schools are much like those used in North America. They are specific as to what should be taught and, insofar as the teachers’ guides are concerned, designed to give additional background information not to be found in the student texts, as well as suggestions for teaching the material (Eisemon, Patel, & Abagi, 1988). The guides and student texts for subjects like science are organized into units so that teachers may prepare daily lesson plans, taking into account the difficulty of the material, the time that may be available to teach it, the preparedness of the students, and other factors. Consequently, Kenyan teachers face the difficult task of selecting and designing appropriate classroom learning activities.

Burundian teachers’ guides, especially in mathematics, make more of these judgments for teachers, significantly reducing the linguistic demands on both teachers and students. Teachers have less responsibility for inventing discourse from statements of general objectives and background information in subject guides and for integrating information in student texts into their exposition of the lesson. Students have mainly to comprehend oral instruction, which they help to develop through activities requiring class participation. These activities are the substance of the lessons; they mark knowledge that is to be transcribed into exercise books, learned, and demonstrated on examinations. The task of making sense of teacher discourse and other instructional information presented in the metropolitan language is simplified enormously.

In contrast, primary school teachers in Kenya must invent learning activities and create and guide instructional discourse in a language neither they nor their students may be able to use very well. Hence imprecise, often incoherent instructional discourse is a characteristic of instruction in many Kenyan primary schools (Eisemon et al., 1990). Often Kenyan teachers use imprecise ordinary English equivalents for English scientific and technical terms. In many instances, what teachers may actually be doing is finding the nearest English equivalents for vernacular language terms (as in an observed lesson on human reproduction when the *scrotum* was called a “sack”). If “back translation” into ordinary English still does not produce understanding, teachers may revert to the vernacular language. Language switching is common in Kenyan primary school classrooms when instructional discourse has broken down, though teachers rarely use vernacular languages for explanation (Eisemon et al., 1990). Language switching seems to be less commonplace in Burundian classrooms.

In both countries, instances of language switching are brief. Language policies discourage language switching, and teachers avoid using vernacular languages because of a belief that their use inhibits proficiency in the metropolitan language. And yet, the use of vernacular languages might well facilitate students’ understanding of academic subjects like science. The dilemma is that students will not perform well on national examinations unless they know metropolitan-language scientific and technical terminology, however well they might understand basic concepts in their mother tongue.

It is difficult to say how much students who do not go on to secondary school actually retain of the metropolitan language. Our studies of school-leavers in Burundi and Kenya indicate that few have functional literacy in the metropolitan language, particularly in Burundi (Eisemon, 1988a; Eisemon et al., 1989). In Kenya, English is more widely used in rural areas than French is in Burundi, so English is more likely to be practiced. Still, the importance of metropolitan language proficiency derives
mainly from the use of French and English for secondary and higher education; they are the languages of educational opportunity and upward mobility for a minority of students. The majority, failing to enter secondary school, return to the family farm and/or try to generate some other form of employment for themselves, making whatever use they can of knowledge and skills acquired at home or at school.

Conclusion
We began this article with a question to which we have given no answer thus far: Should primary schools prepare students for secondary education or for self-employment? Primary schooling in Burundi, Kenya, and in other African countries will continue to have dual purposes that are difficult to reconcile. As long as some children go on to secondary school, primary schooling will not be reformed on the sensible premise that it is the terminal stage of schooling for most children. Nor can the content and methods of instruction be changed in anticipation of the universalization of secondary education. That will not occur in the foreseeable future in these and in most other African countries.

Nevertheless, there are many ways of strengthening academic and prevocational programs of primary schools as long as it is recognized that reforms will have to embrace both purposes of primary education as well as take into account the limited resources that governments have to spend. Research has pointed to three domains of intervention: (1) improving the scientific content of practical training; (2) reducing the scope of prevocational studies to the teaching of those skills that are best developed in school settings; and (3) increasing instruction in subjects that may facilitate entrepreneurship (e.g., mathematics and languages used in the informal sector).

The first domain is informed by research on the contribution of primary schooling to farm productivity. Integrated science, which bases agricultural instruction on the teaching of modern biology (as is done in Kenya), is more apt to develop the capacity to use modern technologies than the practice of separating science and agricultural instruction (as is the case in Burundi and many Francophone countries). More emphasis could therefore be given to teaching the scientific principles of modern agriculture rather than to teaching production skills that are best acquired at home or from extension agents.

Second, prevocational craft and technical training is difficult to organize in schools and to carry out in ways that will impart or enhance expertise. For many reasons, these forms of practical training do not lend themselves to formal instruction in primary schools. Students do not work with materials of value to produce objects of value under the supervision of experts, as is characteristic of informal learning of these skills outside school. Kenya is moving in the direction of decreasing the importance given to this kind of skill training in the primary school curriculum.

Third, language and mathematics teaching is important for imparting skills for self-employment in Burundi, Kenya, and in most African countries. English and Kiswahili are languages of the informal sector in Kenya, while both Kirundi and Kiswahili have this function in Burundi. Literacy in these languages is, consequently, a commercial asset. Of like importance are the mathematical skills involved in calculating monetary transactions and interest, manipulating weights and measures, and so on. The subjects that develop these skills receive less attention in the school curricula than they deserve. For instance, in Burundian primary schools, Kiswahili is not taught, and more attention is given to geometry than to the teaching of simple and compound interest and other business topics. In brief, the opposition between prevocational and academic education may be a false dichotomy. Instruction in academic subjects such as mathematics and language arts can be organized to facilitate self-em-


