Biennale on Education in Africa
(Maputo, Mozambique, May, 5-9 2008)

Beyond Primary Education:
Challenges and Approaches to Expanding Learning Opportunities in Africa

Parallel Session 6D

Teacher Issues
in Post-Primary Education

Recruiting, Retaining, and Retraining Secondary School Teachers and Principals in Sub-Saharan Africa

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Working Document
Draft

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• Original Version in English •

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WORLD BANK WORKING PAPER NO. 99

Recruiting, Retaining, and Retraining Secondary School Teachers and Principals in Sub-Saharan Africa

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THE WORLD BANK
Washington, D.C.

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Washington, D.C. 20433, U.S.A.
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Manufactured in the United States of America
First Printing: March 2007

printed on recycled paper

1 2 3 4 5 10 09 08 07

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ISBN-10: 0-8213-7066-9 ISBN-13: 978-0-8213-7066-7
eISBN: 978-0-8213-7067-4
ISSN: 1726-5878 DOI: 10.1596/978-0-8213-7066-7

Cover photo by Jacob Bregman.

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Library of Congress Cataloging-in-Publication Data has been requested.

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Foreword

Many African countries are undertaking important economic reforms, improving macroeconomic management, liberalizing markets and trade, and widening the space for private sector activity. Where these reforms have been sustained they have raised growth and incomes and reduced poverty. However, Africa still faces serious development challenges. More than 314 million Africans live on less than $1 a day—nearly twice as many as in 1981. The continent has 34 of the world's 48 poorest countries. The HIV/AIDS pandemic costs Africa 1 percentage point of per capita growth a year, while malaria kills about 2,800 Africans a day.

UN and World Bank progress reports on achieving the MDGs attest to a renewed commitment in Africa to defeat poverty and disease. The Education for All-Fast Track Initiative (EFA-FTI) involves more than 30 bilateral and international agencies and has gradually made important strides. In the coming years, the key challenges are to continue the efforts towards achieving universal primary education, to expand secondary school access in response to demands from growing African economies, and to improve quality, relevance and equity of learning across the board.

Secondary education and training (SEIA) will be one of the key factors for increased economic growth and social development. Recent developments in Asia and Latin America have shown these trends convincingly. SEIA graduates enter labor markets that increasingly demand *modern knowledge and skills, readiness to take initiatives, and ability to solve problems and to innovate products and processes.* SEIA is also indispensable for young people to become productive citizens and to lead healthy lives.

Our Human Development strategy is anchored in the Africa Action Plan. Through the AAP we work in partnership with other development partners to assist African countries. The SEIA study initiative of our Africa Human Development Department (AFTHD) is led by Jacob Bregman (Lead Education Specialist). The study aims to assist countries in developing sustainable strategies for expansion and quality improvement in SEIA.

SEIA's eight thematic studies have been conducted with an emphasis on stakeholder participation. The draft reports have been discussed at the two regional SEIA conferences (Kampala 2003 and Dakar 2004). A SEIA donor workshop was held in 2005 in Amsterdam. All SEIA products are available on the website: www.worldbank.org/afr/seia

This thematic study is about recruiting, retaining, and retraining secondary school teachers and principals in Sub-Saharan Africa. The study is based on country studies in Ethiopia, Ghana, Guinea, Madagascar, Tanzania, and Uganda and an extensive literature review. In many parts of Africa, the demand for secondary teachers substantially exceeds the supply due to factors such as secondary teacher attrition, bottlenecks in the teacher preparation system, and perceived unattractive conditions of service. Few countries have strong policies, strategies, and programs for recruiting able secondary leavers to secondary teaching. Many secondary school Principals are ill-prepared to meet the demands posed by the changing nature of their jobs. Organized and systematic training in educational leadership and effective and transparent management that goes beyond the occasional workshop presently offered in most systems is urgently needed for Principals. There are no

magic bullets. The study suggests several critical and promising areas for improvement in the quality of secondary teachers through new approaches to recruitment; pre-service and in-service teacher development; and improvements in the deployment, utilization, compensation, and conditions of service for teachers. Hopefully, this thematic study will make a timely and useful contribution to the debate on SEIA issues.

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Acknowledgments

This thematic study report, *Recruiting, Retaining and Retraining Secondary School Teachers and Principals in Sub-Saharan Africa,* was prepared on a contract-basis for SEIA study initiative of the Africa Region Human Development Department (AFTHD) in the World Bank. This SEIA thematic report was produced by the Academy for Educational Development (AED), working jointly with the National University of Ireland, Maynooth, and the University of Minnesota. The Maynooth/Minnesota/AED team carried out an extensive review of the literature, designed a field study, analyzed data collected by researchers in six Sub-Saharan African countries, and prepared the final report. Preliminary findings from the study were presented and discussed at the first SEIA conference in Uganda in June 2003. In addition, the final draft report was reviewed by education specialists and the SEIA core team. Jacob Bregman (SEIA Task Team Leader and Lead Education Specialist, AFTHD) and Adriaan Verspoor (Senior Education Consultant) provided extensive comments and inputs on the drafts.

The University of Minnesota team was led by David W. Chapman, assisted by Joan G. DeJaeghere, Grace Akukwe, Holly Emert, Suzanne Miric, Eva Nderu, and Awa Saidy. The team at the National University of Ireland, Maynooth, was led by Aidan Mulkeen, assisted by Gerry Jeffers, Maeve Martin, Eamon Casey, and John Coolahan. The Academy for Educational Development team was led by Elizabeth Leu, assisted by Karen Bryner.

This report benefited from country information collected by the following researchers:

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(3) Ethiopia: Derebssa Duffera and Daniel Desta, Institute for Educational Research, Addis Ababa University
(4) Madagascar: Marianne Ralinirinarisoa, Education Specialist and Head of Program "Enfant pour Enfant" and "Enfant pour Communauté" (JSI/USAID)
(5) Tanzania: Gabriel K. Nzalayaimisi, Academic Dean and Head of the Waldorf College and Tumaini University
(6) Uganda: Emmanuel Ssemambo, Education Research Consultant, National Bank of Uganda

This SEIA study was financed by the World Bank and the Irish Education Trust Fund—which is gratefully acknowledged.

Executive Summary

Expanding and rethinking the nature of secondary education in Sub-Saharan African countries, traditionally reserved for elites and few others, are becoming crucial to successful individual and national participation in the global economy. As governments and donors turn their attention increasingly to secondary education, policies are being established to create more widely accessible, more relevant, and higher-quality secondary education. This presents a particular challenge, because secondary education subsystems are unlikely to be infused with large amounts of additional funding in the near future. Improving the quality of secondary education, therefore, must include policies that use current resources creatively and more effectively. Teachers and principals are the most expensive and, possibly, the most critical components in establishing quality in education systems. New and more effective approaches to the preparation, deployment, utilization, compensation, and conditions of service for teachers, accompanied by more effective school leadership, are therefore needed to achieve higher standards of secondary education in Africa.

This study used an extensive literature review and subsequent field studies in Ethiopia, Ghana, Guinea, Madagascar, Tanzania, and Uganda to identify current trends, challenges, and opportunities in the recruitment, retention, and retraining of secondary teachers and principals in Sub-Saharan Africa. The study also suggests ways of attracting teachers to the profession, retaining teachers and principals in the profession, and providing support to strengthen teachers' and principals' effectiveness. Insufficient data and information that differentiate lower and upper secondary education is a limitation of the study, especially in the context of the present growing interest in the lower or junior secondary level. There is a similar dearth of information in the literature on secondary principals and on gender issues as they relate to secondary teachers and principals. The findings of the study and the recommendations, summarized below, are intended to provide policymakers and other stakeholders with material for policy development and for the development of strategies for increasing the quality and effectiveness of secondary teachers and principals.

Summary of Study Findings

The following summary combines major findings from the literature review and the field study.

Recruitment, Retention, and Retraining of Teachers

In many parts of Sub-Saharan Africa, the projected demand for secondary school teachers exceeds projected supply, in some cases by substantial amounts. Factors contributing to this include high rates of teacher attrition, in some areas due to illness, and bottlenecks in teacher preparation systems. A variety of unattractive conditions of service also plays a strong role in limiting teacher supply. These include perceived low salary, arbitrary teacher deployment systems, unattractive work locations, unprofessional treatment of teachers, lack of professional development opportunities, and insufficient supportive supervision.

Teachers indicate that, although higher salaries would encourage better performance, improvements in conditions of service are also very important in promoting job satisfaction, motivating teachers, and promoting retention. Teachers express a strong desire for more professional support in general, better teaching and learning resources, supportive supervision, and ongoing inservice professional development. This is a very promising area of policy and program intervention in improving the recruitment, retention, and retraining of secondary teachers.

Few countries have strong policies, strategies, and programs for recruiting able secondary leavers to secondary teaching. Recruitment is frequently neither systematic nor energetic and does not draw a sufficient number of potential teachers to the profession, either from the pool of secondary leavers or from older people with relevant academic backgrounds.

In response to an insufficient number of teachers, inefficient deployment practices, or scarcity of funds, contract teachers are often hired for secondary teaching and paid through school or community fees. Contract teachers have a less stable source of remuneration, creating issues of absenteeism and retention that the schools themselves must address. Employing contract teachers as part of the civil service teaching force may stabilize the teaching corps and provide better quality teachers in schools that have difficulty retaining teachers or in certain subject areas.

The fiscal capacity of most governments to improve teachers' compensation and conditions of service is extremely limited. Increases in or reallocation of public funds to secondary education, as a general remedy, are not feasible. Ensuring an adequate supply of qualified teachers requires monetary resources that many countries do not presently have and are unlikely to get in the near future. Countries therefore will need to make better and more creative use of the resources that are already available to secondary education.

Teacher education is expensive and, for the most part, has not been very effective. While all agree that teachers need good professional preparation, it is not clear that the high present investments in teacher preparation have yielded adequate results. Experimentation with different strategies and models, research, and policy deliberations until now have led to only modest, if any, improvements in teacher quality and motivation. This suggests the need for bold and creative thinking about alternative approaches to teacher preparation, including more flexible models of preservice preparation, a new balance between preservice and inservice programs, and the development of strong ongoing professional support programs for serving teachers.

Recruitment, Retention, and Retraining of Principals (Head Teachers)

Many secondary school administrators are ill-prepared to meet the demands posed by the changing nature of their jobs. Organized and systematic training in educational leadership and effective and transparent management that goes beyond the occasional workshop presently offered in most systems is urgently needed for principals. Principals' critical new roles as instructional leaders within schools, builders of learning communities among teachers, and developers of strong community participation in schools are widely recognized, although few principals have any preparation for this array of new responsibilities. A national or regional institution that specializes in advanced degrees or certification for educational leadership could be one option to address this need. Concerted effort to

improve school leadership is one of the more promising points of intervention to raise the quality of secondary education across much of Africa.

Mechanisms for recruiting teachers to become principals or head teachers are unsystematic and not necessarily based on professional criteria. The position of principal is often not professionalized or seen as a career choice. It is sometimes filled by senior teachers who rotate through the position for limited periods of time. A more systematic approach to the selection and training of principals would lead to stronger school leadership.

The Importance of Female Teachers and Principals

Female teachers and principals are critical to the expansion and improvement of secondary education systems. Female teachers are important in encouraging the access and retention of female students, although in most countries fewer females than males enter secondary teaching and attrition of female teachers is particularly high. Females in leadership positions within schools provide good role models for female students and encourage female student retention. Leadership in secondary schools is presently dominated by males.

The Impact of HIV/AIDS on Teachers and Principals

HIV/AIDS has many devastating impacts on secondary teachers and principals. The pandemic greatly reduces the capacity of the system by increasing teacher attrition and absenteeism. It also saps the system's energy by imposing additional demands on teachers as they provide support for ill students and students with ill family members. HIV/AIDS also constitutes a major area for secondary teacher retraining because of the potential power of school-based formal and informal programs to encourage heightened awareness among both teachers and students and changed behavior patterns.

There are No Simple Solutions to Present Challenges

The literature suggests that there have been few, if any, interventions to improve the recruitment, retention, and retraining of secondary teachers that have yielded dramatic, positive results. There are no magic bullets. The quality of secondary teachers and teaching is influenced by many small factors rather than a few large ones. This appears to have two consequences as reflected in the literature: (a) developing consensus about how to improve teacher quality and performance is difficult; and (b) different stakeholders support different approaches to improving education, each advocating the efficacy of the particular approach they favor.

Stronger Policy Research and Practice-focused Research is Needed

Despite the enormous attention given in the literature to the problems of teacher supply, preparation, performance, and retention, the international research on secondary teachers in Sub-Saharan Africa tends, with notable exceptions, to offer only a weak basis for guiding policy and program development. Four characteristics of the research are of particular note: (a) much of it focuses on clarifying the dimensions of the problem rather than formulating and testing alternative solutions; (b) much of the literature tends to be descriptive

of particular country efforts to attract, deploy, and retain teachers, but often lacks solid evidence of the effectiveness of the approaches being described; (c) there is a lack of longitudinal research that tracks the longer-term effects and consequences of interventions aimed at improving the teaching force; and (d) some of the more impressive research has been conducted within projects and is only reported in project documents, often with a short half-life of retrievability. Such research too quickly becomes fugitive literature.

Recommendations for Strengthening the Quality of Teachers

This study suggests several critical and promising areas for improvement in the quality of secondary teachers through new approaches to recruitment; preservice and inservice teacher development; and improvements in the deployment, utilization, compensation, and conditions of service for teachers. Improvements in all of these areas are likely to enhance the status of the profession and thus encourage the recruitment and retention of secondary teachers. Under each of the headings below, a finding of the study is given, followed by recommendations for consideration by policymakers.

Recruitment of Teachers

Recruitment of secondary teachers is presently not systematic and not adequate to meet the growing demand.

- Develop strategies for the systematic recruitment of potential teachers for colleges of teacher education from the pool of secondary school leavers. This should be a concerted effort and not left to chance.
- Consider recruitment campaigns that profile the profession positively, use excellent secondary teachers as exemplars of good practice and leadership, and encourage able secondary school leavers to join the profession.
- Develop strategies to encourage people with appropriate academic qualifications to enter the teaching profession and enter a teacher education program at a later stage of their careers. A potential source or recruits might be females who have been at home raising families after obtaining their diplomas or degrees.
- Consider employing contract teachers in the civil service teaching force. This would provide them with training and job security and would stabilize the teaching corps, particularly in schools in remote areas that have difficulty recruiting and retaining teachers.

Preparation and Professional Development of Teachers

Because preservice secondary teacher education, as presently configured, is very expensive and not particularly effective in developing a high quality and motivated teaching force, broader and bolder thinking about alternative modalities is required.

- Design teacher competencies and formal teacher qualifications in accordance with the emerging and differing needs of junior and senior secondary teachers, with teacher preparation approaches newly designed in accordance with this.

- Consider alternative approaches to the acquisition of formal qualifications, such as periods of teaching interspersed between periods of study.
- Consider a rebalance between preservice and inservice programs. Examine whether or not the present frontloading of activity and budget into preservice teacher education, with relatively little attention and budget devoted to inservice programs is achieving the best results, in terms of teachers' skills, professionalism, and morale.
- Achieve a balance of practical pedagogical skills and content in the preservice teacher education curriculum. Design a linkage between pedagogical skills and content development through school-based studies and expanded and well-supervised, practical experience in schools that take place throughout the whole teacher education program rather than just at the end.
- Design a program to improve the skills of teacher educators in both content areas and in pedagogical skill areas so that their teaching reflects good practice and knowledge of the secondary school environment and their ability to supervise students effectively is increased.
- Design teacher education as a continuum, starting with initial preservice education and continuing with a strong ongoing inservice professional development program for secondary teachers that will support them throughout their teaching careers.
- Develop strong supportive supervision structures. The most cost-effective way may be to develop the role of the school principal in this area.
- Initiate induction and mentoring programs to assist new teachers.

Deployment of Teachers

Teacher deployment approaches often contribute to attrition, with arbitrary posting of teachers to undesirable work locations being a major problem expressed by secondary teachers.

- Recruit teachers from rural areas, providing as much initial teacher preparation in these areas as possible. Follow this with ongoing localized inservice professional development programs that reach teachers in their schools, or in clusters of schools, in these areas.
- Give additional compensation and recognition to teachers in difficult postings.
- Take into account the location of families in postings so as not to separate husbands, wives, and children for unreasonable periods of time.

Utilization of Teachers

Evidence from the study suggests that teachers are often used inefficiently within schools, with few class hours taught per week, particularly in rural schools.

- Prepare teachers to teach more than one subject, or possibly as many as three subjects, at various grade levels.
- Consider a system of rotation of teachers through several nearby schools and an alteration of timetables so that teachers' time is well used and students are taught all subjects required in the curriculum.

Compensation for Teachers

Although teachers universally request higher salaries, evidence suggests that increased salaries alone would be unlikely to improve the quality of the teaching force significantly.

- Increase salaries only in special circumstances, such as through the provision of bonuses for service in rural areas.
- Develop a career structure where advancement and salary are dependent on good quality of performance.

Conditions of Service for Teachers

Improvement of conditions of service for teachers is a promising way of increasing teacher morale, making the profession more attractive, enhancing retention of teachers, and improving the quality of teaching and learning. Although improving conditions of service always has budget implications, changes in this area may be less costly and more effective than an overall increase in teachers' salaries.

- Create learning communities and a sense of cohesion among teachers at the school level—or in pairs or clusters of secondary schools—that include groups of teachers and their principals developing a vision, a strong professional identity, and strategies for improving the quality of teaching and learning in their schools.
- Strategize with secondary teachers about how a strong and positive professional identity can be created and how higher regard for the profession from society can be earned.
- Involve community members in the lives of schools in order to promote quality of education, better student learning, and respect for teachers.
- Provide teachers with better resources for good teaching.
- Provide space for teachers to work in the school.
- Give special assistance to teachers, especially female teachers in rural areas, in finding appropriate housing.
- Develop programs to recognize and reward teachers, including use of the media to profile excellent teachers.

Recommendations for Strengthening the Quality of Principals (Head Teachers)

This study suggests that, while most of the above recommendations apply also to principals who usually come from the ranks of more senior teachers, concerted effort to improve school leadership is one of the most promising interventions to raise the quality and efficiency of secondary education across Sub-Saharan Africa. The following recommendations for consideration by policymakers are suggested by the findings of the study:

- Systematize the recruitment of teachers to become principals, based on explicit professional criteria.
- Professionalize the position of secondary school principal and develop certification courses in school leadership.

- Establish regional or national institutions that specialize in advanced degrees or certification in educational leadership and organize ongoing professional development programs for principals.
- Develop a program of ongoing inservice professional development for secondary principals that takes place at the school level, including an initial induction program and ongoing support.
- Ensure that the idea of the principal as instructional leader as well as transparent and efficient administrator is well understood by teachers and communities and incorporated in all initial preparation and ongoing professional development for principals. Likewise, ensure that the principal's role in creating strong linkages with communities is understood and that principals are prepared for this role.
- Organize principal clusters that meet regularly, providing a setting for delivery of some of the formal ongoing professional development and creating an opportunity for informal communal problem-solving, experience-sharing, and strategizing about effective approaches to secondary school leadership.

Recommendations for Action on Critical Crosscutting Issues

Issues regarding gender as well as HIV/AIDS cut across all aspects of recruiting, retraining, and retaining secondary teachers and principals.

Gender

In many secondary education systems there are few female teachers and even fewer females in leadership positions. Female teachers and principals are critical to the expansion and improvement of secondary education systems. The following recommendations for policymakers are suggested by the findings of the study:

- Develop recruitment programs for secondary teachers that especially encourage females to enter the profession.
- Provide academic and other means of support (counseling and extracurricular activities) in colleges of teacher education to ensure the success of female students.
- Recruit more females as faculty in colleges of teacher education.
- Develop more family-friendly teacher deployment systems.
- Assist female teachers in finding appropriate housing, particularly in remote areas.
- Encourage communities to develop support networks for female teachers.
- Develop mentoring programs for new female teachers, perhaps pairing more experienced female teachers with less experienced female teachers.
- Set goals for numbers or percentages of females in secondary teaching and in leadership positions and develop strategies for reaching these goals. Challenge the institutions involved to work towards and achieve the goals.

HIV/AIDS

HIV/AIDS has a variety of devastating impacts on secondary education and on secondary teachers and principals, particularly through illness and attrition of teachers or their family

members, and through the needs of students who are ill or who have ill family members. The following recommendations for policymakers are suggested by the findings of the study:

- Infuse HIV/AIDS information in all preservice and inservice programs for teachers and principals to raise awareness, change behavior, and help reduce teacher infection rates.
- Make sure that school environments are extensively and relentlessly filled with HIV/AIDS information and awareness-creating activities.
- Develop strategies for school-community cooperation and solidarity programs to raise awareness about HIV/AIDS and encourage changed sexual behavior among teachers, students, and community members. Through such cooperation, the school can ensure that the community thinks that school-based programs are appropriate. The school can also use community suggestions and information to strengthen awareness and behavior-change programs.
- Encourage HIV-positive teachers and students to seek mutual support, speak out, and play a leadership role in demanding changed behavior.
- Supply teachers and principals with an extensive array of anti-AIDS information, teaching strategies, and suggestions for extracurricular activities to use for their own awareness, with their students, and with community members.
- Provide specific guidance and measures in teacher education and professional development programs to prepare teachers to support colleagues or students affected by HIV/AIDS.

Recommendations for Further Research on Secondary Teachers and Principals

The literature review that is part of this study revealed that the present research on secondary teachers and principals in Sub-Saharan Africa offers only a weak basis for guiding policy and program development. In particular, there is little research on secondary principals and school leadership little research on female teachers and gender in secondary education, and little research that differentiates junior and senior secondary education, with the majority of research focusing on senior secondary. Suggestions for increasing the power and relevance of research on secondary teachers and principals are the following:

- Focus research specifically on either junior secondary or senior secondary education, emphasizing the collection and analysis of information on teachers and principals in junior secondary.
- Focus research on the changing roles and effectiveness of secondary school principals.
- Focus research on factors that promote the success of girls in secondary schools and factors that promote the success of females as teachers and as school leaders.
- Focus research on formulating and testing alternative solutions, rather than continuing to clarify and describe problems.
- Collect solid evidence on the effectiveness of approaches being described rather than simply describing efforts to attract, deploy, or retain teachers.
- Carry out longitudinal research that tracks over time the effects and consequences of interventions to improve the secondary teaching force or school leadership.
- Find ways to make the research conducted within projects more widely available.

CHAPTER 1

Introduction

Across much of Sub-Saharan Africa, secondary education has been a weak link in students' progression from primary to higher education, or from primary education to employment. Over the last two decades, national governments have invested heavily in improving access to and quality of primary education, and in developing strong networks of colleges and universities. The secondary level, while not forgotten, has been given lower priority and has received less attention. Governments and international assistance organizations have largely neglected secondary in favor of investment in primary education (UNESCO 1999).

Attention is now increasingly directed toward secondary schooling, with a particular focus on the lower level of secondary schooling (junior secondary), for several reasons. Demand for increased secondary provision has grown as a consequence of greatly increased primary completion rates. As school participation rates rise and retention rates improve, some countries are now faced with enormous social demand for wider access to better quality, more relevant, junior and senior secondary education (Alvarez, Gillies, and Bradsher 2003). Many African countries therefore must now cope with the consequences of their success in increasing primary school enrolments over the last decade. Overall, Sub-Saharan Africa is now experiencing significant increased demand for and growth in secondary education.

Another important factor is that national economies are increasingly knowledge-based. Modern sector employers need graduates with more advanced literacy, numeracy, and problem-solving skills than are provided by primary schooling alone. Secondary education provides society with educated people who are needed for many areas of work, including the critical area of primary teaching. Governments recognize that economic and social development require a more balanced investment in education than has been evident in the last two decades, when resources were directed largely to primary and higher education.

While there is now a renewed interest in expanding secondary education and making its content more relevant, there is also interest in doing so at a low cost to governments.

The provision of secondary education has traditionally been considered a government function but escalating demand, combined with serious financial constraints, have resulted in many African governments being unable to fund secondary education adequately. At the same time, in response to the changing needs of the workplace, there has been a general shift away from an emphasis on vocational training toward general junior and senior secondary education (World Bank 2000).

As a result of the growth of secondary education, there is a sharply increased demand for high-quality secondary teachers and principals. Projected demand in many countries far exceeds projected supply. This, combined with severe budget constraints, puts pressure on governments to seek effective and efficient approaches to recruiting, preparing, supporting, and retaining qualified secondary school teachers and principals.

The purpose of the present study is to analyze emerging issues related to the recruitment, retention, retraining, and support of secondary teachers and principals in Sub-Saharan African and to suggest options for policymakers. The study combines a comprehensive review of the literature with a field study carried out in six Sub-Saharan African countries (Guinea, Ghana, Ethiopia, Uganda, Tanzania, and Madagascar) designed to examine and illuminate the trends identified in the literature. The literature is reviewed in the next chapter of this paper, the field data are presented in Chapter 3, and recommendations or options for consideration by policymakers are presented in the final chapter.

Results of the study highlight the many challenges facing the governments of Sub-Saharan African countries in their quest to expand and strengthen secondary education, particularly through the provision of more and better quality teachers and stronger school leadership. Despite substantial challenges, the study identifies promising areas on which individual governments may want to focus their efforts to improve the effectiveness and morale of secondary teachers and principals and enhance the overall professional status and attractiveness of the profession.

CHAPTER 2

Review of the Literature on Secondary Teacher and Principal Recruitment, Retention, and Retraining

Introduction to the Literature Review

Much of the research relating to teachers and principals (head teachers) in Sub-Saharan Africa has focused on the primary level, leaving a relatively sparse literature on secondary education teachers and principals. Research on the primary level provides valuable data, but policies and operational issues in the recruitment, training, deployment, supervision, and retention of secondary teachers and principals differ from those associated with teachers and principals at the primary level:

- At the secondary level, teachers specialize in particular subject areas, making teacher deployment more complex.
- The cost of staffing secondary schools in rural areas is particularly high, because teacher assignment must take into account content expertise as well as student:teacher ratios.
- The need to have a full complement of teachers who can cover all the required subject areas, even in locations with limited numbers of students, can result in low student: teacher ratios and a low number of teaching hours per teacher.
- Because of the level and complexity of the material to be taught, preparation of secondary teachers involves a greater emphasis on the subject content than at primary level.
- Since the required educational preparation of secondary teachers and principals is more substantial, they have more career mobility than primary teachers. One consequence of this is that retention of secondary teachers and principals may be more difficult.

Attention in the literature on secondary teachers focuses on problems of teacher supply, preparation, performance, and retention but offers a relatively weak basis for guiding policy

and program development for four reasons. First, much of the literature focuses on clarifying the dimensions of the problem, rather than formulating and testing alternative solutions. Second, much of the literature tends to be descriptive of particular country efforts to attract, deploy, and retain teachers, but often lacks solid evidence of the effectiveness of the approaches being described. Third, there is a lack of longitudinal research that tracks the long-term effects and consequences of interventions aimed at improving the teaching force. Fourth, some of the stronger research has been conducted within projects and is reported only in project documents that are difficult to retrieve. In addition, there is relatively little literature that explores the recruitment, retention, and professional preparation of secondary principals, particularly in relation to the changing roles of principals in response to decentralized authority and to principals' expanding role as instructional leaders within their schools.

Although there is presently a particular need to differentiate between junior and senior secondary education, the literature frequently fails to make a distinction between the two levels and rarely addresses the specific purposes and needs of the two. Despite the importance of the distinction between junior and senior levels, much of the available data amalgamates the two groups. The lack of segregated data may reflect the international inconsistencies in the boundaries between junior and senior levels, which make reliable international comparisons difficult. As a consequence of the dearth of segregated data between junior and senior secondary teachers and principals, distinctions in this report are minimal. Throughout this document, the term "secondary teachers" is used to describe teachers at both sublevels. In rare cases where distinctions in the literature are made, these are noted in the text.

Because of the critical gaps in the literature on secondary teachers and principals, one of the important recommendations of the study would be that future research focus on areas such as the identification of promising practices, the tracking of innovation over time, the differentiation between junior and senior secondary teachers and principals, and the changing nature of school leadership at the junior and senior secondary levels.

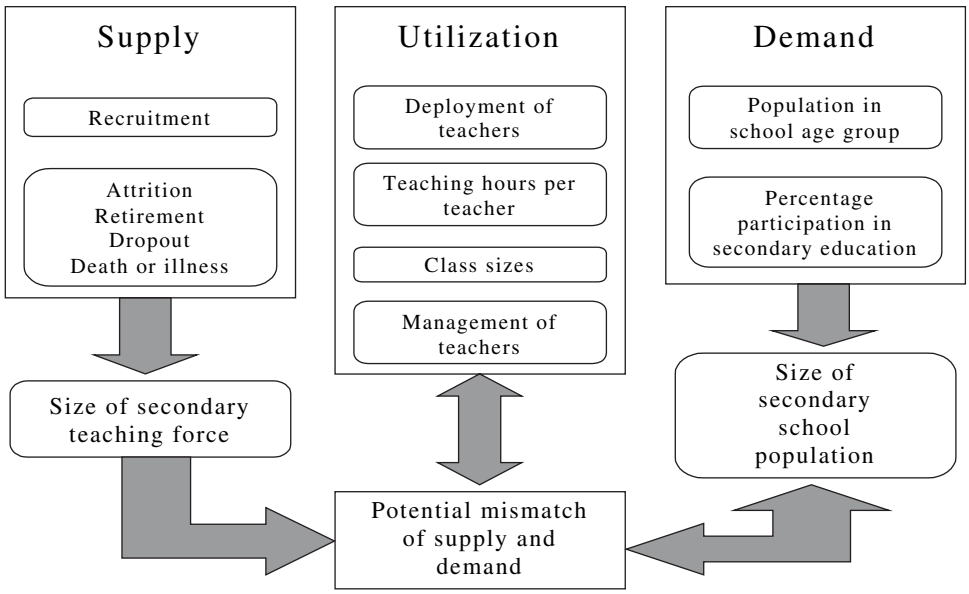
Teacher Supply and Demand

The issues of teacher supply can be broken into three main areas. One variable is the demand for secondary education, which is determined by the population in the relevant age group and the participation rate. A second variable is the supply of teachers, a function of recruitment and retention patterns. Between these two lies a third series of issues concerning the utilization of teachers, including their deployment, teaching hours, the sizes of the classes they teach, and other conditions of service. As Figure 2.1 below indicates, meeting the challenge of increased demand for secondary education will require changes in the utilization of as well as the numbers of teachers.

Sharply-Rising Demand for Secondary Education

It is predicted that secondary education is about to expand dramatically in many countries in Sub-Saharan Africa as a result of both rising populations and growing participation in

Figure 2.1. Key Issues in Teacher Supply and Demand



secondary education. Table 2.1 below displays the growth in school-age population in a selection of Sub-Saharan Africa countries.

Table 2.2 displays the transition rates from primary to secondary education in 35 countries between 1970 and 1998. The overall trend reveals increased shares of primary students entering secondary schooling.

Most countries subdivide secondary education into junior and senior secondary levels, with the two levels sometimes taught in the same institution and sometimes in separate institutions. As Table 2.3 clearly indicates, there is a wide variety among countries in the number of years of primary, junior secondary and senior secondary education.

Most countries have policies in place for the expansion of secondary education, in response to growing demand. In Tanzania, the education strategy aims to double the secondary enrolment by 2004, with further increases to 2015 (Ministry of Education, Tanzania, 1999). In Uganda, increasing enrolment in primary education is placing pressure on existing facilities at post-primary level. In 2002, over 400,000 students sat for the primary leaving exams; currently, less than 50 percent of these can be absorbed into post-primary education. In 2004, up to 900,000 candidates will be seeking places at post-primary level (Ireland Aid and Ministry of Education and Sports, Uganda 2003).

Supply of Teachers

The rapid expansion of secondary education leads to an escalating demand for teachers. The scale of the increased demand for teachers can be estimated as follows. Assuming a gross enrolment rate (GER) of 22 percent (the median GER reported for secondary education in Sub-Saharan Africa in 2000) 20,119,880 students will enroll in secondary

Table 2.1. Sub-Saharan Africa: School-age Population Data

Average Annual Growth Rate of School-age Population, 2000–2005

Country	%	Secondary School-age Population, 2000 (000)* ↓	Secondary School-age Population, 2005 (000)**
Angola	3.1	2,221	2,662
Benin	2.1	1,220	1,083
Botswana	1.6	194	212
Burkina Faso	2.9	1,097	2,215
Burundi	2.3	1,104	1,271
Cameroon	2.6	1,417	2,738
Cape Verde	1.5	60	64
Central African Rep.	2.0	570	641
Chad	2.6	1,112	1,270
Comoros	2.5	117	132
Congo	3.1	471	564
Congo, DR	3.4	7,270	8,911
Côte d'Ivoire	1.3	2,649	2,835
Djibouti	2.2	104	114
Equatorial Guinea	2.6	72	84
Eritrea	2.5	520	608
Ethiopia	3.9	8,445	10,313
Gabon	3.5	171	202
The Gambia	2.7	152	179
Ghana	2.1	3,304	3,706
Guinea-Bissau	2.1	886	1,053
Guinea	3.2	1,196	1,418
Kenya	1.1	128	144
Lesotho	2.0	261	287
Liberia	2.5	454	461
Madagascar	2.7	3,017	3,486
Malawi	2.5	1,003	1,166
Mali	3.3	1,668	2,012
Mauritania	1.9	359	386
Mauritius	0.8	135	145
Mozambique	2.7	3,084	3,589
Namibia	2.2	190	216
Niger	3.8	1,636	1,978
Nigeria	2.8	17,735	20,923
Rwanda	1.6	1,094	1,188
Senegal	2.4	1,480	749
Sierra Leone	2.3	1,678	847
Somalia	3.7	1,011	1,211

***Secondary School-Age Population, 2000 (thousands).** Estimated population of the age group that corresponds to relevant grade levels. The estimates for the school-age population for 2000 and 2005 are based on the structure of the educational system in 1996. For countries of less than 150,000 inhabitants, such as São Tomé and Principe and the Seychelles, population data by age are not provided.

****Secondary School-Age Population, 2005 (thousands)**
Estimated population of the age group that officially corresponds to relevant grade levels. The estimates for the school-age population for 2000 and 2005 are based on the structure of the educational system in 1996. For countries of less than 150,000 inhabitants, such as São Tomé and Principe and the Seychelles, population data by age are not provided.

(*continued*)

Table 2.1. Sub-Saharan Africa: School-age Population Data (*Continued*)

Average Annual Growth Rate of School-age Population, 2000–2005

Country	%	Secondary School-age Population, 2000 (000)* ↓	Secondary School-age Population, 2005 (000)**
South Africa	1.7	4,846	5,230
Sudan	1.3	2,087	2,073
Swaziland	2.4	111	123
Togo	2.8	754	889
Tanzania	2.6	4,522	5,213
Uganda	3.5	3,101	3,620
Zambia	1.7	1,158	1,256
Zimbabwe	2.0	1,748	1,971
Total		**87,612,000**	**91,453,994**

Source: ADEA (1999, 2003).

Table 2.2. Transition from Primary to Secondary Education
(percentages)

Country	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1998
Benin	28	29	—	—	—	—	—	—	—	—	—
Botswana	—	—	—	36	76	76	84	84	90	—	—
Burkina Faso	13	18	—	—	—	—	27	—	—	—	—
Burundi	—	6	8	9	10	11	—	—	—	—	—
Cameroon	17	22	22	29	—	—	—	—	—	—	—
Cape Verde	—	—	30	—	—	—	—	—	—	—	—
Central African Rep	23	—	37	26	—	—	—	—	—	—	—
Chad	—	—	—	—	—	—	—	41	46	—	—
Congo	—	75	83	62	—	—	48	—	51	—	—
Congo, DR	40	—	—	—	27	32	27	—	—	—	—
Côte d'Ivoire	27	25	—	23	—	—	37	—	40	39	—
Eritrea	—	—	—	—	—	—	77	80	79	76	84
Ethiopia	—	—	—	80	—	—	80	77	82	—	85
Gabon	19	—	—	—	—	—	—	—	—	—	—
The Gambia	—	41	41	32	—	—	—	—	—	—	—
Guinea	—	—	—	27	—	48	50	—	—	—	—
Guinea-Bissau	—	—	65	—	—	—	—	—	—	—	—
Kenya	28	—	—	—	—	—	—	—	—	—	—
Lesotho	—	—	—	52	—	—	—	—	—	—	—
Madagascar	41	—	—	—	—	—	35	—	42	—	—
Mali	—	—	39	43	—	61	63	—	56	—	—
Mauritania	—	—	—	—	31	34	32	34	—	—	—
Mauritius	—	40	47	—	50	46	51	51	56	61	—

(*continued*)

Table 2.2. Transition from Primary to Secondary Education (*Continued*)
(percentages)

Country	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1998
Mozambique	—	—	—	34	—	39	39	40	41	—	—
Namibia	—	—	—	—	—	74	—	—	—	—	84
Niger	24	34	—	—	27	—	—	—	—	29	—
Rwanda	—	7	—	4	—	—	—	—	—	—	—
Senegal	—	—	—	—	—	—	—	—	—	30	—
Seychelles	—	—	62	87	—	99	100	—	99	—	—
Sierra Leone	58	—	—	—	—	—	—	—	—	—	—
South Africa	—	—	—	—	90	—	—	—	—	—	92
Sudan	99	—	—	—	—	—	—	—	—	—	81
Swaziland	47	60	70	67	76	87	80	79	97	73	—
Togo	—	60	37	34	38	—	—	45	52	—	—
Zambia	—	22	—	—	—	—	—	—	—	—	—

Source: World Bank (2002c).

Table 2.3. Duration in Years of Primary and Secondary General Education for Selected Sub-Saharan African Countries

Country	Primary	Lower Secondary	Upper Secondary
Benin	6	4	3
Botswana	7	2	3
Burkina Faso	6	4	3
Burundi	6	4	3
Cameroon	6	4	3
Cape Verde	6	3	3
Congo	6	4	3
Côte d'Ivoire	6	4	3
Ethiopia	6	2	4
Ghana	6	4	3
Kenya	8	*	4
Lesotho	7	3	2
Madagascar	5	4	3
Malawi	8	2	2
Mauritius	6	3	4
Mozambique	5	2	5
Namibia	7	*	5
Senegal	6	4	3
Sierra Leone	7	5	2
South Africa	7	3	2

Adapted from Acedo 2002. Data source: UNESCO Statistics (2000). http://unescostat.unesco.org
UNESCO *World Education Report 2000*. http://www.unesco.org/education/informaton/wer.index.htm

education across the continent in 2005 (UNESCO 2002a). Assuming a 20:1 student:teacher ratio, 1,005,994 teachers will be needed to teach these students. This number is almost double the 576,770 secondary teaching staff estimated to have been available in 1998, based on data from 40 countries (UNESCO 1998a).

Teacher demand estimates for four specific countries are developed in Table 2.4. These are based on a series of assumptions about enrolment growth, grade progression rates, percentage of trained teachers, and teacher turnover. While offered only as a rough estimate, it illustrates the magnitude of the problem facing some countries in ensuring a sufficient supply of qualified teachers at the secondary level. The main implication of these projections is that the demand for trained secondary school teachers is likely to exceed supply in many parts of Africa over the next decade.

> In many parts of Sub-Saharan Africa the projected demand for secondary school teachers exceeds projected supply, in some cases by substantial amounts.

Although severe shortages exist at the junior secondary level in most countries, shortages of teachers for senior secondary education present particular problems. First, lack of access to senior secondary schooling prevents progression to tertiary level education, a formal requirement for most senior secondary teaching positions. If bottlenecks exist between junior and senior secondary levels, they effectively regulate access to the tertiary level sector and to "white-collar" employment. Second, where teachers at senior secondary level are better paid or have higher status than those at the junior level, they may be even less likely to locate in areas seen as undesirable such as isolated rural areas, thus exacerbating the problems of teacher deployment and equitable service provision. Third, in some countries, teachers for senior secondary level are drawn from the ranks of existing teachers at junior secondary level. In these cases, efforts to increase the supply of senior secondary teachers will, in the short term, reduce the supply of junior secondary teachers.

While demand increases rapidly for secondary teachers at both junior and senior levels, the supply of teachers is highly dependent on a complex weave of factors, of which utilization practices, deployment practices, and conditions of service are critical. This is elaborated in the next three sections.

Teacher Recruitment

At times of rapid expansion of the education system, additional strain is generally placed on teacher supply and bottlenecks are increasingly highlighted. These bottlenecks in teacher supply vary from country to country. In Ghana, the teacher education system is the limiting factor of teacher supply. Teachers' colleges are oversubscribed and more teachers could be prepared if spaces were available. Yet achieving the target primary enrolment rate would involve increasing teacher supply by up to four times the current level (Lewin 2002). In Lesotho, the number of suitable graduates from secondary schools limits teaching force numbers. Only about 2,000 students each year achieve marks on the Cambridge examination that would qualify them for preservice teacher education; up to half of these would need to opt for teacher preparation in order to satisfy the demand for teachers (Lewin 2002).

Where student teachers are required to pay fees for their training, another barrier to entry is created. In Tanzania, student teachers reported: "Since the government has intro-

Table 2.4. Secondary Teacher Projections in 2005, Selected Countries

	Chad	Benin	Tanzania	Malawi
Secondary school-age population (2000)[1]	1,195,000	1,052,000	4,692,000	2,161,000
Secondary GER[1]	12	22	5	45
Estimated secondary enrollment for 2000[2]	137,430	231,440	234,600	972,450
Estimated secondary school teachers[3]	3,710	6,810	13,030	27,780
Student (pupil):teacher ratio (PTR)[1]	37:1	34:1	18:1	35:1
Number of trained teachers[1]	—	2,660 (39%)	11,860 (91%)	9,167 (33%)
Estimated teacher attrition[4]	5%	5%	5%	10%
Estimated annual growth in school-age population[5]	2.6%	2.1%	2.6%	2.5%
Estimated secondary school-age population in 2005[6]	156,240	1,167,200	5,213,000	2,444,970
Number of new teachers needed in 2005, based on annual growth in population[7]	1,350	2,290	4,400	15,030
Number of new teachers needed in 2005, based on 5 percent increase in GER[8]	3,190	4,000	18,880	18,520
Number of current teachers needing training if 80 percent of teachers are trained[9]		2,790		13,060
Number of new teachers needed if PTR is raised or lowered to 30 students (pupils) per teacher[10]	4,600	5,240	7,290	24,340

Notes:

1. From UNESC0 (2002a), annex. The data are 1999–2000.
2. Secondary school enrolment for 2000 was calculated by multiplying the GER by the secondary school-age population for 2000.
3. The number of secondary teachers in 2000 was calculated by dividing the secondary school enrolment for 2000 by the PTR for 2000.
4. Lewin (2002), in calculating teacher supply and demand for several African countries, suggests using an attrition rate of 5–10 percent A rate of 10–15 percent is reasonable for countries most affected by HIV/AIDS, which includes Malawi.
5. From ADEA (1999, 2003). This rate was estimated for the years 2000–05.
6. The secondary school-age population for 2005 was estimated using the secondary school-age population for 2000 (from UNESCO 2002b) multiplied by the average annual growth rate (from ADEA 1999) for five years.
7. This figure was calculated based on a constant GER and PTR. The number of new teachers needed in 2005 accounts for only the average annual growth rate in school-age population and the attrition rate of teachers.
8. This figure represents an increase in teachers needed based on a 5 percent increase in GER. A 5 percent increase in GER is reasonable, given that secondary GER increased in most countries by at least that percentage between 1990 and 1996 (Acedo 2002).
9. This figure represents the number of current teachers needing training (in year 2000) if 80 percent of the teaching corps is trained.
10. This figure represents the number of new teachers needed if the PTR is lowered or raised to 30. A PTR of 30 seems reasonable, given the growing secondary school enrolment demand and the realities of recruiting, training, and deploying sufficient teachers.

duced this cost-sharing in education, more people are now prevented from applying due to the shortage of money" (Towse and others 2002). Financial pressures are likely to be a disincentive to prospective teacher college students, especially to girls, given the cultural perceptions of girls' work.

On the other hand, in some countries, the bottleneck is not a lack of sufficient places in or candidates for teacher education, but recruitment into the teaching force. In Uganda, the government's financial constraints have prevented qualified teachers from being recruited into teaching. As a result, "the stock of trained teachers in the market is very substantial since most of the last five years' output has not been recruited and may number more than 20,000" (Lewin 2002).

In subject areas such as science and mathematics, shortages of teachers may be particularly acute. In Zambia, the education ministry noted a shortage of teachers of mathematics, science, and English (Ministry of Education, Zambia, 1996). A serious problem with the lack of teachers in certain disciplines, including mathematics and science, has also been observed in Francophone African countries, and has sometimes resulted in subjects not being taught, or being taught by non-subject specialists (Caillods 2001).

The challenges of teacher supply are usually greater at senior secondary level, because the material to be taught is more specialized and there may be fewer appropriately qualified teachers available. In many countries, there are different teacher qualifications required for junior and senior secondary teachers. In Ghana, teachers for junior secondary schools are trained with primary teachers, while senior secondary teachers are trained separately. In Uganda, a network of national teachers colleges prepares teachers for junior secondary teaching, but further college study is required to upgrade students to graduate status in order to meet senior secondary teaching requirements. Rapidly increasing demands for teachers at both the junior and senior secondary levels leads to a higher rate of teachers who are not formally qualified for the level at which they are teaching.

A shortage of qualified teachers results in the use of large numbers of unqualified teachers in schools throughout Sub-Saharan Africa. In Zimbabwe in 1992, about half of the 24,900 secondary teachers were unqualified; typically, they had five "O levels" but no teacher preparation course (World Bank 1992). Liang (2001) has reported that in Uganda 15 percent of secondary teachers—four-fifths of whom are male—are unqualified, while only 28 percent have the desired qualification of a degree (Table 2.5).

Table 2.5. Qualifications of Secondary Teachers in Uganda

Qualification	Male Teachers	Female Teachers	% of Total Secondary Teaching Force
Grade III	64	4	0.4
Grade IV	57	17	0.5
Grade V	7,249	1,839	56
Graduate*	3,444	1,092	28
Untrained	2,255	185	15
Totals	**13,069**	**3,137**	**16,206**
Proportion of total	**81%**	**19%**	**100%**

*Formal qualification for secondary teaching.
Source: Liang (2001).

Possibly due to attempts to mitigate the teacher shortages, a growing number of temporary and contract teachers has been noted in certain Francophone African countries—notably in Mali and Senegal, but also in Burkina Faso. While some of these may have had some teacher preparation, most have not, and they are generally paid less than permanent teachers. Contract and nonpermanent teachers represent over 11 percent of staff in lower secondary schools in Mali and 28 percent in general upper secondary schools (Caillods 2001).

Discussions of ensuring an adequate supply of qualified teachers often focus on increasing monetary resources, which most countries do not have and are unlikely to get.

Countries will need to make better and more creative use of the resources that are already available to secondary education.

Teaching as a Last Resort

It is challenging to ensure that teaching is and remains an attractive career option and attracts a sufficient number of high-quality applicants. A study in Ghana found that some young people chose teaching because of a vocational commitment, wanting to impart knowledge or seeking to develop the young people of their country. For many, however, teaching was chosen on the basis of the possible benefits it offers, including salary, job security, and opportunities for advancement (Akyeampong and Stephens 2002).

There is increasing evidence that some people may choose to teach because of the lack of other employment options. This is especially true in the case of those who did not succeed in gaining access to tertiary-level education, yet aspire to white-collar employment in the public service. Fiscal constraints in many countries mean that teaching is one of the few areas of white-collar work in the state sector available to nongraduates. In a study of student teachers in Tanzania, only 10 percent of males and 15 percent of females said that teaching was their first career choice, and 37 percent had been unable to follow their first choice because their grades were too low (Towse and others 2002). Consequently, teaching tends to attract less qualified candidates. In Ghana, about 69 percent of student teachers had a grade E in English, the lowest possible pass grade, while 40 percent had a grade E in mathematics (Akyeampong and Stephens 2002).

Teacher Retention and Attrition

Challenges of Teacher Attrition

Teacher supply is further reduced by a hemorrhage of teachers who leave the profession before retirement age. Contemporary teacher attrition rates are believed to range between 5 and 30 percent in different countries of Sub-Saharan Africa. Malawi, with a slow economy, reported an 8 percent attrition rate in 1996, while greater economic "freedom" in Liberia contributed to attrition rates in the region of 20 to 30 percent.

Attrition is a result of economic factors, as teachers make rational economic decisions about their careers and seek better paid work where they can.

In part, teacher retention is affected by economic factors, as teachers make rational economic decisions about their careers and seek better paid work where they can. However, there is also considerable evidence that teachers feel their work is becoming increasingly stressful and that their status is falling (Macdonald 1999). There is evidence, for example, that teaching conditions have deteriorated drastically in Senegal, Burkina Faso, and Mali, with an insufficient supply of student textbooks and teaching materials, inadequate equipment, poor teaching and living accommodation, and a high number of students per classroom (Caillods 2001).

The loss of teachers to the teaching profession is rarely distributed evenly across the teaching force. Attrition is highest in geographical locations where living conditions are extremely poor, harsh, or expensive, or where teachers do not feel comfortable with the local ethnicity, customs, or language (Macdonald 1999). Attrition rates are also higher in the early years of a teaching career. Teachers early in their careers may have less stable family lives and have less commitment to teaching. If they stay in their positions, they often accrue benefits of knowledge, skills, contacts and an investment in that locale (for example, home ownership), as well as knowledge of and seniority within the institution (Macdonald 1999). There may be differentials between private and public schools, although the direction of this may vary from country to country. Differential rates of attrition for teachers can also be clustered around specific subjects, with higher attrition for those subjects in demand in other jobs (Macdonald 1999).

Attrition may also be related to teacher qualifications. The most highly qualified teachers may be the most likely to leave, as they can easily get alternative employment (Macdonald 1999). Hedges (2002) reports that in Ghana unqualified teachers may have more of a stake in the communities they work with—and hence lower attrition—because they have fewer choices. In Zimbabwe, by contrast, attrition of unqualified teachers was higher than qualified teachers, possibly reflecting the short-term nature of their contracts (World Bank 1992).

Teaching as a Stepping-stone

Attrition may increase by a perception of teaching as a path to further education or an exit strategy. As one Tanzanian student teacher put it, "It is the only profession which will allow me to advance to the higher levels of education" (Towse and others 2002). Schemes that allow teachers to avail themselves of paid study leave are very popular. In Ghana each year, there are 4,000 teachers on study leave while 6,000 new teachers leave teachers' colleges (figures are for primary and junior secondary teachers; Hedges 2002). Over 80 percent of newly qualified Ghanaian teachers indicated that they expect to move on to further study within five years (Akyeampong and Lewin 2002). Many of those on study leave do not return to teaching. The system is thus unintentionally promoting a steady flow of teachers out of the profession (Hedges 2002).

Impact of Teacher Attrition on Schools

Attrition does not simply mean a numerical loss. It also represents the loss of experienced teachers from the system. This is particularly the case where those who are leaving the profession are the more successful or more qualified teachers. It may have the effect of leaving a less capable pool of teachers in the classroom or assuming leadership positions. It may also lead to demoralization among remaining teachers (Macdonald 1999).

In addition, schools may be unable to replace the teachers who have gone and are forced to operate, at least for a period, with reduced staff. The scale of the disruption caused by attrition is enormous. One study in Malawi found that, of 188 teachers who began the school year, almost 50 percent were not teaching the same class nine months later (IEQ 2000). Some teachers had moved to other schools or had left for further training. Others were no longer present in their classrooms due to illness or other temporary absences. However, the majority had moved to teaching other classes within the same school. In many cases, this was a "chain reaction" resulting from the absence of one teacher. These movements clearly have a disruptive effect on a series of classes, damaging the student-teacher relationship as well as class planning and other activities.

Policy Interventions to Increase Retention

A variety of strategies to increase retention has been devised. In Ghana, teachers are required to have a bond signed. If they leave teaching before their initial three-year posting is completed, they are barred from further employment in the state sector and the guarantor must repay the bonded amount. In practice, however, the value of the bond has been reduced by inflation, and the system is no longer enforced. Lack of enforcement has led to widespread cynicism about the scheme (Hedges 2002).

Increasing teacher salaries may appear to be the obvious response to attrition problems. However, there is little evidence that increased salary alone has a high long-term impact on retention. Improving teachers' physical, social, and professional experience of work increases their commitment, reduces attrition, and is often cheaper than trying to tackle salary or the costs of teacher dissatisfaction, loss, and retraining. Benefits that might compensate or reward teachers, improving retention at some expense—but perhaps less than salary increases—include:

- improving school buildings and teachers' accommodation;
- increasing teacher responsibility for educational decisions;
- reducing class sizes;
- increasing parental and community support;
- promoting collegial relationships among teachers and administrators;
- providing teacher support and recognition; and
- providing teacher counselling and medical care (Macdonald 1999).

The Impact of HIV/AIDS on Teacher Attrition

The HIV/AIDS pandemic has specific implications for the education system. Where infection is prevalent, the education system is weakened by the deaths of qualified teachers, the reduced productivity of teachers, and resultant loss of expertise in the system (Kelly 2000). The quality of teaching suffers as teachers are placed under increased pressure through illness, supporting ill colleagues and relatives, and dealing with the consequences of HIV/AIDS in the school.

Across Africa, an estimated 260,000 teachers—9.4 percent of the total employed in 1999 may die of AIDS-related illnesses over the next decade (Bennell, Hyde, and Swainson 2002). There is already evidence that in some countries teachers are dying faster than replacements can be adequately trained (Cohen 1999; Bennell, Hyde, and Swainson 2002).

Teacher Rates of HIV Infection. In some cases, the rate of HIV infection among teachers is higher than in the population as a whole. Kelly (2000, 64) reports that teacher mortality in Zambia in the late 1990s stood at 39 per thousand, about 70 percent higher than in the general population. He argues that before the dynamics of HIV transmission were well understood or information disseminated, the relative affluence and greater mobility of teachers tended to increase their risk of infection. It is possible that the risk has decreased for new recruits to the teaching profession, but, in many countries, the majority of serving teachers are experiencing infection rates that are higher than those in the general adult population. Consequently, higher proportions of teachers may die in the coming decade from AIDS-related causes.

However, the situation may be more varied than Kelly suggests. Other studies found little evidence for the belief that HIV/AIDS prevalence among the teaching profession is higher than the adult population (Bennell, Hyde, and Swainson. 2002). For example, in Botswana, teacher mortality was less than half of that projected for the overall adult population in the late 1990s.

In general, mortality rates are much higher among male teachers than female teachers (Bennell, Hyde, and Swainson. 2002). Levels of mortality are generally lower among secondary school teachers—who are much better educated, trained, and better paid—than among primary school teachers, as illustrated in Table 2.6.

Impact on Teacher Productivity. The impact of HIV/AIDS on education quality goes beyond teacher attrition. Goliber (2000, 27) points out that illness also has a damaging impact on productivity. In the course of HIV infection there may be 10–14 bouts of prolonged illness, leading to long absences from school (Kelly 2000). On this basis each death is preceded by 18 months of disability (Kelly 2000). Goliber (2000) estimates that a typical teacher loses six months of work due to illness before developing full-blown AIDS.

The extent of productivity losses resulting from HIV/AIDS is illustrated in Table 2.7 and Table 2.8. For some teachers, attending funerals and caring for others who are sick can lead to as much lost work time as being sick themselves. AIDS-related illnesses within the family or community also reduce productivity, as teachers are involved in caring or support. The burden of caring may fall more heavily on female teachers; as a result, in several countries head teachers have reported that the productivity of female teachers is lower than that of males (Kelly 2000).

In addition to lost teacher time, HIV/AIDS is reshaping how school funds are used. For instance, schools' financial responsibilities to sick teachers are diverting non-salary funds

Table 2.6. Teacher Mortality Rates by Marital Status and Type of School in Botswana, 1999 (percentages)

	Single		Married	
School Type	Female	Male	Female	Male
Primary	0.87	0.72	0.52	2.96
Junior secondary	0.42	0.48	0	0.56
Senior secondary	0.36	0.52	0	0.96
Senior secondary	0.36	0.52	0	0.96

Source: Bennell, Hyde, and Swainson (2002).

Table 2.7. Teacher Absenteeism Rates
(percentages)

	Primary			Secondary		
Sex	Botswana	Malawi	Uganda	Botswana	Malawi	Uganda
Female	7.4	4.5	4.3	6.1	3.4	12.6
Male	4.2	4.6	2.4	3.7	2.4	9.1

Source: Bennell, Hyde, and Swainson (2002).

to non-educational purposes. The expectation in Malawi that schools purchase coffins for teachers who die has depleted the instructional budgets in many schools.

Juma (2001) points out that teachers who are ill with HIV/AIDS may not wish to make it known to the education authorities for fear of losing their jobs or for fear of stigmatization. As a result, they may continue to teach while unable to do so properly. In some cases, absence while ill may be "covered" by the school to avoid informing the central authorities. As a result, many teachers who are absent as a result of illness are not replaced and their work is distributed among colleagues.

Teacher productivity may also be affected by stress resulting from the incidence of AIDS among colleagues or friends or from worry about their own HIV status. UNICEF (1996) reported that less than one-third of teachers who had experienced the death of

Table 2.8. Reasons for Teacher Absences
(percentages)

		Own Sickness	Funerals	Sickness of Others	Work-Related	Other*
Primary						
Botswana	Female	42	18	18	15	8
	Male	35	14	14	15	20
Malawi	Female	42	31	20	2	4
	Male	38	47	11	5	0
Uganda	Female	29	24	10	29	5
	Male	33	17	0	42	8
Secondary						
Botswana	Female	50	10	8	9	25
	Male	26	21	16	16	21
Malawi	Female	40	27	7	13	13
	Male	42	38	17	4	0
Uganda	Female	23	23	14	32	9
	Male	16	16	11	35	22

*"Other" includes collecting pay and maternity leave.
Source: Bennell, Hyde, and Swainson (2002).

a colleague had spoken to friends or relatives about it, and most felt unable to do so. Similarly, approximately 25 percent of teachers admitted to worrying about their own HIV status (Siamwiza and Chiwela 1999). HIV/AIDS also places additional stress on teachers when they are expected to act as health educators and, in some cases, as counsellors for their students.

Implications for Management. Education management may also need to be involved in actions to deal with the pandemic. Among the bundle of strategies to be considered in addressing HIV/AIDS and teachers in Sub-Saharan Africa are a crackdown on sexual misconduct of teachers and better education of teaching staff about HIV/AIDS prevention. However, to date there has been relatively little targeted HIV/AIDS education for teaching staff (Bennell, Hyde, and Swainson 2002). Better deployment practices also appear to offer part of the solution. Both high levels of teacher mobility and postings that lead to the separation of spouses, particularly in isolated areas, contribute to the risk of HIV/AIDS infection.

Implications for Teacher Preparation. Vacant teaching posts created by the deaths of teachers must be filled. The main strategy for replacement is to wait for new teachers from the training colleges. However, teacher preparation systems are usually designed to cover projected retirements and may not be able to cope with the increased demand. In Zambia in 1998, teacher deaths were the equivalent of two-thirds of the output from teacher training colleges (Kelly 2000). HIV/AIDS may further reduce the capacity to prepare teachers by reducing the capacity of the teacher educators (Kelly 2000).

At the same time, teacher education programs will need to be modified to address the prevalence of HIV/AIDS in the school environment. This may involve heightening teachers' awareness of their professional responsibilities and inculcating a strong code of conduct for interaction with students. It may also involve preparing teachers to act as counselors and health educators, helping them to act as agents for prevention of HIV/AIDS in their schools.

Teacher Attrition Issues in Countries Facing Emergencies

A substantial number of countries in Sub-Saharan Africa currently and recently have faced emergency situations. These generally involve armed conflict (as reflected in Table 2.9), drought or disease (Gleditsch and others. 2002). Emergencies cause further attrition of the teaching force through death, forced migration, disruption, and non-payment of salaries. Armed conflicts impose many additional burdens on education systems, including the provision of special inservice training for teachers (Sinclair 2002) and the development of reemployment policies for returnee teachers.

Teacher Deployment

In many African countries, the distribution of teachers is uneven, with surpluses in certain areas coexisting with shortages in others (Lewin 2000). Typically, the pattern is that there are fewer teachers in the least attractive locations, such as rural areas or the poorest urban areas. Teachers found in these areas tend to be the untrained or underqualified. The difficulties of teacher deployment are a major cause of inefficiency in the education system and run counter to the aim of equitable educational provision.

Table 2.9. Active Armed Conflicts in Africa, 2001

Country	Year	Intensity Level
Angola	1975–1994	War
	1999	Intermediate
	19998–2001	War
Burundi	1990–1992	Minor
	1995–1996	Minor
	1997	Intermediate
	1998	War
	1999	Intermediate
	2000–2001	War
Central Africa Republic	2001	Minor
Chad	1997–2001	Minor
Congo, DR	1998–2000	War
	2001	Intermediate
Ethiopia	1996	Minor
	1998–2001	Minor
Guinea	2000–2001	Minor
Liberia	2000–2001	Minor
Rwanda	1998	War
	1999–2000	Intermediate
	2001	War
Senegal	1990	Minor
	1992–1993	Minor
	1995	Minor
	1997–2001	Intermediate
Sudan	1983–1992	War
	1993–1994	Intermediate
	1995–2001	War
Uganda	1994–1995	Minor
	1996–2001	Intermediate

Source: Gleditsch and others (2002).

Rural-Urban Divide

Qualified teachers are often reluctant to stay in rural settings (Rust and Dalin 1990). In Ghana, over 80 percent of teachers said they preferred to teach in urban schools (Akyeampong and Lewin 2002). Rural postings are unpopular for a variety of reasons. In Ghana, student teachers considered working in deprived areas as unattractive because of the danger of disease, problems with local languages, and unsuitable teacher accommodation (Akyeampong and Stephens 2002). In Tanzania, student teachers expressed concern about poor classroom and home accommodation, school resources, leisure opportunities, and medical facilities (Towse and others 2002). The spread of HIV/AIDS has caused

rural postings to appear even less attractive, as healthcare is less accessible there (Smith and McDonagh 2003).

In addition, teachers in isolated schools often feel excluded from opportunities for participation in consultation or professional development. They may also find it difficult to secure their entitlements—such as salaries, benefits, and professional development opportunities—from regional education administrations, often due to corrupt officials. The problem is further exacerbated where the majority of student teachers come from urban backgrounds. In Ghana, teachers tend to come from higher socioeconomic backgrounds (Akyeampong and Stephens 2002) and are disproportionately from urban areas (Hedges 2002). These student teachers are more likely to be unhappy with postings in deprived communities or rural areas. An additional disadvantage for rural areas may arise where the language of instruction is not the local language or where a teacher is not fluent in the local language, leaving him or her isolated, professionally and socially, within the community (Brodie, Lelliott, and Davis 2002).

Rural postings may present particular problems for female teachers. Single female teachers may feel unsafe in rural areas or believe that they have better marriage prospects in urban areas (Hedges 2002). Married female teachers may be reluctant to accept a rural posting if it involves a move away from their husbands (Gaynor 1998). The unpopularity of rural positions has two self-reinforcing effects. First, in some cases, the transfer system is used to move teachers to unpopular postings as a punishment for improper behavior, such as stealing or misbehaving with female students (VSO 2002). This can create a higher concentration of misbehaving teachers in schools farther from inspection mechanisms and further demoralizes the existing staff. Second, where there is a shortage of teachers in rural areas, teachers in rural schools sometimes have greater workloads, further increasing the disincentive to accept a rural posting (VSO 2002).

Teacher Deployment Systems

Teacher deployment may be organized in a variety of ways. In practice, two main systems exist, either deployment by a "market system," or deployment by a central authority (Lewin 2000). In a market system, each school can advertise and recruit its own teachers. For example, in Lesotho and Swaziland, teachers apply directly to schools, after which a formal contract is submitted to the education ministry (Feiter, de Vonk, and van den Akker 1995). Such systems have the advantages of ease of administration and automatic response to shortages. However, market systems that allow new teachers to apply for advertised jobs tend to exacerbate shortages in unfavorable locations. Market systems will only act to reduce the imbalances if there are incentives for trained teachers to apply for jobs where they are needed most. Otherwise, given a shortage of supply, there will be a concentration in schools in favored locations (Lewin 2000).

Most African countries use a system of centralized teacher deployment, where it is fairly common for a secondary teacher's contract to require deployment to anywhere in the country. Deployment by a single, central authority is generally free from local pressures and can more easily be made transparent and fair. However, centralized deployment systems have several weaknesses that "undermine the rational operation of the posting system" (Hedges 2002). First, the system is dependent on the quality of information coming from the schools and, without adequate data, it may easily become bureaucratic and unresponsive

(Gottelmann-Duret and Hogan 1998; Rust and Dalin 1990). Second, the posting system often allows experienced teachers to transfer, thus resulting in greater numbers of inexperienced teachers in the areas with weak infrastructure and teaching resources (Lewin 2000). Third, in many countries there are difficulties in implementing deployment systems. For example, in Ghana, significant numbers of trained teachers fail to take up their postings in rural areas. In a recent survey of 262 newly trained teachers posted to four districts in the Upper West Region of Ghana, 115 (44 percent) failed to arrive at their teaching posts.

Over the last 10 years, many countries have given new attention to the benefits of decentralizing the teacher-hiring process to a local level. In terms of teacher deployment, decentralization brings both benefits and risks. The more local the system, the more likely it is to be in touch with the needs of the schools and respond quickly and flexibly to these needs. However, a local system may also be susceptible to undue influence by individuals in positions of power, especially in countries with weak administrative capacity at district and local levels (Hallak 1990). Improved systems of checks and balances are needed to ensure countrywide equity, justice, and efficiency in teacher deployment (Gottelmann-Duret and Hogan 1998).

Teacher deployment at the secondary level is further complicated by teacher specialization. Teachers are typically specialists in one or two subjects, and there are frequently shortages in specific subject areas such as science and mathematics.

The existence of a private education sector also diminishes the capacity of the state system to deploy teachers. Private school positions in urban areas, even at lower pay than government schools, may be more attractive than a rural posting. The private sector has other impacts as well. In Uganda some secondary teachers were reported to teach part-time in private schools while holding full-time teaching positions in government schools. Such instances are more likely to occur in urban areas where there are more private schools and distances between schools are smaller.

Cost-sharing initiatives create uneven deployment of teachers as well. Schools in more affluent areas that charge fees are often in a position to hire additional teachers or to offer higher salaries to existing teachers. To teachers, this means the possibility of a reduced workload or more pay. Fee systems can create a private market for teachers within the public system. Often the poorer schools find their best teachers transferring to these schools.

> Important root causes of inadequate teacher supply can be traced to arbitrary teacher deployment practices and poor conditions of service.

Strategies to Redress Deployment Imbalances

There is a need for a deployment system that will ensure a distribution of experienced teachers (Gottelmann-Duret and Hogan 1998). Interesting research has suggested that young, recently trained teachers have more difficulties in rural areas, while teachers who have worked in a school for fewer than two years or for more than five years have lower student pass rates (Daun 1997). This suggests that deployment policies that post relatively experienced teachers to rural areas and seek moderate stability in teacher postings may be the most effective.

Countries have experimented with a number of different policy initiatives to redress the deployment imbalance. The three main types of initiatives follow.

Incentives for Teachers Locating in Rural Areas. Some countries have attempted to make working in rural areas more attractive through the use of incentives. In some cases, these may be financial incentives in the form of a hardship allowance, travel allowance, or subsidized housing. In other areas, the incentives may be non-monetary, including special study leave, better inservice training, or enhanced promotion opportunities (Gaynor 1998, 17; Craig, Kraft, and du Plessis 1998; Gottelmann-Duret and Hogan 1998). These systems have met with mixed success, partly because they rely on sophisticated tracking systems that are not available in many countries.

Forced Transfer. There have also been attempts to redress deployment imbalances by forcing teachers to work in rural areas (Gottelmann-Duret and Hogan 1998). However, this may not be an effective policy, as it may damage teacher morale, leading to a high turnover of staff and to an overrepresentation of young and inexperienced staff in rural areas. These challenges are exacerbated by delays in deployment and other inefficiencies in resource distribution to rural secondary schools (Gaynor 1998; Hedges 2002; Garson 1998).

In South Africa, an effort to encourage the redeployment of teachers to poorer rural areas failed badly. The predominately female teaching force was not mobile enough to respond to school staffing needs. When strongly encouraged to relocate, large numbers of key science and math teachers left teaching. As a consequence, there was a significant drop in the number of school leavers choosing to apply to colleges of education because teaching was seen as an embattled profession "where one is likely to be redeployed or moved" (Samuel 2002). Similarly in Uganda, recent redeployments of secondary teachers have only been partly successful, as many teachers simply did not move.

Local Recruitment of Student Teachers. An alternative strategy may be to recruit student teachers from within each region in the hope that personal history and family connections will entice them to return to teach in their home area after they attain their teacher certification. This strategy often involves locating teacher education colleges in these rural areas. The presumption is that those with family roots in rural areas may be more willing to return to and remain in rural settings (Craig, Kraft, and du Plessis 1998). Where teachers' salaries are inadequate, working close to one's extended family may provide some level of financial support and subsidy. For example, in Uganda services such as retirement pensions, unemployment benefits, housing, and other social services are often provided by the extended family. This strategy has led some countries to lower entry qualifications for students from rural areas (Lewin 2002). However, teachers from a rural background may not want to return to their roots, and may have entered teacher education in the first place in an attempt to move to urban areas (Rust and Dalin 1990; Azam 2001).

It is clear that teacher deployment is an important issue, for reasons of efficiency and equity and for dealing with a teaching force of mixed qualifications. There is a clear argument for teachers being better matched to their school placements by taking into account age, sex, teaching background, interests, and cultural and socioeconomic background (Macdonald 1999). It is also clear that deployment is difficult to manage and that there may be resistance to attempts to implement deployment on an equitable basis.

While many teachers may fail to report for unpopular postings, this is not true for all teachers. Some insight can be gained by analysis of the teachers who take up the unpopular posts. Hedges (2002) reports that those posted together with another teacher were more likely

to report to their posting, suggesting that the company of a colleague helped a teacher arriving in an unfamiliar area. In addition, Hedges reports that those from poorer backgrounds were more likely to value the relative security of the teaching profession and take up their postings. These findings suggest that some gains in the implementation of deployment policy could be made through attention to the details of the posting system and in the selection of student teachers.

It is also possible that compulsory transfers could be used to redistribute teachers. In Botswana, compulsory transfer was successfully implemented with the help of certain compensatory measures such as transportation and other special allowances. Mandatory transfers are more difficult to achieve where funds to provide incentives are lacking. Such incentives can include accelerated promotion prospects, disturbance allowances, free transport, and improved accommodation (Gottelmann-Duret and Hogan 1998).

Finally, it seems clear that deployment must be seen in terms of an ongoing program, supported with information systems and structures appropriate to the task. As Penrose notes, where redistribution of teachers is funded as a one-off project, it may fail to be embedded in "normal" institutional structures (Penrose 1998a).

Too much of the literature on secondary school teacher shortages has focused on clarifying the dimensions of the problem rather than formulating and testing alternative solutions.

Teacher Remuneration

Teachers' salaries form the biggest proportion of education spending in African countries (UNESCO 1998) and, in some cases, also account for the largest part of the public service pay bill. Teachers' pay often accounts for up to four-fifths of education spending (Caillods 2001). Governments face a dilemma. On the one hand, raising salaries is a powerful way to attract more and better qualified teachers. Low pay may result in poorly qualified and disinterested teachers, reducing the quality and impact of the education system. On the other hand, the large number of teachers means that even modest changes to teachers' level of compensation can have dramatic financial consequences for the government (Macdonald 1999).

UNESCO and ADEA data indicate that in many countries secondary teachers are paid considerably above the per capita GNP but, as indicated in tables 2.10 and 2.11, their real earning power has dropped more often than it has increased in the last two decades (see also UNESCO 1998b; Crouch and Lewin 2000).

Some have argued that teachers' salaries are high enough, pointing to the ease with which temporary teachers in various countries are recruited at much lower salaries than their tenured counterparts. For example, when Senegal recruited teachers at one-third the salary of tenured teachers, there were 28 candidates for every opening. In Mali's community-based schools and Chad's spontaneous schools, the communities pay the teachers. These teachers are paid about half the salary of public school teachers and do not enjoy other advantages of being civil servants (Mingat 1998). However, this is also an unreliable indicator of the sustainability of teachers' salaries. In a context of high unemployment, people may accept jobs that do not pay a living wage in the hope of progression to a better job or of supplementing income from other sources.

Table 2.10. Average Secondary Teacher Salary and Benefits
(percentage of per capita GNP)

Country	1990	1991	1992	1993	1994	1995	1996
Botswana	—	317.6	—	—	—	—	—
Burundi	1082	997.3	894.9	—	—	—	—
Chad	—	—	—	—	1333	—	1013
Ethiopia	1613	—	—	—	—	—	—
The Gambia	318	251.1	—	—	—	—	—
Guinea	—	—	764.9	—	—	—	—
Lesotho	—	—	—	—	1015	—	—
Mauritania	—	—	—	884.9	—	—	—
Swaziland	—	—	—	368.3	391.2	—	—
Togo	979.7	—	—	—	1202	—	—
Uganda	—	—	—	—	411.8	—	—
Zimbabwe	1011	889.3	976.6	—	—	825.3	953.8

Source: World Bank (2002c).

Teachers' organizations assert that salary levels are low, often declining in real terms and relative to remuneration in other professions. Where teacher salaries have been eroded, this has often pushed teachers into second jobs or private tutoring (Gaynor 1994; VSO 2002). One common consequence is high teacher absenteeism, as teachers supplement their income with second and third jobs (Chapman 1994). Ample research has indicated that when teachers' standard of living is so low that their basic needs are not met, teachers do not give priority to their teaching responsibilities. In these circumstances, instructional quality suffers (Daun 1997).

A further difficulty arises when salaries are paid late or the payment system is inefficient or unreliable. Late payment of salaries imposes hardship on teachers. In Ghana, teachers reported frequent delays of between two and nine months (Hedges 2002). Penrose (1998b) reported that in Tanzania 53 percent of state teachers claimed that their salaries were never paid on time. Late payment causes particular hardship for teachers posted to remote areas, where they are farthest from their families and support networks (Hedges 2002). Rectifying problems with payments and allowances may involve more teacher absence while they take long and frustrating visits to district offices, further reducing motivation. Late and unreliable pay also undermines the development of professional attitudes among teachers. Osuala's research in Nigeria showed that tutors' lateness for class or irregular attendance could not be disciplined when they were unpaid (Monk 1999). Increasing the reliability of salary payments seems to offer a cost-effective method of enhancing teachers' working conditions. Countries such as Botswana have had some success in addressing this issue through the spread of banking services and the institution of special "pay days" when teachers are permitted to collect their salaries from their banks (Gottelmann-Duret and Hogan 1998).

The presence of a differentiated salary structure is perhaps as important as the starting salary level in the motivation and retention of teachers. There is a danger of attracting teachers with higher starting salaries, only to have these salaries stagnate by mid-career

Table 2.11. Average Secondary Teacher Remuneration
(multiple of income per capita)

Country	1980	1985	1990	MRY
Botswana	6.0	6.5	3.5	3.4
Burkina Faso	16.3	7.6	8.7	9.5
Burundi	22.9	12.0	11.1	7.9
Cape Verde	—	4.7	—	—
Central African Rep.	9.2	9.7	—	6.7
Chad	—	—	8.9	13.0
Comoros	4.9	7.6	—	7.0
Congo	5.3	—	—	—
Côte d'Ivoire	13.3	11.9	—	9.5
Ethiopia	24.3	—	22.2	15.7
Gabon	—	—	—	5.3
The Gambia	8.1	—	3.3	1.8
Ghana	1.8	1.3	2.8	2.9
Guinea	11.9	—	3.4	7.1
Guinea-Bissau	9.3	—	—	—
Lesotho	8.3	8.1	8.9	9.1
Liberia	2.0	—	—	—
Madagascar	5.9	4.3	4.4	4.0
Malawi	21.0	11.4	11.7	13.7
Mali	—	—	—	3.5
Mauritania	19.4	—	13.5	12.5
Mauritius	4.6	—	2.7	2.2
Mozambique	—	—	14.6	12.4
Niger	—	—	—	5.8
Rwanda	9.4	—	5.5	—
São Tomé and Principe	2.2	—	—	—
Senegal	11.3	—	—	10.4
South Africa	—	—	—	4.4
Swaziland	5.3	5.0	5.7	4.4
Seychelles	3.7	—	2.1	1.2
Tanzania	13.1	—	10.0	
Togo	10.1	8.5	9.4	8.9
Zambia	4.8	6.1	—	—
Zimbabwe	21.5	9.5	9.3	9.3

Note: Average emoluments of primary and secondary teachers are expressed in constant 1990 U.S. dollars and as a multiple of GNP per capita for the most recent year (MRY). Caution should be exercised when interpreting average teachers' salaries since, in several cases, data refer to expenditure on total emoluments, i.e., emoluments for administrative staff, teaching staff, and other personnel. The figures are computed by dividing public recurrent expenditures allocated to teachers' emoluments on primary and secondary education by the number of teachers in each level of education. Data on GNP per capita used for the calculation are from the World Bank.
Source: ADEA (1999, 2003).

(Macdonald 1999). In most countries, variations in teachers' pay are still based on seniority and qualifications. Few systems use teacher pay to reward quality of performance. A growing trend in OECD countries and some others (such as the Dominican Republic) is to experiment with performance-related or merit-based pay for teachers.

Teacher Efficiency

Given the constant constraints on funding, ministries are naturally concerned with the efficiency of the secondary education system. There are two main areas where teacher efficiency could be improved. The first is in teachers' time on task. The amount of teaching that a secondary teacher is expected to do varies widely among countries, but teaching contact hours in some Sub-Saharan African countries are very low by international standards (Lewin 2002). In Tanzania, teachers in state schools taught only 17 periods per week, while their colleagues in private schools taught 21 periods (Penrose 1998b). In Senegal, the expected load is 18 periods per week, while in Madagascar it is 15 hours at lower secondary and 13 at upper secondary as indicated in Table 2.12. By comparison, teachers in Alberta, Canada, are assigned classes for an average of 27 hours per week (ATA 1997), teachers in Ireland are required to teach 22.5 hours per week, and secondary teachers in Lebanon teach 20 hours per week.

A second area where efficiency could be improved is in the student:teacher ratio. Where enrolment is low class sizes may be small, and the teacher cost is then spread over a smaller number of students. This is a particular problem for small rural schools, which may be unable to attract enough students to form viable classes. Lewin (2002) has pointed to the low student:teacher ratios that often pertain in Uganda and the need to increase them in order to improve efficiency and allow more learners to attend secondary education within the same resource availability.

Policy Considerations Regarding Teacher Remuneration

It is clear that teacher pay is the most significant cost in the secondary education system, and so acts as a practical limit to the numbers that can be enrolled. At the same time, it is obvious that if teacher pay falls below a living wage, teachers will either leave the profession or remain on the payroll while devoting their energies to other tasks.

Countries in Sub-Saharan Africa, therefore, are faced with difficult tradeoffs between number of teachers and level of teachers' pay. Determining the optimum salary is not straightforward. Low salary has a detrimental effect on teacher morale and work practices, but

Table 2.12. Madagascar: Time Use of Teachers in Secondary Schools, 1998

	Lower		Upper	
Workload	**Public**	**Private**	**Public**	**Private**
Weekly teaching workload per teacher (hours)	15	19	13	18
Teachers teaching two subjects or more (%)	33	45	4	30

Source: Caillods (2001), pp. 147–48.

there is little to suggest that raising salaries alone has a significant impact on the quality of teaching (World Bank 1995). Although increased salary on its own may not improve teaching, increases may be used to attract a higher caliber of entrant into the profession or facilitate changes in work practices that would otherwise not be possible.

While countries have sought alternative, low-cost incentives as means of rewarding and motivating teachers (such as allowances for teaching in remote areas or public recognition), these have met with limited success (Kemmerer 1990; Chapman, Snyder, and Burchfield 1993). In the final analysis, teachers need to be paid a living wage in a timely manner.

One means of easing the tension between numbers and costs would be to increase the efficiency of the system. Existing systems vary, but there is evidence that in some countries teachers teach for relatively few hours, sometimes to quite small classes. However, there is also a potentially fraught relationship between the introduction of reforms intended to improve teacher effectiveness and overloading teachers who may have poor pay and morale in a context where existing and emerging demands already put considerable strain on them (Alvarez, Gillies, and Bradsher 2003).

Teacher Education

In the examination of efficiency, student:teacher ratios, and contact hours, it is easy to lose sight of the teacher as an individual professional. Yet, it is clear that the quality of educational outcomes depends heavily on the quality of the individual teacher. Recent research in the United States, for example, has reported that teacher quality is the single most important variable in determining student achievement (AFT 2000). It is no surprise, then, that improvements in teacher education are frequently suggested as solutions to educational problems.

The quality of teachers is likely to assume even greater importance in the future, as changing needs place greater pressures on teachers. Increased enrolment will mean larger classes for many teachers. Furthermore, secondary students may have different characteristics in the future than they did in the past, when access was restricted to the more academically able. New entrants may not have adequate mastery of the language of instruction or sufficient numeracy, and may have only a rudimentary grasp of scientific thinking (Lewin 2002).

> It is not clear that the considerable investment in teacher preparation has yielded the anticipated results. There is a need for broader and bolder thinking about alternative modalities for teacher preparation.

Simultaneously, teachers are increasingly expected to engage with a range of new challenges. They may be expected, for example, to avoid administering physical punishments to students (still commonplace in Sub-Saharan Africa), create a collaborative classroom climate, promote analytical thinking, encourage good citizenship and gender-fair attitudes, deal with HIV/AIDS-related issues, and incorporate ICT into their work. They may also be expected to engage with parents and the local community and to build collaborative relationships with them (Condy 1998). In addition, teachers are increasingly required to employ constructivist teaching approaches, a shift in the teaching and learning paradigm that will require that

teachers learn a much more complex and varied repertoire of teaching skills than has been necessary in the past.

While preservice teacher education is the most widely used intervention to raise instructional quality, it is also among the most expensive. Not only are the direct costs of such courses high but teachers, once trained often receive higher salaries, raising the long-term recurrent cost of education (Lockheed and Verspoor 1991; Chapman and Snyder 1992; Chapman, Chen, and Postiglione 2000).

Even more seriously, evidence of the positive impact of preservice teacher education initiatives has been disappointing. Apart from small-scale projects, the literature provides little evidence of teacher education functioning as an effective agent for educational change in Sub-Saharan Africa. Research in Botswana found that classroom instructional practices of teachers with more preservice preparation were not very different from those with less (Chapman and Snyder 1992). Researchers in South Africa, Nigeria, and Kenya have described the difficulty of moving secondary teachers from a teacher-centered to a student-centered classroom approach. Part of the reason for teachers' resistance to new methods is the change these methods imply in the culturally accepted relationship between teachers and students (Ware 1992).

In more recent research, Akyeampong and Lewin (2002) analyzed the attitudes of student teachers. Their data, based on primary and junior secondary teachers in Ghana, provide little evidence that teacher education is having a lasting impact on teacher behavior. For instance, students beginning teacher education were less likely to believe that caning is necessary to maintain discipline than those finishing the course or those newly qualified. Similarly, belief in the status of teaching as a profession seemed to decline during preservice teacher preparation and in the early years of experience. These findings call into question the impact of some of the existing preservice teacher education programs. In addition, there is generally relatively little provision of inservice support for secondary teachers, thus neglecting a potentially powerful way of strengthening teaching skills, introducing reform, developing professional identity, and increasing teacher morale.

Weaknesses in Existing Teacher Education Provision

Teacher preparation programs face a series of challenges. Students in colleges of education may have very poor knowledge of the subjects they are expected to teach, especially where the status of teaching is low and the educational standards of entrants to teacher preparation courses are poor (Gaynor 1994). In some cases, subject content takes up to 80 percent of the teacher preparation time (Lewin 2000). International research has shown that there is a positive correlation between teachers' knowledge of their subject and their impact in the classroom. Researchers in the United States have found that in many cases teachers' lack of understanding of the principles of their subject may impede good teaching. This is especially true in subjects like mathematics. However, teachers may acquire the appropriate understanding through subject-specific pedagogical courses more effectively than through higher academic qualifications in their subject (Wilson, Floden, and Ferrini-Mundy 2001).

Student teachers' own learning may have been heavily centred on rote learning, leaving them with only one model of teaching and an insufficient understanding of the conceptual underpinnings or practice of new paradigms of teaching and learning. In addition to subject matter, teacher education often concentrates on the history, psychology, and sociology of

education, to the detriment of pedagogy or practical experience of classrooms, leaving students ill-prepared for classroom teaching (Lewin 2000). Where numbers are high in teacher preparation, there is increased pressure on teacher educators to use lecture methods themselves, rather than modeling the alternatives that they hope to encourage. Without adequate pedagogical development, teachers practice the teaching approaches they experienced as students, further reinforcing the dominance of their own experience of school as a model for their teaching. This pattern of repeating their own experience is exacerbated in situations where the student teachers have a low level of education, making it difficult for them to come to grips with the real problems of teaching and learning (Condy 1998).

Teaching is often conducted in a medium of instruction that is not a mother tongue of the students. Many problems of learning in different subjects may be associated with lack of language fluency. Student teachers may require additional language training to enable them to function effectively in the language of instruction (Lewin 2000).

Teacher education may do little to prepare teachers for leadership positions in the community. In Ghana, colleges of education often impose strict discipline and engage students in college chores, like carrying water and weeding compounds, under supervision of prefects. The colleges may also use punishments and sanctions to control social gatherings and classes. Akyeampong and Stephens (2002) argue that such authoritarian structures are likely to send signals about teacher role identity that shape their actions as teachers in later life.

One of the core tools in developing the quality of teaching is teacher engagement in structured teaching practice and school-based studies. Too often, unfortunately, teaching experience in teacher education programs is disconnected from the theoretical components of training (Wilson, Floden, and Ferrini-Mundy 2001). The school-based studies and student teaching components of teacher education courses should be integrated with coursework over the entire period of the preservice preparation and not just relegated to the last few weeks of the last year, which is frequently the case. According to Ware, "the student teachers need to experience the reality of the classroom as soon as, and as frequently as, possible" (Ware 1992). The problems of effective teaching practice may be further compounded where links between the schools and teachers' colleges are weak. For example, in countries such as Namibia, Tanzania, and Zimbabwe, different ministries are responsible for teacher education and for the public schools (Gaynor 1998).

A further barrier to improvement of teacher education may arise where the state has little control over teacher education. The extent of state control of the teacher education curriculum varies (Gaynor 1998). Even where the government controls colleges of teacher education, there may be little control over the quality of the teacher educators. In some cases, teacher educators are secondary teachers who have been transferred to teacher education as a promotion, although there is little to ensure that they have solid pedagogical knowledge, appropriate teaching skills, or the ability to act as change agents in education. In other cases, teacher educators are subject specialists, with no experience at all in teaching and no knowledge of the realities of secondary schools or classrooms.

Few interventions have yielded dramatic improvements. There are no magic bullets. The quality of secondary teachers and teaching is influenced by many small factors rather than a few large ones.

Policy Interventions to Reduce Attrition

School-based Teacher Education. Some countries are experimenting with systems that put more emphasis on in-school teacher education (UNESCO Higher Education Division 2002). It is argued that this provides less expensive teacher education that is more relevant to classroom needs. In addition, student teachers function as teachers during their training. Most of the experiments with school-based teacher education have been in the preparation of primary teachers, where this approach has been used to train unqualified (but experienced) teachers and as a form of initial teacher preparation. Although such programs may offer very effective pedagogic training, they may be weaker in developing student teachers' basic subject knowledge (Kunje 2002). This may be a significant problem for the preparation of secondary teachers, where subject knowledge is a more important component of the overall teacher education.

Inservice Professional Development and Distance Education. Inservice professional development for secondary teachers is a largely neglected area and should be strengthened. Local groupings of teachers working together to learn (learning communities or communities of practice), share experiences, reflect upon and explore ways of strengthening their practice is a promising alternative to large-scale workshops that have little impact on teachers' practice. One option of inservice delivery that has potential—on the basis of cost savings and reaching geographically separated beneficiaries—is distance education. Distance learning may be a less expensive option than study leave, and it permits teachers to continue to teach instead of taking them out of the classroom (Ware 1992). To be effective, however, distance learning requires considerable follow-through and support (in school-based workshops, seminars, and other means of sharing experiential knowledge and mutual support). Conceiving of it as a cheap delivery option for teacher training delivery is misplaced. Online technologies offer some alternatives that may allow for dialogue at a distance. However, these require a high degree of computer literacy and internet connectivity, both of which may be in short supply among untrained teachers in remote areas. Such limitations may constrain the value of distance education for teacher development (Ware 1992).

Continuing Professional Development. In an era of changing demands on teachers, it is inappropriate to structure teacher development as a single period of teacher education at the start of a career (Feiman-Nemser 2001). One of the potentially valuable initiatives in ongoing teacher development is the involvement of experienced teachers in the design and delivery of courses at the school (or cluster of schools) level. This has the double benefit of ensuring that the courses are relevant and practical, while also providing development opportunities for the experienced teachers (Gaynor 1998; Condy 1998; Ware 1992; Monk 1999). However, despite enthusiastic claims for inservice teacher education, the impact of many schemes has been disappointing. There are numerous examples of projects involving short interventions that showed little sustained change in classroom teaching. It seems clear that training aimed at making a change in teacher methods must provide opportunities for the teacher to practice with such methods over a reasonable period (Monk 1999).

Induction and Mentoring Programs. Induction initiatives for new teachers have a useful and necessary role to play in developing effective teachers. In far too many schools, new teachers must "sink or swim," learning the ropes on their own, but at a high cost in terms of lost ideals, lower expectations, lower morale, the lost opportunity to consolidate good practices and address poor ones, and teacher attrition. Halliday (1999) emphasizes that the

enthusiasm and commitment of newly appointed teachers, particularly those straight from colleges of education, must be captured. The first years are crucial to the professional development of a teacher, he argues. Experienced staff and, particularly, school principals have a key role in assisting and mentoring new teachers so that they improve and consolidate their teaching and classroom management skills. Induction and mentoring programs show promise in these areas.

Teaching as a Career: Morale, Development, and Support

While the demands on teachers are increasing, there is mounting evidence that teachers' morale and status are falling (VSO 2002; Gaynor 1998; Towse and others 2002). Declining morale has serious implications for recruitment and retention of teachers as well as for teacher performance. The perception that the status of teachers in society is declining is encouraged by the use of shorter teacher training programs and lowered entry qualifications for teaching (Gaynor 1998). Qualified teachers believe that their work is diminished in the eyes of the public by the employment of unqualified people who are also termed teachers (Halliday 1999). The combination of increased demands and falling status does not augur well for teacher recruitment or retention. A study in Awanbor in Nigeria reported that an increasingly materialistic value system in that country has devalued teaching as a career choice (Kyriacou, Hultgren, and Stephens 1999).

While pay and conditions are important contributors to motivation, there is evidence that other issues are almost as important as the actual level of remuneration (VSO 2002). Motivation is highly related to career-path projections and opportunities for progression. However, promotion opportunities within the profession are often limited. As a result, many skilled teachers leave the classroom, while others become demotivated by the lack of status and recognition (VSO 2002). In many countries, teachers are demoralized by the lack of transparency and information in the promotion process (Gaynor 1998).

Student performance and positive relationships with students also motivate teachers. In the VSO study (2002) of teacher motivation, student performance was reported in all countries as a major contributor to teacher morale. In some cases, teachers reported pressure to promote students unprepared for the next level. Consequently, real student success was diminished in the following grades, reducing chances of high teacher morale related to student performance. In addition, constantly reassigning teachers to different classes makes it more difficult for teachers to build a relationship with students or feel a responsibility for them (IEQ 2000).

These studies suggest that cost-effective improvements in morale could be achieved by measures such as the introduction of a career structure based on professional development (Towse and others 2002), a distinctive status for qualified teachers (Halliday 1999), greater transparency in promotions, and greater stability in posting.

Ongoing Professional Support and Supervision

Teachers need both support and supervision throughout their careers. It would be naïve to assume that teachers can go through a preservice program and then perform well for the

remainder of their careers without further professional development. Support for teachers can take a variety of forms, including access to resources, inservice courses, and peer groups. A key teacher support missing in many school systems is the ongoing opportunity to talk with other professionals regarding personal challenges and experiences in the classroom. Such practice has been successful with principals and other promoted staff in mentoring beginning teachers in an induction stage so that they improve their teaching and classroom management abilities in the first years of teaching (Halliday 1999).

Parallel with teacher support, there is also a need for teacher supervision and monitoring. There needs to be a system to help teachers develop good practice and to ensure that teachers are in place and teaching the required course materials. However, in many African countries such inspection systems focus on fault-finding rather than support. In some cases, supervisors or inspectors lack the resources to travel to schools. Supervision visits can be infrequent and haphazard (VSO 2002).

Teachers' Unions

Teachers' unions have become important professional and political forces in many Sub-Saharan African countries in shaping the conditions of teachers' working lives. They operate largely as trade unions, with the goal of protecting interests and promoting cooperation among teachers (Farrell and Oliveira 1993). However, in some countries teachers' unions have broadened their interests and are engaging as partners with governments in educational quality improvement initiatives. This is often accomplished through professional development activities for union members. In doing so, unions provide a mechanism through which teachers can be more effectively represented and consulted on the issues, programs, and policies that affect them (Farrell and Oliveira 1993).

Governance

Good governance is an issue that cuts across teacher and principal recruitment, retention, and retraining. At one level, good governance is about ensuring that the education system can be led effectively and transparently. Good governance is also concerned with fighting corruption that can occur at school, district, or central levels, with corrosive effects on the entire system (Alvarez, Gillies, and Bradsher 2003).

Management of the Education System

There is evidence of recurring weakness in the management of education systems in Sub-Saharan Africa (Mingat 1998), with the following difficulties frequently reported.

- Late payment of salaries: The scale of delayed payments can be enormous. In Malawi teachers who were transferred to new jobs reported that it took as long as three months before their pay was sent to their new locations (Gottelmann-Duret and Hogan 1998). A study in Uganda showed that prior to 1996 only about 26 percent of direct government resources actually reached schools on time (Murphy 2002).

- Red tape and corruption: The bureaucracy involved in receiving entitlements and the suspicion that there may be corruption in the process are great frustrations to teachers (VSO 2002).
- Shortage of staffing: Staffing levels may be set centrally but are often not implemented on the ground, leaving schools with insufficient numbers of teachers. (Gottelmann-Duret and Hogan 1998).
- Questionable promotion procedures: Teachers often feel that the allocation of promotional posts is biased or corrupt (Gaynor 1998; Gottelmann-Duret and Hogan 1998).

The solutions to these management issues are relatively clear and comparatively inexpensive. The efficient management of payments and other disbursements to schools can be enhanced with the managerial will to improve it, along with adequate and accurate information as a basis for improved decisionmaking. Transparency may also help. In Uganda, after the Ministry of Education, districts, and schools began to publish details of the resources allocated, the amount reaching schools increased to over 90 percent (Murphy 2002). Similar strategies may be used to develop rational promotion systems. In South Africa, for example, transparency of the promotion system has been enhanced through the participation of the school board and teachers' union representatives in the process.

Decentralization. Virtually every country in Africa has formulated official policies endorsing some level of decentralization, though there is considerable variation in the form that it takes (Rugh and Bossert 1998; Bray 1996; Rondinelli and Puma 1995; Hannaway 1995; Hannaway and Carnoy 1993). Advocates argue that decentralization shifts decisionmaking to those closer to the community and school, leading to decisions that are more responsive to local conditions and needs. Opponents suggest that decentralizing authority and responsibility may only shift the same problems to levels of the system less well prepared to cope with them, and that decentralizing management invites corruption and inefficiency (Chapman 2003). While the educational impacts of decentralization may not yet be clear, one byproduct of decentralization is likely to be an increased expectation that principals will play a greater role in instructional supervision, community relations, and school management—activities for which many have never been trained.

Management Information Systems. Many aspects of the management of education depend on the availability of accurate and timely information about schools' needs. Effective deployment depends heavily on relevant, accurate, and timely data on needs of the schools and on teacher characteristics. The absence of such data and difficulties in using them effectively when they do exist are major impediments to effective teacher assignment in many countries (Gottelmann-Duret and Hogan 1998; Chapman, Snyder, and Burchfield 1993; Hallak 1990).

Corruption and Unprofessional Behavior

One of the most insidious problems facing the development of secondary education across Sub-Saharan Africa is pervasive corruption. The World Bank (2002a) has identified corruption as the single greatest obstacle to economic and social development. Education systems across Africa are particularly vulnerable to corruption, largely for four reasons:

- As one of the few governmental agencies with a high level of representation all the way down to the community level, education is an attractive structure for patronage.
- Decisions perceived to have significant consequences for people's lives are made by "gatekeepers" who control decisions at each of those levels.
- A considerable percentage of education funds are spent in small amounts across many scattered sites, most of which have weak monitoring systems.
- There are few meaningful sanctions for teachers and principals who engage in petty corruption. Indeed, in some countries there is sympathy for teachers who require their students to pay them for private tutoring or charge a "paper fee" for taking a required test—even from those victimized—because of the widespread recognition of the difficult financial circumstances that teachers face.

Corruption has damaging consequences in that resources are wasted, young people are denied the education they should receive, and those unable to afford bribes are denied access to schooling. A generation of students comes to believe that personal effort and merit do not count and that success comes through manipulation, favoritism, and bribery (Chapman 2003). Figure 2.2 illustrates common forms of corruption at the district, school, and classroom levels.

Figure 2.3 contains a newspaper report of an incident of district and school level corruption in Uganda.

Tackling corruption is a difficult task, but the actions required are well known and documented. Strategies for responding to corruption in education have been offered by IIEP (2001a, 2001b), Poisson and Hallak (2002), Heynemann (2002), and Chapman (2003).

Figure 2.2. Illustration of Common Forms of Corruption at District, School, and Classroom Levels

Level of Activity	Type of Behavior
Region or district	Favoritism in personnel appointments (e.g., principals and teachers)
	The overlooking of school violations during inspector visits in return for bribes or favors
School level	Ghost teachers
	Diversion of school fees
	Inflation of school enrolment data (in countries in which central ministry funds are allocated to schools on the basis of enrolment)
	Imposition of unauthorized fees
	Diversion of central Ministry of Education funds allocated to schools
	Diversion of monies in revolving textbook fund
	Diversion of community contributions
Classroom or teacher level	Siphoning of school supplies and textbooks to local market
	Selling of test scores and course grades
	Selling of grade changes
	Selling of grade-to-grade promotion
	Selling of admissions (especially to higher education)
	Creation of the necessity for private tutoring
	Teachers' persistent absenteeism to accommodate other income-producing work

Source: Adapted from Chapman (2003).

Figure 2.3. Tackling Corruption and Malpractice: An Extract from a Ugandan Newspaper Describing the Jailing of an Education Official

The New Vision, Wednesday, August 20, 2003 **NATIONAL NEWS 3**

Kiboga official jailed over ghost teachers

By Maurice Okore

KIBOGA District Service Commission secretary John Sebigaju has been remanded in Luzira Prisons in connection with 'ghost' primary school teachers in the district.

Sebigaju, 27, who is also in charge of education in the district was remanded yesterday by the Buganda Road Court Magistrate Olive Kazaarwe, after he pleaded not guilty to abuse of office and forgery of academic transcripts.

Kazaarwe advised Sebigaju to apply for bail through the High Court because the offence he was charged with was above her jurisdiction. He will appear in court again on September 4.

According to State Prosecutor Patricia Cingtho, Sebigaju presented to the public service ministry a payroll which included 50 unexisting teachers on July 3, 2003.

She said the suspect also presented forged academic documents for the 'ghost' teachers.

Herbert Ariko, a personnel officer at the Ministry, received the payroll and the transcripts, prosecution said, and added that that the forged documents included five Grade III teacher certificates purportedly offered by the Uganda National Examination Board, four diploma transcripts offered by the former Institute of Teacher Education Kyambogo and 20 'O' level certificates.

On his arrest, Sebigaju allegedly claimed that the academic transcripts had been issued to him by the Kiboga chief administrative officer.

Source: Adapted from Chapman (2003).

One of the key actions should be the development of codes of practice so that appropriate behaviors are clearly defined. A second is the introduction of efficient enforcement procedures to take action against misbehavior. A third is increased transparency, both to managers and the community. Finally, the public is increasingly recognized as an agent in preventing corrupt practices. In many countries, advertising campaigns have made the public aware of the standards expected of public servants and given the public a channel for complaints (Commonwealth Secretariat 2000).

Unprofessional Behavior by Teachers. Teachers and principals may engage in unprofessional behavior. There is a need for efficient systems to detect such behavior and react to it. Some of the kinds of misbehavior that have been reported are financial, ranging from charging students for compulsory "extra tuition" to "ghost teachers"—who appear on the payroll but do not exist (Gaynor 1998) and "remote teaching," the practice of writing notes on the board or using a class prefect to read out of a textbook while the teacher is elsewhere (VSO 2002). Eliminating such practices is closely tied to teachers' pay. Where teachers' pay is very poor, they may rely on other sources of income to survive (Gottelmann-Duret and Hogan 1998). However, there is little to suggest that raising teacher pay will automatically reduce teacher engagement in other commercial activities.

Other misbehavior issues highlighted in the literature include drunkenness, bullying, excessive corporal punishment, and sexual relations with students. Preliminary research in junior secondary schools in Zimbabwe found that male teachers, in particular, have engaged in violent and sexual intimidation and abuse of girls in a manner that became institutionalized and considered "normal." Schools and the education system were complicit in this abuse by failing to discipline perpetrators and by sustaining an authoritarian culture that facilitated it (Leach and Machakanja with Mandoga 2000).

Another study has pointed out the potential for sexual interactions between students and teachers (Samuel and Stephens 2000). Failure to protect learners from violence and abuse and failure to create a conducive learning environment may be systemic, such that eliminating abuse would require a significant change in school culture and attitudes. On the whole

and despite the rhetoric, there has been little sign of systematic mainstreaming of gender awareness in education (FAWE 2000, 2002).

Gender

One of the themes running through this work is the question of gender, although there is a marked paucity of literature specifically focused on this critical issue. Across Sub-Saharan Africa, the enrolment and retention of girls in school, particularly at the secondary level, is lower than that of boys. The under-representation of girls tends to be greatest in rural areas and among the most disadvantaged communities. While a number of measures can be shown to have an impact on the retention of girls in school, one of the important factors is the presence of female teachers (Bernard 2002). Similarly, the presence of females in positions of responsibility and leadership in schools is an important factor in creating positive female role models. Many girls in Africa are forced to drop out of school because school administrators have been insensitive to gender issues (FAWE 2002). Despite the importance of female teachers, available data suggest that there is considerable opportunity to improve the representation of women in secondary teaching (Beoku-Betts and Logan 1998). With notable exceptions, the percentage of female teachers at secondary level across Sub-Saharan Africa is low. This is shown in Table 2.13.

While the proportion of females in the teaching force at secondary level is above 40 percent in Sudan, Seychelles, Mauritius, Lesotho, South Africa, Botswana, and Reunion, it remains below 20 percent in Chad, Congo, Eritrea, Ethiopia, Mauritania, Mozambique, and Togo. Moreover, there has not been much increase in the proportion of female teachers at secondary level over the last 30 years, suggesting little progress in attracting and retaining female secondary teachers. Nevertheless, it is important to note that those female teachers who are employed in secondary schools are more likely to be trained than their male counterparts, as indicated in Table 2.14.

The shortage of female teachers is not due entirely to difficulties in initial recruiting. The research suggests that the attrition of female teachers may be greater than male teachers. There is considerable anecdotal data suggesting why female teachers fail to enter or persist in teaching. Female teachers may be reluctant to move to rural areas, perceiving these areas as offering little social opportunity and lower levels of personal safety. This results in a greater proportion of male teachers in schools where female role models would be of the most importance. Female teachers may also be driven from the teaching force by relocation policies, especially if relocation means moving away from their husbands and families.

The issue of gender also has implications for managers. There is a need for school leaders to develop an environment that is safe for female students, encourages retention, and strives for gender equality. In doing so, it will be increasingly important that females are adequately represented among school principals. Some countries—such as Uganda—have already begun to use quota systems to increase the proportion of female school principals. There are similar implications for teacher education. It is important that the teacher training institutions model gender-fair practices and develop appropriate gender attitudes in all teachers. In doing so, it is particularly important that females be fairly represented among the staff of teacher education institutions.

Table 2.13. Females as a Percentage of Secondary School Teachers

Country	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995	1996	1997
Botswana	29	30	37	40	40	40	40	43	44	43	—	—
Burundi	—	21	—	21	21	21	20	—	—	—	—	—
Cameroon	—	20	—	22	—	—	—	—	—	—	—	—
Cape Verde	—	—	—	—	—	—	—	—	—	—	—	38
Central African Rep	—	—	16	—	—	—	—	—	—	—	—	—
Chad	—	—	—	—	—	—	—	—	4	5	4	—
Comoros	32	—	20	—	—	—	—	—	—	—	—	—
Congo	22	11	—	—	—	—	—	—	—	16	—	—
Congo, DR	—	—	—	—	—	14	15	17	—	—	—	—
Djibouti	—	39	—	—	—	—	—	—	—	—	—	—
Equatorial Guinea	—	11	—	—	—	—	—	11	—	—	—	—
Eritrea	—	—	—	—	—	—	13	12	12	12	14	—
Ethiopia	16	—	—	—	10	10	10	10	10	10	—	—
Gabon	28	—	24	22	—	—	—	—	18	18	—	—
The Gambia	26	26	25	—	—	—	19	16	16	17	—	—
Ghana	17	22	21	26	—	—	—	—	—	—	—	—
Guinea	—	—	—	7	12	—	13	—	—	—	—	—
Guinea-Bissau	—	—	21	—	—	—	—	—	—	—	—	—
Kenya	28	—	—	36	—	—	—	—	—	—	—	—
Lesotho	45	—	—	—	—	—	—	50	—	—	53	—
Liberia	19	—	—	—	—	—	—	—	—	—	—	—
Mali	17	—	—	—	14	—	—	—	—	—	—	—
Mauritania	—	—	—	—	—	—	—	11	8	—	—	—
Mauritius	—	—	—	—	—	—	—	—	—	—	45	—
Mozambique	—	—	—	21	—	—	—	20	18	17	—	—
Namibia	—	—	—	—	—	—	46	—	—	—	—	—
Niger	22	23	21	—	18	18	—	—	—	21	21	—
Nigeria	18	—	29	28	33	32	34	35	36	—	—	—
Reunion	—	—	—	—	—	—	—	—	—	46	—	—
Rwanda	—	—	—	—	20	21	—	—	—	—	—	—
Seychelles	62	58	37	29	—	—	—	52	50	48	50	—
Sierra Leone	28	35	—	—	18	—	—	—	—	—	—	—
Somalia	10	9	7	11	—	—	—	—	—	—	—	—
South Africa	—	—	—	—	—	63	—	—	—	—	—	—
Sudan	18	—	—	33	35	33	—	—	—	—	45	—
Swaziland	—	—	—	—	46	45	—	—	43	43	42	—
Tanzania	28	—	—	—	24	23	23	20	25	25	26	26
Togo	25	16	—	13	12	—	—	—	12	—	—	—
Zimbabwe	—	—	—	—	29	32	33	32	40	36	36	—

Source: World Bank (2002c).

Table 2.14. Percentages of Male and Female Secondary Teachers Who Are Trained, 1998

	Females	Males
Benin	42	30
Congo	52	38
Djibouti	55	55
Eritrea	66	55
Seychelles	89	85
Sierra Leone	98	84
South Africa	93	86
Tanzania	95	88

Source: UNESCO (1998a).

School Leaders: Principals and Head Teachers

Across the world, research findings indicate that school principals (head teachers) are one of the most powerful single determinants of the overall quality and effectiveness of schools (Daresh 1998). The importance of the role of school leader is continuing to expand as schools are increasingly expected to deal with a range of social and economic issues. Decentralization of educational administration has increased the responsibilities of the school principal, although this often is not complemented by appropriate training or authority (Riley 1999; Ross and Hutchings 2003; Kucera and Stauffer 2003).

Changing and Increasing Demands on School Principals

In part, the role of the principal is to ensure the efficient and transparent administration of the school. Many of the day-to-day management issues are very practical, but of critical importance. In many areas, working to reduce teacher absenteeism is a major priority (Halliday 1999; Gaynor 1994; Condy 1998). Secondary school principals may also face a series of financial pressures. In Kenya, school principals ranked school fees and money matters as their principal concerns (Kitavi and Westhuizen 1997). Some other very specific challenges include the incidence of sexual and physical abuse of girl students by teachers. School heads have a particular role to play by working to change the culture of violence and complacency and establish a more caring, participatory, and democratic school environment (Leach and Machakanja with Mandoga 2000).

Schools are also increasingly expected to develop links with local communities. Parental involvement may be seen as a mechanism to increase attendance, a means of raising additional income, or as a means of creating accountability for school management. Developing good community relations is an additional burden on school leaders, particularly as the community may have "no idea of what is needed in teaching" and rely on the principal to explain the issues to them (Condy 1998).

While school principals may focus on the administrative parts of their role (Kogoe 1986), there is strong evidence that they play an important part in ensuring instructional quality (Togneri 2003). In the absence of other inspection and supervision structures, the responsibility for guiding and supporting new and often poorly trained teachers may fall to the school principal (de Grauwe 2001). Helping teachers to develop the quality of their teaching is a difficult and lengthy process, particularly where the teachers have low levels of education (Condy 1998). With the growing importance of school-based inservice programs, it is important that the supervision be focused on providing guidance, improving performance, and enhancing professionalism and morale, rather than simply on criticism of teachers (Craig 1999).

In many countries, the mechanism for recruiting teachers to become principals is unsystematic and not necessarily based on professional criteria.

Weaknesses in Current Provision

The reality of school administration, management, and leadership frequently falls short of the ideal. UNESCO (1996) notes that education systems nearly everywhere are managed poorly and administered inefficiently. Despite the enormous expectations of school principals, many are poorly prepared for the task. A 1990 study of 31 African countries concluded that only three of them had comprehensive training programs in educational planning, administration, and management. Where training programs are provided, they are sometimes criticized for being unsystematic and inadequate in content and coverage, lacking followup, and failing to address the real needs of supervision (de Grauwe 2001; Dadey and Harber 1991). Moreover, the training has tended to be focused on skills: how to budget, analyze data, or design an evaluation (Gillies 1973; Adams 1998). However, much of the need is for strategic thinking, analysis of cross-impacts, and the ability to work with constituent groups. The more profound problem in the preparation of principals is that, even if they have strategic planning skills, they often lack a firm understanding of the education process. They do not know what inputs and processes can reasonably be expected to contribute to increased student learning. Lacking this, principals are left to react to daily events and ongoing political pressures.

Instructional supervision is one of the areas where school principals are least effective; many do not even regard it as part of their role. Teacher supervision in most developing countries is the responsibility of officials operating from the provincial or district level. This would appear to remove supervision from the administrator most aware of a teacher's pedagogical skill (for example, the principal or school head) and assign it to individuals removed from the school context. Yet, external inspectors or supervisors may visit a school intermittently or not at all. They often view their role more as one of enforcing rules than the supportive role of discussing practice with teachers and demonstrating how practice can be improved. Ideally, this supervision should be jointly undertaken between school principals and inspectors. However, in many cases, the relationship between principals and inspectors is less than ideal. Principals may have little respect for the expertise of inspectors, especially when the inspector's salary is less than that of a principal. These differences may be more acute at the secondary level, where supervisors tend to be recruited from subject specialists who have little or no management experience (de Grauwe 2001).

The weakness of school leadership is often reinforced by the mechanisms for the selection of school principals. The dominant tradition has been to recruit from within the teaching profession, often as a reward for good performance, long years of service, or ideological compatibility with the existing political orientation of government (Dadey and Harber 1991). Principals rarely have specific training for the new responsibilities they face, especially before taking up their posts (Gottelmann-Duret and Hogan 1998). The relatively flat structure of the teaching career provides few opportunities for people to develop leadership skills in middle management positions (Macdonald 1999). Newly appointed principals may lack

legitimacy in the eyes of teachers, who view them more as peers than supervisors. The frequent use of seniority and ideology as the basis for promotion, in combination with lack of specific job training, often results in principals being a rather conservative group, with little motivation to innovate or support new school or classroom practices (de Grauwe 2001; Dadey and Harber 1991). The selection system may also be more likely to favor males for leadership positions, causing a gender imbalance in this crucial role (Gottelmann-Duret and Hogan 1998).

Because of the pivotal position of school principals, the possibilities of them engaging in corrupt practices cannot be ignored. Poisson and Hallak (2002) note that corruption in Ghana and Nigeria is often linked with problems of school admission, payment of salaries, and leaked examination questions. As the senior personnel in the schools, principals play a central role in the prevention of corrupt practices. Conversely, they may have the greatest opportunities to engage in corrupt practices themselves. There is a need for supervision of principals and for clear consequences when principals are found to have behaved improperly. There is also a need for training principals to examine issues of corruption and develop the means to tackle it.

Directions for Development

There is a clear need to prepare principals to adopt the role of educational leadership within their schools. Where training for school principals exists, it is often brief and focused on administrative tasks. Changing the behavior of school leaders will require richer and more extensive training. The importance of quality training for school principals, both prior to appointment and on an ongoing basis, is a recurrent theme throughout the literature. There are numerous viewpoints on what might be emphasized in such training and, again, tensions surface between administrative competency and leadership vision. Riley (1999) contends that secondary school principals "need to be given the tools to reflect on the priorities, the areas of conflict and tension, the ethical dilemmas, as well as values, expectations, and professional issues about teaching and learning." Therefore, an important skill that all school leaders require is strategic thinking. This should play a prominent role in all training programs for school leadership.

In recent years, there has been an increased focus on the professional development of school principals. In Burkina Faso, the Ministry of Basic Education and Literacy and RESAFAD (the African Network for Education at a Distance) developed a multinational program for West African Francophone countries aimed at increasing the management capacity of principals (Perraton, Creed, and Robinson 2002). However, development of principals is not without difficulties. Poorly designed courses may be taken up by teachers who see the qualification as providing a route out of teaching altogether (Sayed, Heystek, and Smit 2002). Courses based on materials from outside Africa may not be relevant for schools in African communities (Sayed, Heystek, and Smit 2002).

Summary of Findings from the Literature Review

The following is a summary of the major findings from the literature review. These findings defined the focus of the field study that was carried out in six countries, in which informa-

tion was gathered to explore and illuminate the trends indicated in the literature. The field study is presented in Chapter 3.

1. In many parts of Sub-Saharan Africa, the projected demand for secondary school teachers exceeds projected supply, in some cases by substantial amounts. The reasons for the anticipated shortage vary by the particular circumstances of the countries involved. Major factors, however, include teacher attrition due to illness or the need to care for ill family members, salaries too low to attract and hold qualified teachers in teaching, and bottlenecks in the teacher preparation system.
2. Important root causes of inadequate teacher supply can be traced to arbitrary teacher deployment practices and poor conditions of service. It is probable that more people would enter teaching if they believed that: (a) they would receive adequate compensation; (b) they would not be arbitrarily posted to an undesirable work location; and (c) they would be treated in a fair and professional manner (for example, be paid on time). New and more effective approaches to preparing, deploying, and compensating teachers are necessary if the current problems are to be resolved.
3. The fiscal capacity of most governments to improve teachers' compensation and conditions of service is extremely limited. Merely reallocating public funds for these purposes as a general remedy is not feasible. For many countries, the problem seems intractable. Ensuring an adequate supply of qualified teachers will require resources that many countries do not have and are unlikely to get in the near future. To the extent that this is true, countries will need to make better and more creative uses of the resources that are already available to secondary education.
4. Teacher education is expensive and, for the most part, has not been very effective. While all agree that teachers need good professional preparation, it is not clear that the considerable investment in teacher preparation has yielded the anticipated results. Moreover, substantial amounts of experimentation with different models and strategies, research, and policy deliberations have led to only modest, if any, improvements in teachers' preparation. This suggests the need for a broader and bolder thinking about alternative modalities for teacher preparation.
5. Quality-cost tradeoffs in teacher preparation are severe. Many of the more promising interventions to improve the secondary school teaching force across Africa cost more than many governments are willing to pay. Many of the more common strategies to reduce expenditure on education tend to have a negative impact on quality. For example, shortening the length of teacher preparation programs to get more teachers into the schools (and alleviate projected shortages) often erodes quality. Efforts to improve instructional quality tend to be expensive.
6. Many principals or head teachers are ill-prepared to meet the demands posed by the changing nature of their job. The importance of effective school leadership is widely recognized. However, given the increasingly decentralized nature of education systems, many school principals lack adequate preparation for the responsibilities they now face. Concerted effort to improve school leadership is one of the more promising points of intervention to raise the quality and efficiency of secondary education across much of Africa.
7. The literature suggests that there are few, if any, interventions that have yielded dramatic improvements. There are no magic bullets. The quality of secondary teachers

and teaching is influenced by many small factors, rather than a few large ones. This appears to have two consequences, as reflected in the literature: (a) developing consensus about how to improve teacher quality and performance is difficult; and (b) different stakeholders support different approaches to improving education, each advocating the efficacy of the particular approach they favor.

8. Despite the enormous attention given in the literature to the problems of teacher supply, preparation, performance, and retention, the international research on secondary teachers in Sub-Saharan Africa tends, with notable exceptions, to offer only a weak basis for guiding policy and program development. Four characteristics of the research are of particular note: (a) much of it focuses on clarifying the dimensions of the problem rather than formulating and testing alternative solutions; (b) much of the literature tends to be descriptive of particular country efforts to attract, deploy, and retain teachers, but often lacks solid evidence of the effectiveness of the approaches being described; (c) there is a lack of longitudinal research that tracks the longer-term effects and consequences of interventions aimed at improving the teaching force; and (d) some of the more impressive research has been conducted within projects and is only reported in project documents, which often have a short half-life of retrievability. Such research too quickly becomes fugitive literature.

CHAPTER 3

Field Study of Secondary Teachers, Principals, and Decisionmakers

Introduction to the Field Study

The preceding literature review suggested that current systems for teacher recruitment and preparation strategies across many parts of Sub-Saharan Africa, as they are presently designed, will be unable to meet the projected demand. The literature suggests that part of the solution to shortages in teacher supply rests with improving teachers' conditions of service. Some observers advocate accelerating the preparation of teachers through shorter preservice preparation, combined with more reliance on inservice professional development. Other writers view a shortening of preservice preparation as posing an unacceptable tradeoff leading to the reduction of education quality. Much of the literature argues the importance of school leadership in successful education reform and that better preparation of principals is an essential element of school improvement.

As part of this research project, a field study was undertaken to test these propositions emerging from the literature review and to elaborate further topics that were not well addressed in the existing literature. The field study involved interviews with a total of 114 teachers, principals, and decisionmakers and government officials in six countries—Ghana, Ethiopia, Tanzania, Guinea, Madagascar, and Uganda. In each country, a local researcher interviewed teachers, head teachers, and policymakers as indicated in Table 3.1, using a standard interview protocol (in English and in French) developed for each of the three groups. The sample was not randomly selected, and the results therefore cannot be generalized to any broader population of teachers, head teachers, or policymakers. The results are, however, suggestive of issues warranting further consideration, additional research, and the attention of policymakers.

The survey collected participants' views on issues related to teacher recruitment, conditions of service, retraining, and retention. In some cases, data were collected to verify

Table 3.1. Sample of the Surveyed Teachers, Principals, and Policymakers

Country	Teachers	Principals or Schools	Policymakers	Total Sample
Ethiopia	9	3	6	18
Ghana	9	3	6	18
Guinea	9	3	6	18
Madagascar	12	4	8	24
Tanzania	9	3	6	18
Uganda	9	3	6	18
Total	57	19	38	114

observations that had emerged from the literature review. In other cases, interview questions elicited information on issues not well addressed in current literature, such as the role and importance of teachers' unions in education reform.

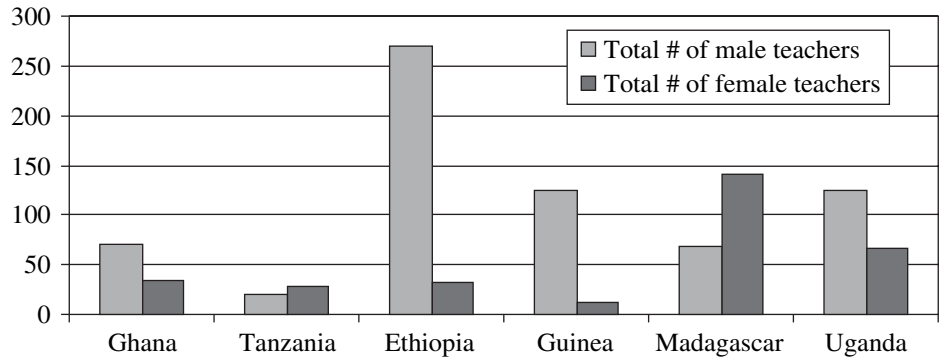
Countries were selected by the research team, working in collaboration with the World Bank, on the basis of their geographical and linguistic diversity. Two Francophone and four Anglophone countries were selected. Across six countries, overall, local researchers selected a convenience sample of 57 teachers, 19 principals in the same schools as the teachers who were interviewed, and 38 policymakers. The local researchers were asked to select schools in a way that would capture diversity in location (rural and urban), type of school (coed, girls, boys, day, and boarding), and number of students (large, small). Within schools, the teacher sample was to include at least one more experienced and one less experienced teacher, one math or science teacher, and one female teacher. The local researchers were asked to select decisionmakers to include those working in the central education ministry (for example, directors of teacher training divisions and directors of teacher training institutions) and at least one union official (Table 3.1).

Overall, 33 percent of the schools in the study were rural, 66 percent were urban, all schools were coeducational, 82 percent were day schools, and 18 percent were boarding schools. Enrollment ranged from 80 to 5,679 students. The smallest schools were in Tanzania, with enrollments ranging from 80 to 208 students. School enrollment in the other five countries ranged from several hundred to several thousand students. All but two schools reported their enrollment was increasing. The two schools with declining enrollment were both in urban areas. Head teachers generally attributed the increased enrollment to improved test scores, a growing school-age population, and parents' willingness to educate their children. Principals reported that most of the teachers in these schools were trained, with the exceptions of two schools in Guinea that reported 50 percent or fewer trained teachers.

Of the sample of teachers interviewed as part of this study, 52 percent were male and 48 percent were female. In Guinea, only male teachers were interviewed for the study. All but two of the principals interviewed were male. On average, teachers in the study had 13 years of teaching experience. Twenty-eight teachers (49 percent) had taught 10 or fewer years; 13 (23 percent) had taught 10–20 years; and 16 (28 percent) had taught 20–35 years.

Figure 3.1 illustrates that in four of the six countries, secondary school teachers are still predominantly male. The schools surveyed in Madagascar and Tanzania, however, had more female teachers than male teachers. The proportion of female teachers seemed to vary across the six countries due to: (a) the number of girls completing secondary school and

Figure 3.1. Number of Male and Female Teachers in Surveyed Schools



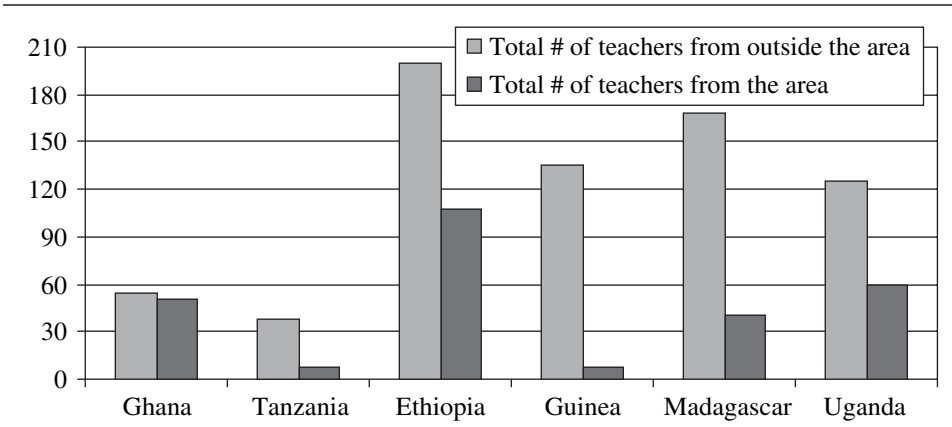
entering university; (b) the relatively small number of female teachers recruited and deployed; and (c) the number of females retained in the teaching corps.

Figure 3.2 illustrates that most teachers in the surveyed schools are not originally from the area in which the school is located. This imbalance in the number of teachers from the area and from outside of the area illustrates a deployment challenge, and may also influence retention issues. Theoretically, some countries (for example, Uganda) deploy teachers within their areas of local residence. However, it appears that this has not been a consistent practice.

Recruitment and Deployment of Teachers

Recruitment refers to the identification of potential preservice students to enter the field of education. When students leave secondary school, some make a choice to pursue further studies and be trained in a profession. Given the predicted increase in demand for secondary school teachers, recruiting more teachers to pursue studies and then work in

Figure 3.2. Number of Teachers From Outside the Area and From the Area Near the Schools



secondary education is important. Yet, this study revealed that little attention is given to the initial recruitment of qualified candidates into the field of education. Only Ethiopia reported that it has a central system of recruiting potential teachers to pursue teacher education. Ghana encourages students to enter teacher education by paying for their initial preservice education. When principals were asked about recruiting teachers, they referred to the system of recruiting trained teachers to be deployed in schools rather than recruiting secondary leavers into preservice teacher education. This interpretation of the roles of principals and teachers in recruiting potential teachers into colleges of education suggests a couple of possibilities: (a) teachers and principals believe completion of secondary education best prepares students for work in other professions; (b) teaching is not a very desirable or valuable profession and therefore teachers and principals do not encourage students to enter the profession; or (c) teachers and principals do not accept any role or responsibility for attracting secondary students into the field of education.

These data suggest that incentives need to be implemented to encourage more secondary school leavers to pursue teacher education and remain in the profession. While paying for preservice students' education may be one incentive, it can backfire. Trainees often see it as a mechanism for getting further education but have little commitment to entering the teaching profession. Consideration needs to be given to the motivation, qualifications, and interests of potential teachers so as to attract the best qualified teachers who will remain in the profession.

Once teacher trainees complete their studies, they are available to be hired and deployed in the education system. In all countries in this sample, the Ministry of Education is responsible for hiring and deploying teachers to schools. Most principals had little influence over which teachers were employed in their schools. Principals in Ghana and Ethiopia, however, reported they had considerable influence, while principals from the other countries reported they had no or little influence. Those principals who reported having more influence in deployment sometimes used alternative strategies in hiring teachers. For example, in Ghana, principals sometimes took the initiative to interview potential teachers and then informed the regional office of their selection. Principals in Ghana have discretion to hire contract teachers (non-civil servants). This employment usually occurred when a school was not able to get a replacement for a teacher.

Principals described the following issues related to recruiting and retaining teachers. In most countries, there was a concern that civil servant teachers were leaving the teaching profession. Most were doing so for other job opportunities that presumably paid better; some teachers left their positions to pursue further studies. Once a teacher left the teaching profession, they were often replaced with contract teachers. Contract teachers may or may not be as qualified as the civil servant teachers, and they were not paid by the ministries of education. Rather, contract teachers were often paid by the school PTA (such as in Uganda) or other means. Principals and teachers in all countries reported having difficulty in recruiting and retaining a sufficient number of trained mathematics and science (biology, physics, chemistry) teachers; often these teachers are contracted. Ethiopia reported having a shortage of teachers for teaching civics, economics, and history. While several of the countries (for example, Uganda and Tanzania) had deployment systems that theoretically should ensure the replacement of teachers who left the teacher corps or were transferred, considerable problems existed in getting replacements. In Uganda, several principals suggested that the transfer system for teachers created problems of retaining and replacing teachers.

The Ministry of Education is supposed to approve a transfer only if a replacement is available, but reports from principals suggested that contract teachers were often used to fill replacements. Replacing civil servant teachers with contract teachers creates a number of problems in addition to qualification and quality. Since salaries and work conditions often are not stable, retention of these teachers becomes a problem.

These issues in deployment reveal a fundamental problem in teacher supply and demand: centrally coordinated deployment systems serve an important role in regulating the total number of teachers receiving government salaries, but they are not necessarily efficient in placing teachers in schools and in areas that need them. A response to deployment inefficiencies is the hiring of contract teachers, which creates acute problems with training and retaining this group of teachers. Governments may not have incentives, however, to address the widespread hiring of contract teachers. Nonetheless, fixing the problem by increasing the civil servant teacher corps may lessen the related problems of uneven qualifications and retention.

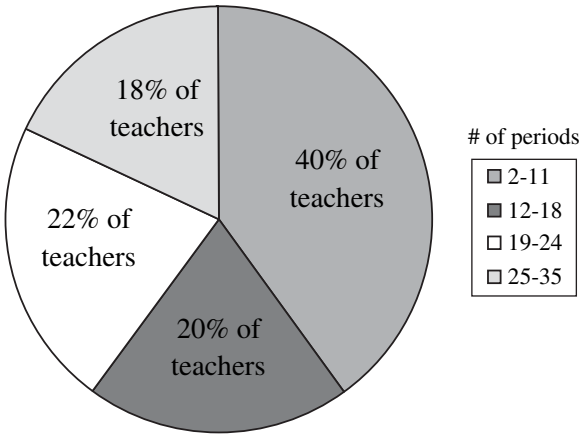
Conditions of Service

The literature on teacher recruitment and retention suggests that recruiting and retaining teachers in the profession is influenced by their conditions of service. In this sample, teachers and principals noted that work conditions were a main reason for leaving the profession. Work conditions refer to the amount of work teachers and principals do, the remuneration they receive for their work, and the support they receive from the community for their work.

Subjects and Hours of Teaching

One of the concerns expressed by teachers is the amount of work they do. They feel that they are overloaded with teaching hours. Teachers reported that they taught, on average, 14 class periods per week. Teachers in Francophone countries—Madagascar and Guinea—taught between four and eight class periods per week, whereas teachers in Ghana taught between 20 and 30 class periods per week (Figure 3.3). However, to understand the amount of time teachers spend teaching, further data are needed to verify the length of time for class periods in the different school systems.

Figure 3.3. Number of Class Periods Taught per Week



From these data, it appears that the largest proportion (40 percent) of this

sample of teachers is underutilized and a smaller proportion (18 percent) is overextended (Figure 3.3). There may be several reasons for underutilization: (a) a proportion of these teachers are teaching in schools that do not have large student enrollments; (b) these teachers are only teaching one subject, rather than two or three; or (c) only one class is offered in their subject or subjects.

The number of contact hours teaching subject matter is only one aspect of the workload of teachers. The number of students per course also affects teachers' workloads. In some countries, teachers reported having 50–100 students in a class. Teachers also need time to prepare for their courses and to assess student learning. Teachers in Uganda consistently reported that continuous assessment was burdensome, time consuming, and one reason for not wanting to stay in the job.

Related to the amount of time teachers spend teaching, a survey question inquired whether teachers should teach more than two subjects. This policy idea did not receive strong support from any of the groups (20 percent or less in all three groups). Teaching more than two subjects was not regarded as a viable option because most teachers felt that it would be difficult to be competent in more than two subject areas. Teachers also felt stretched in the number of periods they currently teach and the number of students they teach. Furthermore, teaching more than two subjects would also place an additional burden on teachers' preparation time and exam marking. Teachers and principals generally felt that an additional subject would indirectly impact teachers' motivation and commitment. Teaching an additional subject would also require longer periods of study in teacher education courses in order to specialize in another area or discipline. The only support for this idea came from Ethiopia, where teachers teach only one subject, and they felt that teaching an additional subject would diversify their knowledge. Some policymakers and principals (16 percent) supported the idea in cases where teachers may be teaching fewer than 18 periods, either because all levels are not taught or there is a small student population in the school. Adding an additional subject would allow these teachers to teach more hours and thus potentially create more efficiency in the system.

Teacher Remuneration

Many teachers do not regard their salary as a sufficient compensation for the amount of work they are expected to do. Nearly all the teacher respondents in this survey felt their current salary was not fair or adequate to cover their living expenses. Many teachers suggested the salary should be double their current salary. At the same time, the salaries they report receiving suggest they are better paid than many other workers in their countries. Table 3.2 shows the range of salaries for teachers, the salary equivalent in U.S. dollars, and salaries as a percent of per capita gross national income (GNI). The salary range reflected differences in years of teaching, from the first year of service to a maximum 35 years. While the salaries may not be sufficient to cover teachers' living costs, beginner teachers in Guinea, Ghana, Tanzania, and Uganda make two to three times the GNI. Beginning teachers in Madagascar and Ethiopia make nearly 10 times the GNI.

However, the adequacy of salary needs to be evaluated in terms of the overall compensation teachers receive. Sixty-four percent of teachers reported they do not get benefits apart from their salary. In contrast, teachers in Uganda and Madagascar consistently reported that they received additional benefits, such as allowances for transportation, housing, and PTA

Table 3.2. Teacher Salary Range

Country	Salary per Annum	US$ Equivalent	Per Capita GNI in US$
Guinea	1,680,000–2,880,000 francs	$840–$1,440	$410
Madagascar	11,400,000–16,800,000 Md francs	$2,040–3,000	$240
Ghana	12–18 million cedis	$1,440–2,160	$270
Tanzania	768,000–1,476,000 Tshs	$720–$1,440	$280
Ethiopia	8,400–18,000 birr	$1,020–2,160	$100
Uganda	2,400,000–5,040,000 Ugshs	$1,200–2,520	$250

Source: World Bank (2002b).

allowances. It appears that some countries have policies to reward teachers with benefits, whereas other countries seem to provide additional benefits on a more discretionary basis. In some cases, the school management committee or principal has the discretion to provide additional benefits, such as food or housing allowances.

As a means to supplement salaries, teachers often hold other jobs to earn additional income. Sometimes this work is directly related to their teaching responsibilities, such as tutoring or marking exams. Other teachers have additional income from small businesses or farming. Thirty-one percent of teachers reported having other sources of income primarily from teaching in private schools, giving tutoring lessons, and marking exams. Again, teachers in Uganda, Guinea, and Madagascar most often reported having additional income.

> Many teachers do not regard their salary as a sufficient compensation for the amount of work they are expected to do.

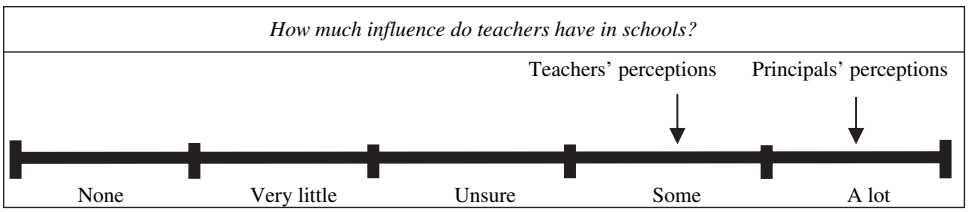
Community Support for Teachers

One of the most frequently reported reasons for leaving the teaching profession was the lack of respect that teachers receive from the community and students. Lack of respect from the community referred to several different factors: (a) a lack of attention from policymakers to address teachers' needs, such as curriculum materials; (b) harassment from students and parents; and (c) increasing demands from administrators, combined with little support. Teachers felt that low salaries were also indicative of a lack of respect for the teaching profession. Improving respect for the teaching profession is not an easy or short-term strategy. It will require changing how policymakers and community members view teachers' roles and the compensation they receive for such roles. However, teachers' perceptions of the respect they receive may be altered by simple initiatives, such as creating a more comfortable and effective work environment and providing needed materials and supplies.

Teachers' Influence in Their Schools

Another way of improving teachers' motivation and commitment to teaching is to involve them in decisionmaking in the school. However, interview data revealed that teachers and

Figure 3.4. Teacher and Principal Perceptions of Teacher Influence in the School



principals had different views about teachers' influence in the schools. Teachers generally reported that they felt they had "some influence" (Mean=4) on the way their school is run. Principals perceived that teachers had "a lot of influence" (Mean=5) on the way the school was run. Figure 3.4 illustrates these differences in teachers' and principals' perceptions of teachers' influence in schools.

The manner and extent to which teachers had influence varied considerably. Some teachers felt their sphere of influence was with students and fellow teachers. They felt they could bring their concerns to administrators and work with other staff members to get issues resolved. Teachers who were involved in committees that were responsible for certain aspects of the life of the school (for example, school cafeteria, cultural group, PTA, or board member), reported feeling more influence in the decisions of the school.

Principals often felt they had a participatory and open approach to running the school, such as seeking teachers' input in resolving problems. Therefore, they perceived teachers' influence to be greater than teachers perceived their influence to be. However, a participatory approach to running the school was not well defined by this sample of principals. Methods for making the school a participatory organization is an issue for further exploration.

These findings suggest that one method for promoting teachers' commitment to the profession and, possibly, increasing their job satisfaction is to give them a greater role in running various aspects of the school. By simply changing structure (personnel roles) in the school environment, principals may create greater opportunities for teacher influence in the school. However, many of the teacher respondents who currently have additional roles within the school (and thus felt they had more influence) were also receiving some form of compensation for those roles, for example, food or housing allowances. Therefore, increasing teachers' roles in the school may serve a dual purpose: (a) promoting their engagement with the profession and with students; and (b) supplementing teachers' incomes. Small monetary rewards may promote greater commitment and serve as an incentive for staying in the profession.

Teacher Retention

Though most teachers believed they were not paid sufficiently, only 23 percent said they would leave teaching. The most common reason for staying in the profession was personal commitment and gratification; teachers enjoy their relationships with students and take pride in contributions they make to students' learning and society. However, a less altruistic rea-

son for staying in teaching was lack of job mobility, either because of a lack of skills to work in other fields or insufficient alternative employment opportunities.

Teachers considering leaving the profession offered a variety of reasons, but foremost among them were poor working conditions—primarily low salaries, insufficient benefits, and the low regard in which community members and students hold teachers. Teachers say they would leave because they do not feel respected.

These results suggest that while increasing salaries or benefits may affect the motivation and commitment of teachers in the short term, increasing salaries may not be a major factor in retaining teachers already in the profession, especially if there is a lack of alternative career options. However, increasing teachers' salaries may be an important long-term strategy to influence the kind of people entering the teaching profession and their commitment to it. Nonetheless, teachers are caught in several dilemmas if policymakers believe that increasing teachers' salaries is neither feasible nor necessary and enhancing their skills to upgrade their positions within the profession or seeking employment outside of education is not possible.

With increasing employment opportunities in the private sector, however, retention of teachers becomes a greater concern. One concern for ministries of education is retaining teachers in the public school sector. Nearly 40 percent of the teachers interviewed said they would take a position in a private school. In some countries, private schools provide an attractive alternative source of employment. Teachers in the Francophone countries of Guinea and Madagascar most often reported that they would go to private schools because they felt they had more options for further training or a better salary. The option to leave teaching in the public education sector seems to be related to available opportunities for work in private schools or in the private sector. Uganda reported a distinctly different situation. There seems to be sufficient number of teachers completing training, but these teachers are not being deployed in the public schools. Rather, some teachers are teaching in private schools as a means of utilizing their training, even though their conditions of employment are often considerably worse than in public schools.

Differing strategies for retaining new and more experienced teachers in the profession also may need to be considered. Those who were newer to teaching seemed to be more willing to leave the profession or to move to a private school. For example, Uganda reported that teachers were leaving the profession more frequently before completing 10 years of teaching; if they had taught more than 10 years, they seemed more inclined to stay. Teachers who had worked in the profession for many years said they would not leave because their pension was important to them.

Two high-impact strategies, therefore, for retaining teachers may be to increase job security by ensuring stability in remuneration and civil service appointments. Teachers and principals suggested that teachers who were contracted or who were not paid on a regular basis seemed less satisfied with the teaching profession. A second strategy may be to improve the school environment in which they work. One common suggestion for improving secondary education was to provide an adequate number of textbooks and materials, classrooms, and lab equipment. By providing these resources, teachers feel better able to teach.

Finally, the idea of implementing a bonus system for teachers received considerable support among teachers, principals, and policymakers (between 70 and 80 percent of all three groups). While increasing salaries overall may not be a feasible option, providing smaller monetary incentives sends a message of support and recognition for teachers'

hard work and commitment. Teachers felt a bonus system would provide motivation and act as an incentive for staying in the job. Implementing a bonus system would require clear criteria and transparency in determining to whom the bonuses would be awarded. It was also suggested that a further study would help determine the most effective form of reward, such as whether it would be given to individual teachers or all teachers in a school, since student learning is seen as a result of the efforts of many people within the education system.

Teacher Professional Development

Training in both subject content and pedagogy is essential for high quality teaching and learning in secondary education. With increasing demand for secondary education, there is a concern to provide a sufficient number of teachers with adequate training to meet the needs of teaching secondary students. In this sample, all the teachers interviewed had some training. Eighty-one percent of them had a university degree. The remaining 19 percent had been trained in colleges of education. Six of eleven teachers who had a teachers' college degree had been in the profession for more than 15 years.

All countries in this sample require a diploma from a college of education or a BSc or a BA degree from a university to teach at the secondary level. Despite this requirement, both Madagascar and Ethiopia reported that the current teacher corps was not sufficiently trained. For example, Ethiopia requires a BSc or BA degree, but only 33 percent of secondary school teachers had this qualification in 2002. In addition, some secondary school teachers may have a BA or BSc degree in a subject area other than education. Finally, some contract teachers are hired without these qualifications, but they are not on government payrolls. Therefore, the official number of teachers who are qualified may be an inaccurate depiction of the training level among secondary school teachers. For teachers who do not have these qualifications, inservice upgrading programs are provided in virtually all countries through which teachers can obtain degrees. Untrained teachers may pursue post-graduate diplomas through distance education or other inservice programs.

Preservice and Inservice Teacher Professional Development Programs

Another issue in the quality of education is the adequacy of teacher preparation programs to prepare teachers for their roles. Most teachers reported that their teacher education prepared them for teaching, although they stated that the inservice professional development (INSET) they received prepared them to a lesser degree than their initial training. Most teachers had participated in a preservice teacher education program in which they learned both subject matter and educational pedagogy. A few teachers studied only subject matter and then received the teaching methodology courses later, after they acquired a teaching position. In general, teachers felt prepared to teach their subjects and to implement pedagogy, classroom management, and examinations.

Inservice programs serve three different purposes: (a) upgrading untrained teachers' qualifications; (b) providing master's degree-level programs for qualified teachers; and (c) offering short-term training related to subject and pedagogy areas. The first two purposes are usually offered under the auspices of the Ministry of Education. The third pur-

pose was not identified as a common practice in the countries in this sample. Uganda, however, stated that short-term professional development is usually conducted by teacher associations—such as the Mathematics Teacher Association, and is generally supported by donor projects.

Only 26 percent of teachers interviewed had attended inservice professional development courses. Most teachers who attended inservice programs did so in specific subject areas, such as science, math, computers, and, in a few cases, English. A few teachers participated in inservice professional development that was focused on more general issues of pedagogy or assessment. While the teachers did not regard the inservice professional development to be as helpful as their initial training, they felt that it provided them with more confidence in teaching as well as a venue in which to share ideas and solve problems. A couple of teachers and principals stated that the inservice professional development served as a mechanism for retaining them in the profession.

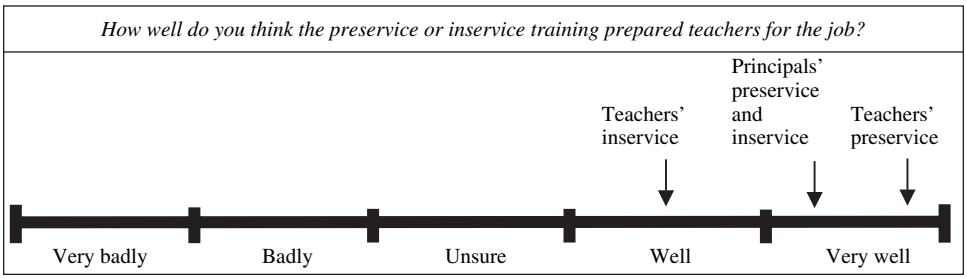
Principals' perceptions of the adequacy of teachers' preservice and inservice professional development differed from those of teachers. Principals are less positive about the quality of preservice preparation of teachers in their schools than teachers are. At the same time, principals are more positive about the adequacy of the inservice professional development teachers received than teachers are (Figure 3.5).

As part of the interviews, teachers, principals, and policymakers were asked to give their opinions on several suggestions that emerged in the literature review for improving teacher preparation:

Shortening Preservice Teacher Preparation By One Year. The idea of shortening preservice teacher preparation by a year was supported by less than 40 percent of policymakers, 20 percent of teachers, and 15 percent of principals. The most common concern of respondents was that less training would make it difficult for trainees to effectively learn the needed subject matter. Respondents believed that shortening the training period would create ineffective teachers who are less knowledgeable.

Shortening Preservice Teacher Preparation While Extending Time under Supervision Once in the Schools. While receiving more support than the idea of simply shortening preservice preparation, a shortened preservice period combined with extended in-school supervision was still supported by less than 50 percent of policymakers, teachers, and head teacher respondents. Some principals and policymakers believed that teachers are not prepared

Figure 3.5. Teacher and Principal Perceptions of the Value of Preservice and Inservice Preparation



sufficiently for the classroom, and thus supervised teaching is very important. In Tanzania and Ethiopia, all three respondent groups supported this idea because those countries already have relatively short periods of school-based training as part of their preservice programs, making in-school induction and supervision more important.

Teachers' and principals' comments revealed a few concerns, however, about the current systems of supervision. In most cases, supervision is provided by pedagogical advisors, tutors, or principals, but it is not always managed effectively. Lack of time and attention on the part of the supervisors creates ineffective supervision. Respondents suggested more training for supervisors and better coordination between training institutions and schools as strategies for improving supervision.

Providing Inservice Courses through Distance Education. This policy idea of providing inservice courses through distance education was supported by nearly 90 percent of teachers, principals, and policymakers. Policymakers favored distance education as a means for delivering inservice professional development courses in order to reduce costs of travel and salary. This strategy also allows teachers to remain in their classrooms rather than traveling to distant cities.

There was a lack of consensus, however, regarding the means of providing these distance education courses. Inservice courses administered via mail were the most widely supported option, for several reasons. First, teachers were accustomed to this method and they preferred having paper copies of materials. Second, mail is a reliable service and accessible to all. While the internet was regarded as a useful method, it was viewed as unreliable, due to lack of electricity in certain places and lack of internet providers and computers. Furthermore, use of the internet requires additional training for teachers and principals to be able to effectively use it.

Teachers also preferred a medium of learning that they could use in their classrooms. Because there are many schools without computers, they felt that time spent learning on computers would be inefficiently spent if they could not also use them in schools. Third, radio was not usually regarded as a viable option because many teachers did not listen to it and the program times did not allow for sufficient flexibility to participate in the courses. If radio were used, it would be necessary to supplement the oral instruction with printed materials; therefore printed materials via mail seemed a better option.

There were also several suggestions as to how to make distance learning courses an effective learning experience. In Ethiopia, there were concerns of cheating, and therefore a system of checks was suggested to ensure that teachers were learning. For example, having teachers meet in small groups or in a classroom environment occasionally is one way to check teachers' learning and create an opportunity for questions, answers, and feedback. Another option to improve teachers' inservice distance learning is to provide a mentor or tutor who meets with groups of teachers and discusses the material. Finally, the learning materials used in distance education courses should make up a comprehensive course of teacher learning and be closely related to teachers' daily work, so that teachers would read them seriously and practice new classroom approaches.

Principals and policymakers were concerned, in general, that inservice courses might be used by teachers simply as a means of improving their qualifications and salaries, not as serious opportunities for improving the quality of their teaching. If inservice courses are managed effectively, however, they may act as an effective ongoing means for updating and upgrading teachers' knowledge and skills.

Student-centered Pedagogy

Teacher education programs have recently emphasized learner-centered pedagogy as a method for improving student learning. Teachers in this sample reported that their preservice and inservice training included substantial coverage of learner-centered teaching methods. Furthermore, they reported that they used learner-centered methods about once a week, including questions and answers, debates or discussions, the summarizing of what was learned, group readings, presentations and simulations in the humanities (English, Islam, History), and lab experiments or activities in science or technical subject matter.

However, interview results indicated that teacher respondents did not always feel these methods were appropriate or feasible. A few teachers reported that student-centered methods were too difficult in large classes and that they created problems for staying on the official curriculum. However, principals had a differing perspective, believing teachers in their schools used student-centered methods less frequently than the teachers claimed (Figure 3.6).

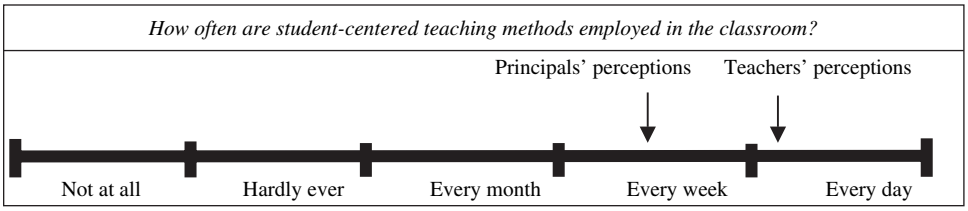
> Principals believed teachers in their schools used student-centered teaching methods less frequently than the teachers thought they used them.

Supervision of Teachers

In addition to preservice teacher education and ongoing professional development through inservice programs, supervision of teachers' classroom practices is regarded as a key method for improving the quality of teaching and learning. This study identified concern with the quality and extent of teacher supervision practices. Forty-seven percent of teachers reported that they "hardly ever" asked for help in their teaching, and another 37 percent said they asked for help "about once a month." Sixty-five percent of teachers said they were "hardly ever" or "about every month" observed or given advice in their teaching. Most principals (69 percent), however, stated that they observed teachers "about every week or every day."

These data suggest that teachers and principals have quite different perspectives about the extent of supervision provided. Furthermore, merely observing teachers may be quite different than providing helpful teaching suggestions. It is unclear from these data to what extent principals provide assistance in—as opposed to mere observation of—the teaching and learning process. When principals were asked if they are responsible for helping teachers improve their teaching, all of them responded that they were either "partly or very much responsible." This responsibility was usually manifested in the support they gave to teachers

Figure 3.6. Teacher and Principal Perceptions of Frequency of Student-centered Teaching Methods Employed in the Classroom



to attend training courses or workshops. In a couple of cases, principals stated that they facilitated workshops for teachers or provided direct supervision of teaching methods. Teachers usually asked colleagues or heads of departments—and sometimes the principal—if they had questions about their teaching.

Teachers and principals have different perspectives about the extent of supervision provided.

Staff meetings are another venue through which teachers and principals can discuss issues and concerns related to their teaching. Most principals (74 percent) and teachers (65 percent) stated that they attend a staff meeting about once every month. These meetings address student issues and administrative procedures and policies more than teaching concerns. Students' academic performance, including assessments and behavioral problems, were the most frequently addressed issues at staff meetings. Staff development, teachers' welfare, and the academic program were other issues discussed. A few principals and teachers also said that staff meetings are used to talk about new government policies, school goals, and infrastructure issues.

Strategies that are both easy to implement and effective in improving teachers' pedagogical practices need to be identified. One suggestion, to have experienced teachers guide younger teachers, was supported by more than 70 percent of the respondents in all three groups. In several cases, teachers and principals reported that this already occurs, though it may not be a formal practice. Experienced teachers providing guidance can be helpful for newer teachers to learn the classroom practices and teaching methods that are most effective. This relationship also allows for an exchange of problems and suggestions and it serves to boost morale and confidence.

Even though mentoring was largely supported by teachers, they raised a few concerns about creating the most effective system of mentoring. It was suggested that a mentoring system needs to be formalized at the district level so that it is accessible to all teachers. Furthermore, the selection of experienced teachers should consider the quality of teaching, in terms of content and pedagogical methods, more than the years of teaching experience. There was a concern that some experienced teachers are using out-of-date pedagogical methods and that mentoring in this context would not be helpful. A process of training the mentor and assessing the mentoring experience would also help address the quality of the experience for new teachers.

Another proposed strategy is the creation of learning communities in which teachers meet with other teachers to discuss ideas and issues in their practice. This idea was supported by more than 90 percent of the teachers, principals and policymakers interviewed. Learning communities generally meet outside of classroom teaching times, yet they are best attended if meetings occur regularly and during teachers' paid work schedule. Furthermore, topics that are most useful to discuss in these communities are concerns related to classroom pedagogy and new content, rather than one-time issues that could be addressed through individual mentoring or staff meetings. Ongoing and long-term learning communities allow for in-depth discussions of issues and encourage professional growth and development of all teachers over time.

Another option for improving teaching and learning in schools is to give principals greater responsibility for working with teachers, including more direct observation and supervision. This policy idea was generally supported by principals, teachers and policymakers (greater than 60 percent of all groups), but received less support than the idea of mentoring or learning communities. Teachers had the most reservations about increasing principals' responsibilities. They were concerned that principals are not necessarily the best trained in pedagogy or specific subject areas. They saw the primary responsibilities of principals as administrative. Other people, such as pedagogical supervisors or heads of departments, were regarded as better able to provide assistance with teaching and learning issues in the classroom. If principals do assume a greater instructional leadership role in their schools and play a stronger role in assisting teachers with pedagogical issues, principals will require additional preparation for this role, and the multiple relationships among teachers and heads of department, principals, and pedagogical supervisors will need to be clarified so that conflicting advice is not given.

Recruitment and Training of Principals

Recent literature on school reform suggests that principals or head teachers play a critical role in the success of strategies to improve teaching and learning. The knowledge they have of good teaching and learning practices, the leadership they provide for the school and community, and the ongoing support they give to teachers are all elements important to implementing successful school reforms.

Principals in this study felt that their most important quality was good management, which seemed to refer to coordination of tasks and teachers and good organization and record keeping. Other important qualities they identified were good communication and the ability to build relationships, including being able to handle a variety of issues with students and staff. While many of the principals mentioned leadership, they did not make clear how they defined leadership. It seemed most often to refer to character qualities, such as ethical, fair, and personable. A couple of principals mentioned that innovative and visionary were necessary qualities for success, and only one stated that an understanding of teaching and learning processes was important. These responses suggest that, generally, principals do not regard their qualities or roles as including knowledge of effective teaching and learning strategies. Rather, the role and the qualities necessary to be successful as a principal are primarily defined as administrative.

Their perceptions of their role as principal may be related to how those roles have previously been defined and the nature of the training they have received. For example, most principals do not have degrees in educational leadership. Rather, once they become principals, they may participate in inservice or distance education workshops to develop skills in needed areas. These workshops tend to focus on administration and management, (for example, accountability, resource management, and recordkeeping). Some principals say that they have participated in workshops on communication and community relations. Principals recognize the need for further training, and several stated that it would be important to have a degree in educational leadership or administration. Areas in which principals need further training include information technology for financial management and evaluation, strategic planning, and human resource management. None of the countries in this study reported

having an advanced degree program for principals. Rather, inservice was a relatively new idea in the professional development of principals. The development of a regional training facility for a master's program in educational leadership, therefore, seems to be an important potential initiative.

A related issue is recruiting interested and qualified teachers to become head teachers or principals. Most teachers felt that to become principals they had to work hard and be disciplined in order to prove their abilities. Teachers noted it was helpful to be in another position of responsibility, such as head of department, before applying to be head teacher. Many teachers also recognized they would need to pursue further studies to be qualified to manage a school. These data suggest that the process by which principals are selected is not based on qualifications to administer and manage a school, but rather they are selected based on prior positions held or their performances as teachers. Several teachers commented that they were not interested in being principals. Similar to the need to recruit interested and qualified teachers to the field, teachers also need to be recruited and mentored to consider taking on leadership roles in the school.

Special Issues

There are other issues that affect the quality of education beyond teacher and principal preparation and support. A few of these issues addressed in this study include community participation in education, inappropriate or unethical behavior, and teacher unions. Finally, whether or not policies get implemented and are successful is often contingent on whether all stakeholders in education are informed about the policy and support its implementation processes and goals. This study revealed that there are divergent views among stakeholders about policies and strategies that would be most effective in improving secondary education. These issues are discussed in this section.

Parent/Community Involvement in Schools

The recent international literature on school reform has emphasized the role that parents and the community can play in improving school quality and, ultimately, in improving student achievement. Additionally, in many Sub-Saharan African countries, parents contribute substantially to the material needs of the schools because governments do not supply the necessary resources. In this study, principals reported that a primary role of parents was their contribution of fees. Only in Ethiopia were fees not required. Education in Ethiopia is free through grade 10, although some schools have a small voluntary fee. Malagasi schools have a registration fee but no other fees, and Guinean schools had a small fee, but usually collect less than half of it from parents. Ghana, Uganda, and Tanzania all imposed government fees and expected additional parental contributions. The parental contribution varied considerably, but could be between four and ten times the government fee. Another issue related to fees is equity across regions. In Tanzania, the fees were higher in the rural schools than the urban schools, and rural schools had very high PTA fees. Table 3.3 reports the government fees and parent contributions in each of the six countries in this interview study.

All schools reported parents' involvement in the PTA or school committees. Parents' roles, however, are generally related to administrative and material upkeep of the school.

Table 3.3. Fees Paid in Surveyed Schools

Country	Government Fee	US$ Equivalent	Parent Contributions	US$ Equivalent
Guinea	2,000 francs	$1.03	None reported	
Madagascar	25,000–40,000 francs for registration	$3.80–6.09	Minimal amount	
Ethiopia	None through Grade 10	0	None to minimal fees	
Ghana	24,000–90,000 cedis, depending on day or boarding school	$2.88–10.81	Up to 100,000 cedis for PTA dues	$12.00
Tanzania	40,000–70,000 Tshs	$39.30–68.78	None to 700,000 Tshs for PTA dues	$687.83
Uganda	60,000–70,000 Ugshs	$30.21–35.24	25,000–55,000 Ugshs for PTA	$12.59–27.69

Note: August 1, 2003, exchange rates used to obtain US$ equivalents.

For example, the PTA and parent fees contribute to building, repairing, and maintaining school facilities. Other ways that parents or the PTA are involved in the school include disciplining students, planning and participating in special events, and assisting with hiring contract teachers, reported in that order of frequency. Parents' roles in improving the quality of teaching and learning, such as making or providing classroom materials or reviewing teachers' classroom practices, were not discussed by these principals. While it appears that these schools have taken initiatives to involve parents, their involvement still remains rather superficial in affecting the real mission of schools and student learning.

> Parents' involvement remains rather superficial in affecting the real mission of schools and students' learning.

Teacher Misbehavior

The quality of teaching and learning is also affected by teacher behavior. Teachers and principals reported that the most common inappropriate teacher behaviors were (in order of frequency cited) absenteeism or tardiness, mistreatment of female students (including inappropriate sexual relationships), and drunkenness. Disciplinary procedures varied for dealing with absenteeism or tardiness, but they usually include a letter of justification from the teacher for the unexcused absence. For a first offense, teachers typically receive either a warning or advice on how to behave appropriately. If multiple transgressions occur, disciplinary action may be taken against the teacher by the school board or district office.

Absenteeism was also addressed by requiring teachers to make up the missed classes. This response has an unfortunate side effect, as it requires students to attend additional classes outside of regular school hours, which may result in decreased student attendance. Another way to punish absenteeism was to deduct the time absent from the teacher's salary. Punishment seemed to vary among schools, with some simply asking the teacher for an

explanation and others revoking salary. While there were procedures for disciplining inappropriate behavior, some teachers stated that these procedures were not always used.

Inappropriate relationships between male teachers and female students had consequences at two levels: school disciplinary procedures and local legal procedures. Disciplinary action by schools included monitoring the situation and counseling the teacher for a first-time offense. Removal from the job was also a response, although it was not always clear if this was for a first-time offense or for multiple offenses. Principals also noted that they could advise the family to file a complaint or civil case with local authorities.

Extortion of students or favoritism in assigning or selling grades were also reported as occurring occasionally, particularly in Guinea and Madagascar. Disciplinary procedures for dealing with inappropriate conduct were not discussed. How extortion is handled needs to be studied further to determine if it is a common practice, as well as the extent to which it is overlooked or accepted by administrators and the effective disciplinary procedures for dealing with it.

While inappropriate behavior affects student learning, there is another issue that has developed as a consequence of disciplining such behavior; that is, principals are sometimes threatened by teachers for disciplining transgressions. Given possible repercussions, other methods for encouraging positive behavior may need to be considered, such as additional classroom materials for teachers who come to work regularly and punctually.

Teachers' Unions

While there is not a substantial literature on teachers' unions in Sub-Saharan Africa, it is suggested in the international literature that they are a force and mechanism for improving teachers' conditions of service. Presumably, the strength of their membership and their ability to influence government officials are indicative of how well unions serve to improve teachers' conditions of service. Data from this study indicate that unions are operating in all six countries, although their membership and influence vary across countries.

Forty-three percent of the teachers said they were not involved in a teachers' union. Most of the teachers not involved in the union were from Madagascar and Uganda. The visibility of unions and their influence need to be researched further in these two countries. In contrast, 84 percent of head teachers were involved in the head teachers' association.

Principals felt that the union had some influence, although this influence did not seem to be particularly strong. Teachers were less sure that the union had a significant influence. The perception that unions did not have much influence on government policy may be a reflection of the particular teacher's lack of involvement in union activities. Another reason that may explain the difference in involvement and perceptions of principals and teachers regarding the union is their knowledge about its activities. One interpretation is that principals are more aware of the union's influence and its effects on education policy than are teachers.

In general, teachers held a wide range of views on unions. Some believed their teachers' union is not knowledgeable about the work of teachers and does not communicate effectively with teachers. Others felt that the union has had some influence on raising salaries and attending to teachers' concerns. In Ghana, most head teachers and teachers felt that the government has failed to act on issues discussed with the union. In Ethiopia, most teachers felt the union was quite passive. In Uganda, the union is relatively new and has not yet recruited

many teachers as members. In most of the countries, the union primarily addressed teachers' salaries. Other issues championed by unions included changes in curriculum, teachers' benefits, and disciplinary procedures for teachers.

This study illustrates that unions are a player in the education arena in these countries, although further study is needed to determine the extent of their present or potential influence in improving teachers' conditions of service. Because teachers' conditions of service were the most frequently-stated issue that needed to be improved in secondary education, finding ways to change government systems to operate more efficiently may become an area for union advocacy.

Support for Policies Among Stakeholders

The literature on education reform suggests that the various stakeholders in education often have differing perspectives regarding the usefulness and feasibility of implementing new strategies. Furthermore, these differing perspectives are one reason that reforms are not implemented or not successful. The three groups of stakeholders interviewed for this study also held divergent views about the value of different policy options. Additionally, there was considerable disagreement within the groups as to the value of policy ideas. For example, policymakers were often split in their opinions around whether preservice teacher education should be shortened. The variation among policymakers seemed to be related in part to the positions they held. For instance, a policymaker who worked in the national Ministry of Education had quite different views about policies than those who worked in university education programs.

Support for policy ideas also can be based on the percentage of people who thought it was a good idea. Yet the percentage of educators who disagree with a policy idea should be taken seriously, as even a minority of participants can undermine the implementation and success of a program. Policies about which there is considerable disagreement as to their usefulness may not gain sufficient support or be effectively implemented.

Summary of Findings from the Field Study

The interviews with teachers, head teachers and decisionmakers in six Sub-Saharan African countries probed propositions and elaborated issues identified in the literature review on secondary education and teacher and principal recruitment, retraining, and retention. The results from the field study highlight the following six points.

1. Recruitment of teachers and principals does not happen in a systematic way that will draw a sufficient number of potential teachers to the profession and meet the growing demand of the secondary student population. Methods for recruiting potential teachers for colleges of teacher education from secondary school leavers need to be considered, as do mechanisms for mentoring current teachers to become principals.
2. The hiring of contract teachers who are paid through school or community fees is common, and is a response to inefficient deployment practices. Contract teachers often require further training; they also have a less stable source of remuneration,

creating issues of absenteeism and retention for schools to address. Incentives to encourage the government to employ contract teachers as part of the civil service teaching force may stabilize the teaching corps particularly in schools that have difficulty retaining teachers in certain regions or subject areas.

3. Simple strategies can be implemented to improve the conditions of service for teachers that may result in a more motivated, qualified, and satisfied teacher corps. These strategies include: creating learning communities among teachers to discuss teaching and learning issues; having experienced teachers mentor newer teachers; and improving the classroom environment, such as providing adequate curriculum materials and books to all schools.
4. Mechanisms for recruiting teachers to become principals or head teachers are unsystematic and not necessarily based on professional criteria. Review of policies on the selection of principals and the establishment of professional criteria would help ensure better quality school leadership.
5. Training in educational leadership and management is needed for principals. Principals, or head teachers, are requesting more systematic and ongoing professional training than the occasional workshop on administration and management presently available to them. A regional institution that specializes in advanced degrees or certification for educational leadership could be one option to address this need.
6. Inservice professional development serves to train, motivate, and retain teachers in the profession. Opportunities for inservice professional development should be increased, including the use of distance learning mechanisms that are seen as desirable by all stakeholders.

CHAPTER 4

Recommendations

The thematic study of secondary teacher and principal recruitment, retention, and retraining was made up of a literature review that was followed by a field study that explored issues identified in the literature. The interviews in six countries with teachers, principals, and decisionmakers in the education sector added depth and nuance to the literature review findings, confirming that the issues identified in the literature were indeed important and current. Very little that was revealed in the field study contradicted the central findings of the literature review. The two dimensions of the study, therefore, revealed remarkably consonant trends. The recommendations that flow from these combined findings are meant to suggest to policymakers potential areas of focus to address the challenges of developing a high quality, motivated, and professional teaching force at the secondary level and strong school leadership.

Recommendations for Strengthening the Quality of Teachers

Ensuring an adequate supply of qualified teachers is essential as junior and senior secondary education expand, although the resources this requires are extremely limited and unlikely to grow significantly in the near future. Planning secondary teacher-strengthening programs that require a much higher level of budget is not realistic for most countries at the present time. Countries, therefore, will need to make better and more creative uses of the resources that are already available to secondary education. New and more effective approaches to preparation, deployment, utilization, compensation, and conditions of service for teachers are necessary if the current problems are to be resolved. Under each of the headings below, a finding of the study is given, followed by recommendations for consideration by policymakers.

Recruitment of Teachers

Recruitment of secondary teachers is presently not systematic and not adequate to meet the growing demand.

- Develop strategies for the systematic recruitment of potential teachers for colleges of teacher education from secondary school leavers. This should not be left to chance.
- Consider recruitment campaigns that profile the profession positively, use excellent secondary teachers as exemplars of good practice and leadership, and encourage able secondary school leavers to join the profession.
- Develop strategies to encourage people with academic qualifications such as a degree to enter teacher preparation at a later stage of their careers. A potential source or recruits might be females who have been at home raising families after obtaining their degrees.
- Consider employing contract teachers in the civil service teaching force. This would provide them with training and job security and would stabilize the teaching corps, particularly in schools in remote areas that have difficulty recruiting and retaining teachers, or in subjects for which a sufficient number of teachers at the secondary level cannot be found.

Preparation and Professional Development of Teachers

Because preservice secondary teacher education, as presently configured, is very expensive and not particularly effective in developing a high-quality and motivated teaching force, broader and bolder thinking about alternative modalities is required.

- Design teacher competencies and formal teacher qualifications in accordance with the emerging and differing needs of junior and senior secondary teachers, with teacher preparation approaches newly designed in accordance with this.
- Consider alternative approaches to the acquisition of formal qualifications, such as periods of teaching interspersed between periods of study.
- Achieve a balance of practical pedagogical skills and content in preservice teacher preparation programs.
- Design a linkage between pedagogical skills and content development through school-based studies and expanded and well-supervised practical experience in schools, ensuring that these elements are integrated into the program from the beginning, not just scheduled at the end.
- Design a program to improve the skills of teacher educators in both content and pedagogical skill areas so that their teaching reflects good practice and knowledge of the secondary school environment and their ability to supervise students effectively is increased.
- Design teacher education as a continuum, starting with initial preservice teacher education and continuing with a strong ongoing inservice professional development program for secondary teachers that will support and motivate good practice throughout their teaching careers.
- Develop good supportive supervision structures. The most cost-effective way may be to develop the role of the school principal in this area.

- Initiate induction and mentoring programs to ensure that new teachers get a good start and feel that the learning community among teachers is supportive and motivating.

Deployment of Teachers

Teacher deployment approaches often contribute to attrition, with arbitrary posting of teachers to undesirable work locations being a major problem expressed by secondary teachers.

- Recruit teachers from rural areas, providing as much initial preparation in these areas as possible. Follow this with ongoing localized inservice professional development programs that reach teachers in their schools—or in clusters of schools—in these areas.
- Give additional compensation and recognition to teachers in difficult postings.
- Take into account the location of families in postings so as not to separate husbands, wives, and children for unreasonable periods of time.

Utilization of Teachers

Evidence from the study suggests that teachers are often used inefficiently within schools, with few class hours taught per week, particularly in rural schools.

- Prepare teachers to teach more than one subject (possibly as many as three subjects) at various grade levels.
- Consider a system of rotation of teachers through several nearby schools and an alteration of timetables so that teachers' time is well used and students are taught all subjects required in the curriculum.

Compensation for Teachers

Although teachers universally request higher salaries, the evidence suggests that increased salaries alone would be unlikely to improve the quality of the teaching force significantly.

- Increase salaries only in special circumstances, such as through the provision of bonuses for good service in rural areas.
- Develop a career structure where advancement and salary increases are dependent on good quality of performance.

Conditions of Service for Teachers

Improvement of conditions of service for teachers is a promising way of increasing teacher morale, making the profession more attractive, enhancing retention of teachers, and improving the quality of teaching and learning. Although improving conditions of service always has budget implications, changes in this area may be less costly and more effective than increasing teachers' salaries.

- Create learning communities and a sense of cohesion among teachers at the school level or in pairs or clusters of secondary schools that include groups of teachers and

their principals developing a vision, a strong professional identity, and strategies for improving the quality of teaching and learning in their schools.
- Strategize with secondary teachers about how a strong and positive professional identity can be created and how higher regard for the profession from society can be earned.
- Involve community members in the lives of schools in order to promote quality of education, better student learning, and respect for teachers.
- Provide teachers with better resources for good teaching.
- Provide space for teachers to work in the school.
- Give special assistance to teachers, especially female teachers in rural areas, in finding appropriate housing.
- Develop programs to recognize and reward teachers, including use of the media to profile excellent teachers.

Recommendations for Strengthening the Quality of Principals (Head Teachers)

The study suggests that, while most of the above recommendations apply also to principals who usually come from the ranks of more senior teachers, concerted effort to improve school leadership is one of the most promising points of intervention to raise the quality and efficiency of secondary education across Sub-Saharan Africa. The following recommendations for consideration by policymakers are suggested by the findings of the study:

- Systematize the recruitment of teachers to become principals based on explicit professional criteria.
- Professionalize the position of secondary school principal and develop certification courses in school leadership.
- Establish regional or national institutions that specialize in advanced degrees or certification for educational leadership and organize ongoing professional development.
- Develop a program of ongoing inservice professional development for secondary principals that includes an initial induction program and ongoing support.
- Ensure that the idea of the principal as instructional leader as well as transparent and efficient administrator is well understood by teachers and communities and incorporated in all initial preparation and ongoing professional development for principals. Likewise, ensure that the principal's role in creating strong linkages with communities is understood and that principals are prepared for this role.
- Organize principal clusters that meet regularly, providing a setting for delivery of some of the formal ongoing professional development and creating an opportunity for informal communal problem-solving, experience-sharing, and strategizing about effective approaches to secondary school leadership.

Recommendations for Action on Critical Crosscutting Issues

Issues regarding gender as well as HIV/AIDS cut across all aspects of recruiting, retraining, and retaining secondary teachers and principals.

Gender

In many secondary education systems, there are few female teachers and even fewer females in leadership positions. Female teachers and principals are critical to the expansion and improvement of secondary education systems. The following recommendations for consideration by policymakers are suggested by the findings of the study:

- Develop recruitment programs for secondary teachers that especially encourage females to enter the profession.
- Provide academic and other means of support (i.e., counseling and extracurricular activities) in colleges of education to ensure the success of female students.
- Recruit more females as faculty in colleges of teacher education.
- Develop more family-friendly teacher deployment systems.
- Assist female teachers in finding appropriate housing, particularly in remote areas.
- Encourage communities to develop support networks for female teachers.
- Develop mentoring programs for new female teachers, pairing more experienced female teachers with less experienced female teachers.
- Set goals for numbers or percentages of females in secondary teaching, in leadership positions, and as teacher educators, and develop strategies for reaching these goals. Challenge the institutions involved to work toward and achieve the goals.

HIV/AIDS

HIV/AIDS has a variety of devastating impacts on secondary education and on secondary teachers and principals, particularly through illness and attrition of teachers and principals, or their family members, and through the needs of students who are ill, or have ill family members. The following recommendations for consideration by policymakers are suggested by the findings of the study:

- Infuse HIV/AIDS information in all preservice and inservice programs for teachers and principals to raise awareness, change behavior, and help reduce teacher infection rates.
- Make sure that school environments are extensively and relentlessly filled with HIV/AIDS information and awareness-creating activities.
- Develop strategies for school-community cooperation and solidarity programs to raise awareness about HIV/AIDS and encourage changed sexual behavior among teachers, students, and community members. Through such cooperation, the school can ensure that the community supports school-based programs. The school can also use community suggestions and information to strengthen awareness and behavior-change programs.
- Encourage HIV-positive teachers and students to seek mutual support, speak out, and play a leadership role in demanding changed behavior.
- Supply teachers and principals with an extensive array of anti-AIDS information, teaching strategies, suggestions for extracurricular activities to use for their own awareness, with their students, and with community members.
- Provide specific guidance and measures in teacher education and professional development programs to prepare teachers to support colleagues or students affected by HIV/AIDS.

Recommendations for Further Research on Secondary Teachers and Principals

The literature review revealed that the present research on secondary teachers and principals in Sub-Saharan Africa offers only a weak basis for guiding policy and program development. In particular, there is little research on secondary principals and school leadership, little research on female teachers and principals, and little research that differentiates junior and senior secondary education, with the majority of research focusing on the senior secondary level. Suggestions for increasing the power and relevance of research on secondary teachers and principals are the following:

- Focus research specifically on either junior or senior secondary, emphasizing the collection and analysis of information on teachers and principals in junior secondary schools.
- Develop more research on the changing roles and effectiveness of secondary school principals.
- Focus research on factors that promote the success of girls in secondary schools and females as teachers and school leaders.
- Focus research on formulating and testing alternative solutions rather than continuing to clarify and describe problems.
- Collect solid evidence on the effectiveness of approaches being described rather than simply describing efforts to attract, deploy, or retain teachers.
- Carry out longitudinal research that tracks over time the effects and consequences of interventions to improve the teaching force or school leadership.
- Find ways to make the research conducted within projects more widely available.

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