

FOCUS ON LEARNING

STRATEGIES FOR THE DEVELOPMENT OF SCHOOL EDUCATION IN ZAMBIA

**Report of the Team Appointed to Review
Investment Strategies in Education**

DIS
J. CHAMBERWA

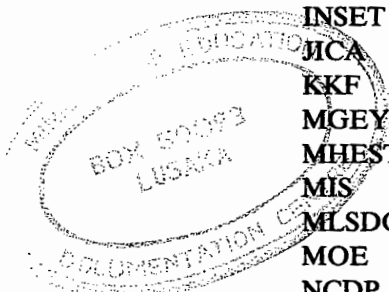
Ministry of Education

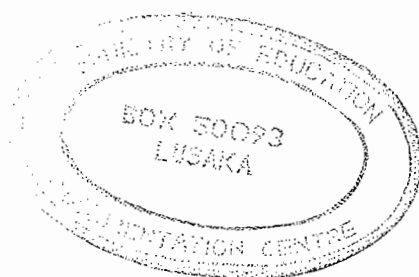
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ACRONYMS

ADB	-	African Development Bank
AIDS	-	Acquired Immune Deficiency Syndrome
CDC	-	Curriculum Development Centre
CIDA	-	Canadian International Development Agency
CSO	-	Central Statistical Office
DANIDA	-	Danish International Development Agency
EBS	-	Educational Broadcasting Services
EC	-	European Economic Community
EMU	-	Educational Materials Unit
ERIP	-	Educational Reform Implementation Project
FINNIDA	-	Finnish International Development Agency
FNDP	-	Fourth National Development Plan
HMSO	-	Her Majesty's Stationery Office
IAEA	-	International Association for the Evaluation of Achievement in Education
IIEP	-	International Institute for Educational Planning
INDP	-	Interim National Development Plan
INSET	-	Inservice Teacher Education and Training
JICA	-	Japanese International Cooperation Agency
KKF	-	Kenneth Kaunda Foundation
MGEYS	-	Ministry of General Education, Youth and Sport
MHEST	-	Ministry of Higher Education, Science and Technology
MIS	-	Management Information Service
MLSDC	-	Ministry of Labour, Social Development and Culture
MOE	-	Ministry of Education
NCDP	-	National Commission for Development Planning
NGO	-	Non-Governmental Organization
NORAD	-	Norwegian Agency for Development
ODA	-	Overseas Development Administration
OPEC	-	Organization of Petroleum Exporting Countries
PFP	-	Economic and Financial Policy Framework Paper
PIP	-	Public Investment Program
PTA	-	Parent-Teacher Association
SAP	-	Social Action Program
SHAPE	-	Self-Help Action Plan for Education
SIDA	-	Swedish International Development Authority
TNDP	-	Third National Development Plan
UNDP	-	United Nations Development Programme
UNESCO	-	United Nations Educational, Scientific and Cultural Organization
UNICEF	-	United Nations Children's Fund
USAID	-	United States Agency for International Development
UNZA	-	University of Zambia
ZANUT	-	Zambia National Union of Teachers
ZEMCC	-	Zambia Educational Materials Coordinating Committee
ZEMP	-	Zambia Educational Materials Project
ZEPH	-	Zambia Educational Publishing House
ZEPIU	-	Zambia Educational Projects Implementation Unit
ZPC	-	Zambia Primary Course

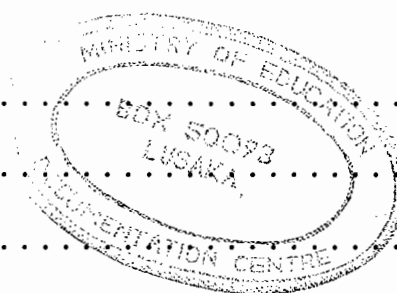




**Dedicated by his colleagues on the
Education Strategy Review Team to
the memory of Mann Sikuyuba. Even
when in failing health, he devoted
himself unselfishly to the develop-
ment of educational opportunities for
Zambia's children.**

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FOREWORD

Foreword by Hon. Arthur Wina, M.P., Minister of Education

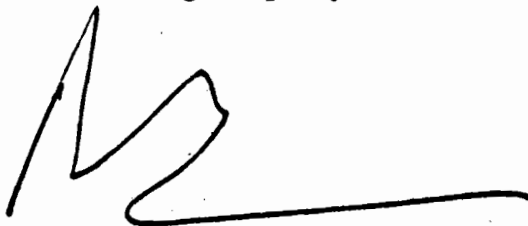
During the first 10 years of Zambia's Independence the Government of Zambia made massive investments in education. Very many primary schools, secondary schools and tertiary institutions were built and those already in existence were regularly maintained. Zambia was then financially capable of building new schools and rehabilitating old ones. Teachers were recruited from all over the world to come and educate our young generation. Quality in education was there and what Zambia wanted in addition was quantity.

In 1973 Zambia entered the phase of one-party rule. With it came a huge bureaucratic party machinery wholly financed by the State. Party functionaries were given sinecures at all levels of state operations and the total annual cost of financing such activities was more than the budgetary allocation by Parliament to education and health combined. Indeed, money allocated to education and health by Parliament was largely diverted to party functions by the provincial accounting units.

This led to a very rapid deterioration in the educational services. Primary schools could only be built by local communities. Secondary schools, except in a few cases, could only be maintained by PTAs. Indeed a breed of self-help basic schools came into existence at the initiative of local communities without any technical assistance from the Government of Zambia. This in itself ensured that no minimum standards could be expected as far as educational buildings went. Government was unable to supply educational materials to schools, and once again all this had to be done by local communities. Few teachers ever benefitted from in-service education since there was no proper funding for this outside the few colleges designated for such activities. Education in Zambia sank to the lowest standards. Certain services were only provided by donor agencies since Government had washed its hands of education.

In 1990 Zambia attended the World Conference on Education for All, and in 1991 organized its own National Conference on Education for All. Coming out of this Conference was a Task Force on Education for All which became responsible for making proposals and working out strategies on how best education in Zambia could be improved. These proposals and strategies are summed up in FOCUS ON LEARNING.

When plural politics came to Zambia in November 1991 the new Government examined the proposals and strategies in FOCUS ON LEARNING and immediately decided to acknowledge this as official policy on education in Zambia. Zambia will welcome any assistance from donor agencies and friendly countries to improve the provision of education within the framework of this agreed policy.

A large, stylized handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the bottom.

PREFACE

In March 1991, Zambia held a National Conference on Education For All. This Conference drew participants from a very wide spectrum of society, including politicians, academics, teachers, church representatives, labor leaders, and donor-agency representatives. The ideas discussed and the Declaration made at the end of the Conference prompted the Government of Zambia to establish a team to examine further the implications of implementing such ideas. With the present document, the Review Team presents its final report.

This report was prepared at a time of significant change in Zambia, between July 1991 and March 1992. Members of the Review Team made submissions in their own areas of expertise for the consideration of the whole team. These draft submissions were elaborated and revised in the light of the comments and suggestions received. The Review Team also considered papers that it commissioned in specialist areas and held discussions with various donor agencies. On the basis of these documents and considerations, drafts of each chapter were prepared under the general guidance of the Review Team. Throughout this preparatory phase, close contact was maintained with senior policy-makers in the ministry of general education (now the Ministry of Education). Initially, the ministry received a draft of the executive summary and subsequently of the entire report. At an early date, the ministry signified its general agreement with the developments that were being proposed.

As part of Zambia's Education For All initiative, a draft of the executive summary was also made available to members of the National Education For All Task Force.

It had been decided from the outset that before the report was finalized senior educationists from the public and private sectors, and representatives from the donor agencies, should be invited to consider its proposals, contribute to its contents, and propose revisions. This approach was adopted in order to widen the participation in the report's preparation, ensure the feasibility of its proposals, and build consensus for their implementation. Accordingly, an intensive two-day seminar was held in February 1992 to consider the draft report. The seminar endorsed the substance of the draft, but proposed a significant number of amendments and additions. It recommended that when the seminar conclusions had been incorporated in the document the report should be adopted as a policy statement for the development of primary and secondary education in Zambia.

The present document, embodying the recommendations from the policy seminar and further reflections by the Review Team, presents a comprehensive approach to the long-term problems and short-term needs of the primary and secondary school sub-sectors in Zambia. The Report sets out a number of strategies for the articulated development of school education and makes major and far-reaching recommendations, some of which impinge on the educational policy of the Government. Although resources are limited, the implementation of all that is contained in this Report is possible, provided that in addition to the necessary human, financial and material resources there is whole-hearted commitment to the measures that are proposed. With such commitment, it will be possible to place every child in a school which can become a vibrant institution for meaningful and satisfying learning. In its absence, the crisis that presently besets the schools -- above all, the primary schools -- will deepen, a generation of young people will be deprived of their right to worthwhile education, and the social and economic future of Zambia will be severely compromised.

The Review Team wishes to express its grateful appreciation to the many individuals who provided it with assistance during the preparation of this Report. Special thanks go to the Ministry of Education, the Ministry of Science, Technical Education and Vocational Training, the Ministry of Community Development, Culture and Social Services, the Central Statistical Office, and the University of Zambia for freeing senior personnel to participate over an extended period in the work of the Review Team. Special thanks are also due to the World Bank for financial support for the work of preparing and producing the Report. But above all, the Government of Zambia must be thanked for entrusting to the Review Team the development of such a crucial report. It is the Team's fervent hope that the Government will adopt this Report as the formal policy statement on the development of school education in Zambia. The Review Team hopes even more that the implementation of the measures it proposes will signal a great renewal in school education and will thereby contribute to fostering individual welfare, social development and economic growth in Zambia.

EXECUTIVE SUMMARY

1. During the past fifteen years a number of major documents and studies have set forth comprehensive strategies for the development of the education sector, with special reference to primary and secondary schools. These documents provide insights and make recommendations that are almost all still valid. In April 1991, the Ministry of General Education, Youth and Sport appointed a team of experts to draw upon these documents and upon existing analyses of the education sector so as to develop a detailed and prioritized strategy for delivering primary and secondary education under current economic constraints. Subsequent to the establishment of the Ministry of Education in November 1991, the Review Team was instructed to continue with its work, bearing in mind ongoing developments in policy. This Report, the preparation of which was supported by the World Bank Education Sector Rehabilitation Programme, presents the team's findings.

2. The fundamental aim of a school system of education is to promote the integral, harmonious development of the physical, intellectual, affective, moral and spiritual endowments of all students so that they can develop into complete persons for their personal fulfillment and for the common good of the society of which they are already members and in whose responsibilities they will share as adults. In the circumstances of Zambian society today, this necessitates a thorough and sound intellectual formation; an appreciation for the achievements and traditions of the past; a careful and critical study of the social and physical sciences and of technology; the development of the imaginative, affective and creative dimensions of each student; the development of important character traits and of a personal sense of moral values; an appreciation of the importance of work in human development; and the provision of a substantial and recognizable preparation for adult life.

3. The report deals primarily with primary education and proposes that MOE should concentrate in the first instance on providing seven years of education for every child and on enhancing the quality of that provision. The expansion and rehabilitation of primary schools and measures designed to improve primary school quality receive detailed consideration. At both levels, the focus is on establishing the conditions under which the school can truly become an institution where worthwhile learning takes place.

4. Primary school enrollments expanded rapidly up to 1985 but, thereafter, the growth rate slowed down, falling very considerably below the population growth rate. In consequence, the gross enrollment ratio in primary schools fell from 96 percent in 1985 to 88 percent in 1990. This slowing down occurred because there were no investments in primary school expansions and because the strategies of multiple sessions and excessively large classes, which had previously been used to increase enrollments, had been used to the limit of their potential. In 1990, approximately 190,000 children of primary school age could find no places in schools. Schools in Lusaka can admit only two-thirds of the 7-year old population, while in rural areas the number who cannot proceed from Grade 4 to Grade 5 because of inadequate places rose from 13,000 in 1985 to 18,000 in 1990.

5. Very few local resources have been available in recent years for supplying schools with books and other educational materials, for carrying out necessary maintenance and repairs, and for the back-up and monitoring services of school inspectors and others. The result is that there has been a reported decline in the level of student achievement. The price that has been paid for the rapid quantitative developments of earlier years is a serious deterioration in the quality of school education.

6. The proportion of public funds devoted to education fell from 13.8 percent in 1981-85 to 9.8 percent in 1987-91. This severe drop occurred when the system was still expanding numerically, even if at a slower rate than previously. The effects of the drop in educational expenditures were made worse by the large proportion that must go to personal emolument (97 percent at the primary level in 1991); by the increasing share that is spent on boarding and other student welfare (over 20 percent in 1989); by the disproportionately high spending on university students compared with primary students (186 to 1 in 1989); and, within the primary sub-sector, by a significant reduction in its share of the education budget (down from an average of 45 percent in 1970-85 to 30 percent in 1990).

7. National policy statements have expressed the need to give more priority to primary education. This priority is justified on equity, social, economic, and educational grounds. But priority for primary schools does not mean neglect of secondary or higher level institutions. The priority accorded to primary education must be viewed in the context of an integrated education system and of qualitative improvements being brought about at all levels. The broad educational strategy for Zambia in the years immediately ahead will be to promote quantitative growth at the primary level and qualitative improvements at all levels. But more generous support will be given to the enhancement of quality at the primary level.

8. The highest priority will be given to primary school development. The principal strategies for promoting this will be:

- (a) provision of resources for the expansion, development and rehabilitation of primary schools and, to the extent necessitated by these development, of the primary teacher training college;
- (b) emphasis on schools as institutions where students are supposed to learn and teachers are supposed to teach. This will entail:
 - (i) providing textbooks, supplementary readers and library books, and educational materials to primary schools;
 - (ii) improving the quality of preservice teacher education and promoting the ongoing professional development of serving teachers;
 - (iii) reforming the secondary selection examination;
 - (iv) developing and facilitating the professional and managerial competence of primary school heads, school inspectors and education officers;
 - (v) improving the overall management, organization and planning capacities within the education sector as a whole;
 - (vi) fostering the community's demand for and interest in primary education by curriculum improvements and measures destined to respond to the special needs of disadvantaged groups.

9. At the secondary level, priority in the allocation of resources will be given to:
- (i) the physical rehabilitation of classrooms, laboratories and specialist rooms;
 - (ii) the provision of textbooks, library books, and other educational materials;
 - (iii) re-equipping science laboratories and providing consumables;
 - (iv) improving the professional and managerial competence of school heads;
 - (v) facilitating the professional activities of school inspectors.

10. Implementation of these strategies requires considerably more information on the education sector than is currently available. Hence, high priority will also be accorded to increasing the amount of necessary information and to developing the capacity to analyze and utilize it.

11. The attainment of the goals proposed will require the commitment to the primary sub-sector of a growing proportion of national resources. This implies that resources will have to be directed into the primary sub-sector away from other areas of education, as well as into the education sector away from other sectors of the economy.

12. National resources alone will not suffice to meet all the needs of the primary sub-sector. Hence, there will be a continuing need for aid from abroad to supplement national resources and efforts to revitalize and develop primary education and to effect substantive qualitative improvements in secondary schools.

The Expansion of Primary Schools

13. There is urgent need for the physical expansion of the primary school sub-sector so that:

- (a) hitherto unsatisfied demands and needs can be met;
- (b) the sizes of classes can be reduced to what can be adequately accommodated and taught in a normal classroom;
- (c) the practice of triple and quadruple sessions can be ended.

14. The immediate need is for approximately 7,500 new classrooms; 400,000 two-seater desks; and 3.5 million textbooks. In principle, the teacher supply is adequate to meet current needs.

15. The long-term need (over the coming decade) is for approximately 17,000 new classrooms; 800,000 new desks; an average supply of 3.5 million textbooks a year; and an additional 20,000 trained teachers. Needs of this order of magnitude will continue to be experienced on into the next century if the child population continues to grow at its present rate.

16. The foregoing projections are based on the following norms:

- an average class size of 40;
- all classrooms for Grades 1-4 to be used for double sessions and for grades 5-7 for single sessions;
- all classrooms to have 20 two-seater desks; and
- for textbooks, the student-to-book ratio to be 2 to 1, with the effective life of school textbooks being 3 years.

It is also assumed that the 7-13 year old population will continue to grow during 1990-2000 at the same rate at which it grew during 1980-1990.

The Rehabilitation of Primary Schools

17. While it is acknowledged that the physical condition of a large number of primary schools has deteriorated to a shocking degree, there is a great need for accurate information on the actual condition of the schools and the types of interventions that are needed in individual cases. A detailed study of the state of the schools is an essential prerequisite for any major program of rehabilitation.

18. To reduce to a manageable size the problem of rehabilitating a large number of primary schools, there would be merit in focussing at first on certain categories of schools, such as incomplete schools, resource schools, schools with triple or quadruple sessions, or others. Donor agencies who are prepared to assist in this area should be encouraged to concentrate on rehabilitating either one such category of school across the country or all schools within a given geographical area.

19. The rehabilitation of schools needs to be accompanied by establishing systems for their ongoing maintenance and repair and for regular programs of visits by inspectors and education officers. Steps should also be taken to involve PTAs at all stages of primary school rehabilitation. Guidelines need to be developed that will spell out the respective responsibilities and rights of PTAs, local government bodies and central administration in the rehabilitation of schools and their subsequent maintenance. Arrangements should also be made for the development and dissemination of a training manual in school construction and maintenance, aimed at both PTAs and teachers.

The Primary School Curriculum

20. The curriculum for Zambia's primary schools displays a number of weaknesses. It is overly concerned with cognitive and factual knowledge. It is organized on the basis of fairly sharp distinctions between subject areas. It is developed centrally without adequate input from

teachers or communities. It lacks the flexibility that would enable it to respond to different local circumstances. The language policy guiding the curriculum is that English is the medium of instruction from Grade 1 onwards, although in practice, departures from this policy are sanctioned.

21. MOE will institute a review of the primary school curriculum with the intent of:
- (a) rationalizing the current subject-based curriculum and reducing the rigid boundaries between subjects;
 - (b) emphasizing student achievement in reading, writing and numeracy;
 - (c) fostering abilities in self-expression, independent thinking and problem-solving;
 - (d) incorporating areas of knowledge and the life and entrepreneurial skills relevant to a primary school leaver;
 - (e) involving the participation of communities and teachers in the design of the curriculum;
 - (f) developing a curriculum that is relevant, diverse and flexible;
 - (g) establishing the main local language as the basic language of instruction in Grades One through Four.
22. The number of hours supposed to be spent in classroom instruction is very low, especially at the lower primary level. Because of the practice of double session teaching, the duration of the actual teaching time in Grades 1 - 4 can be increased by no more than half an hour a day. To help compensate for this, the teaching day for upper primary classes will also be lengthened.
23. Because the teaching day in Grades 1-4 is so short, the curriculum will be adjusted to ensure that almost all of the available time is spent on what are manifestly learning activities. The focus of teaching in these early grades will be on the essential areas of reading, writing and arithmetic.

Learning Materials

24. Notwithstanding substantial support from FINNIDA, SIDA and other donors, there are not yet enough textbooks in schools for use on a sharing basis by all students; there are too few supplementary readers and almost no library books; and there are not enough teaching support materials. Thanks to the joint FINNIDA-SIDA-ZEMP project primary school needs are presently being met in English in Grades 1 - 3 and 5, in mathematics in Grades 4 and 5, and in social studies in Grades 5 -7. But there is a lack of science books for all grades and of mathematic books for most grades. The shortages of books and other educational materials are due in part to the low level of local funding, the value of which has been cut in half during the

past five years. The expenditure from public funds on education materials for each primary student in 1991 was estimated to be about K40 or only 10 percent of what experience elsewhere suggests should be spent as a minimum. The shortages of materials are also due to the failure of local industry to produce the necessary educational materials.

25. The two-stage model used by FINNIDA for the production of school books is effective. In the first stage, existing titles are reprinted and distributed to schools as quickly as possible. Where no titles suitable for reprinting exist, it is necessary to buy existing books off the shelf, very likely from international publishing companies. In the second stage, new textbooks, embodying new approaches to the curriculum, are developed. This second stage requires a long-term investment that should also take account of the need to orient teachers to the new materials. While Zambia should continue to use this model, the first priority should be given to reprinting existing titles (or buying off the shelf) so that schools are supplied with sufficient books as soon as possible.

26. Considerable potential has been created at the Curriculum Development Centre for the generation of manuscripts for school-books, but to capitalize on this potential the Centre needs to be adequately funded, especially for the running of the necessary seminars and workshops. Some of these funds might come from royalties payable on materials developed by the Centre. The CDC should take steps to speed up the entire process of manuscript development and should deal with the curriculum selectively so that a single year of study in a subject will require only a single student textbook which is not too large and not too costly to produce and does not take too long to develop.

27. As prescribed textbooks are the exception rather than the rule in Zambia's schools, CDC does not have a monopoly on the production of materials for primary or secondary schools. There is evidence of growing interest in the production of materials for schools outside the framework of CDC. MOE will encourage this potential by lending strong support to independent authors and publishers who are prepared to venture into the field of school publishing in Zambia and by fostering a more open market situation for the development of books for schools and their subsequent use in schools.

28. The performance of the Zambia Educational Publishing House (formerly the Kenneth Kaunda Foundation) in meeting Zambia's needs for school books has been disappointing. Although ZEPH appears to have the technical capacity to meet between half and three-quarters of Zambia's school book needs, its actual annual output is very much below this. Steps need to be taken urgently to reorganize its operations so that it becomes an effective and efficient supplier of school books. The proposals made in recent reports should be treated with great seriousness. The radical solution of privatizing ZEPH, to make it more effective in a competitive educational market, should also be considered.

29. Regardless of the performance of ZEPH, there is need for private companies to be involved in the publication of books for schools. Measures to encourage this private participation include the formal policy statement of welcome and encouragement which MOE has already made, assurances of fair access to the market for school materials, termination of ZEPH's privileged status as supplier of books and materials for schools, and a government review of taxation on raw materials for book production. This last point is of critical importance. At the high levels of taxation currently in force, Zambia runs the risk of taxing quality education out of

existence. MOE must also guarantee private companies that it will pay them in time for goods produced. Government could also promote the development of the publishing industry by enhancing the training capacity at Evelyn Hone College; giving priority to publishing companies seeking access to loans for the development of their book manufacturing plant; encouraging new investment in the printing industry; and facilitating the setting-up by international publishers of Zambian subsidiaries.

30. These are long-term measures that will take upwards of two years to make their impact on local capacity. In the meantime, a realistic assessment should be conducted of the capacity within Zambia to clear the backlog of titles that are ready for printing. Titles that cannot be produced within Zambia within a reasonable time-span (e.g., before the end of 1992) should be put out to tender abroad.

31. Schools stand in need of various educational materials other than books. Priority in meeting these needs will be given to providing primary schools with a basic set of general teaching aids and apparatus (globes, charts, blackboard instruments, etc.). High priority will also be given to supplying all schools with appropriate science materials and consumables and to improving the supply of rulers and mathematical sets. Initially, these will have to be imported, but the Government will encourage the development by the private sector and NGOs of small industries for the local production of these and other educational materials.

32. In the long term, school libraries should be provided at all educational institutions. Initially, the objective of developing these libraries will be pursued by making sets of primary level books available to schools in rural and high density peri-urban areas, with the objective of compensating for the lack of reading materials in the homes of most students in such schools.

33. To ensure that there is a proper level of public spending on educational materials, a capitation system will be established whereby budgetary allocations for primary and secondary schools will be linked to enrollments. These allocations will be funded by increasing the overall budgetary allocation to the education sector, by redirecting a larger part of the education budget to educational materials and away from boarding and welfare costs at the secondary and tertiary levels, and by a more cost-effective use of teachers.

34. Legislation will be introduced for the establishment of an Educational Materials Trust Fund which will use its resources to support the production of school books and other educational materials, to supply initial stocks of such books to existing schools, and to subsidize PTAs in purchasing additional or replacement stocks. The Fund will be financed by increasing the scope and coverage of the existing education levy. The Fund, which will be registered as a charity, will be empowered to receive donations from organizations and individuals. Donor agencies will be invited to support the Fund either by direct subventions or by transforming part of Zambia's annual debt service obligations into a debt-relief arrangement, whereby instead of paying what is due for debt, Zambia would pay countervalue funds into the Trust Fund.

35. Once schools have been supplied with initial stocks of books and educational materials, responsibility will rest with PTAs for replacements and additions. Because there is wide variation in the economic status of PTAs, the Educational Materials Trust Fund will be used to subsidize the PTAs of schools in disadvantaged areas, possibly through a coupon scheme, so that their purchasing power would be enhanced, but control of purchases and responsibility for materials bought would rest with the PTAs themselves.

36. For the foreseeable future, donor assistance will continue to play an important role in ensuring that schools have the books and other materials they need. Such assistance would most profitably be directed to: immediate reprinting of existing titles; development of new primary course books for mathematics, science, social studies and home economics; equipping primary schools with a set of basic teaching materials; supporting local production of non-book educational materials; providing schools in disadvantaged areas with sets of supplementary readers and other primary level library materials; providing basic science apparatus for primary schools; re-equipping secondary school laboratories; strengthening local capacity for the production of books and other educational materials; subsidizing the purchase of writing materials by students from poor families; allocating resources to the Educational Materials Trust Fund.

37. Increased donor assistance for educational materials points to the need for effective coordination of such assistance. The various programs should be mutually supportive and reinforcing. This coordination is the logical responsibility of the Educational Materials Unit. To discharge this coordination role, it will be necessary to strengthen the unit with additional staff, including technical assistance from a donor agency.

Examinations

38. There is urgent need to reform the Grade 8 selection examination so that it can contribute effectively to improving the quality of education in primary schools. This reform will consist in:

- more questions involving higher order skills, such as comprehension and application, and fewer requiring recognition and recall of facts;
- more questions that relate to the real-life situation of candidates, especially those whose schooling will end at this point;
- evaluation of writing skills and, in the longer term, of practical, oral and aural skills;
- more attention to important curriculum topics and areas; and
- detailed feedback information to the schools on aspects of student performance.

39. The Ministry of Education will work with the Examinations Council of Zambia to devise a formula that will give due prominence to local languages in all public examinations, while maintaining the need for proficiency in English.

40. Recent years have seen more extensive use of school-based assessments as part of the overall assessment of students in several countries. Calls have been made for the introduction of this system in Zambia. The undoubted advantages of the system indicate that it should indeed be introduced, but because of the cost implications, it will be necessary in the first instance to deploy the limited available resources to reform the externally set examination, as indicated above. Before a system of school-based assessment can be put in place, it will be necessary to prepare teachers adequately, to develop suitable testing exercises, to mount a sustained public relations exercise on the merits of the system and the safeguards that would accompany its introduction, and to ensure that there was adequate funding for its implementation. As a first step in this direction, all teacher education programs, pre-service and inservice, will include some orientation to methods of school-based assessment.

41. At the present size of the Grade 7 enrollment manual marking of the secondary selection examination is feasible and, if properly organized, could deliver the results more quickly than at present. A disadvantage of manual marking is that it does not lend itself to the analysis needed for providing feedback to schools, but this issue would not arise until the examination itself had been substantially reformed. In the long term, however, the Examinations Council will need its own computer facilities. The acquisition of a suitable computer system will not of itself solve all of the current examination-processing problems. The professional expertise and management capacities of the Council need to be enhanced so that it can make good use of whatever computer facilities it may acquire. Due regard must be had for the fact that the process of transferring all examination operations to the Council's own computer system will be quite protracted. The Council will devise various contingency measures to ensure that for as long as the present system lasts, and during the period of transition, examination processing and marking will be conducted efficiently and speedily.

42. MOE will adjust the calendar for the school year and the duration of vacations to ensure that adequate time is available between school years for the conscientious marking of the Grade 9 and Grade 12 examinations.

43. Because Zambia does not have the measurement or examination specialists that are needed for the implementation of a program of examination reform, the services of such experts and training opportunities for Zambians will be sought under appropriate aid arrangements.

44. With the focus of school developments being on student learning, objective measures will be established indicative of the level of performance society would expect primary school children to display in such essential areas as reading, writing and numeracy. Zambia does not have the resources to specify competency levels or to design and apply instruments to measure their attainment. Assistance from abroad will be needed, therefore, in providing a research specialist who could help to develop local expertise in defining essential competencies, designing tests, and helping Zambia to participate in the work of the International Association for the Evaluation of Achievement in Education (the IAEA).

Financial Implications of Universal Primary Education

45. On the assumption that there is no further decline in the current value of teachers' emoluments and that increasing provision is made for learning materials, school maintenance and teacher improvements, the recurring costs of primary education will grow at an annual real rate of 11.8 percent over the 1991 level. The projected spending on primary education in the year 2000 will be K5340.3 million (at 1991 values). This increase will be accompanied by an enrollment increase of three-quarters of a million. The combined effect of these two factors will see unit costs at primary level rising from K1285 in 1991 to K2283 in 2000.

6. Difficult choices and sacrifices will have to be made if the allocation to primary education is to grow in this way. Developments in other sectors of the economy will have to be foregone for the sake of developments in education and developments in other areas of education for the sake of developments to the primary level. The implication is that educational developments at all other levels must be kept under strict control. Resources will be barely adequate to maintain the existing levels of provision, with some improvement of quality, at the

secondary and tertiary levels; they certainly will not be adequate to sustain any major developments. The practical outcome of this is that ongoing projects will be completed, but no new projects will be initiated at levels other than the primary and teacher education levels.

47. Because resources for running expenses will be so scarce, it will be more necessary than ever to ensure that they are used in the most effective way that is consonant with educational objectives. Hence, there will be considerable emphasis on cost-efficiency measures relating to the deployment of teaching and non-teaching staff. The application of such measures depends on the availability of information about current numbers and utilization patterns of such staff. Priority will be given to acquiring this information. A further cost-efficiency measure will be to rationalize the present leave arrangements. To this end, discussions will be held with the Teachers' Union.

48. Cost-sharing measures will take many forms, some new, some already in place:

- (a) the development costs of new schools and school extensions will be met on a shared basis between the community and the Government;
- (b) to effect a significant reduction in the public cost of secondary school boarding, economic boarding fees will be charged, the extent of boarding will be reduced, and the number of boarding-related ancillary staff will be reduced;
- (c) various levels of tuition fees, determined periodically by MOE, will be charged in all Grade 8 and higher classes;
- (d) examination fees will be payable at rates determined by the Examination Council, except that there will be no examination fees for students who are taking the secondary selection examination for the first time; and
- (e) the present arrangements for cost-sharing at the tertiary level will be reviewed with the aim of raising more significant sums from the beneficiaries.

49. Some responsibility for the development and maintenance of schools will pertain to district councils. The forms that district council involvement in education might take and their financial implications are still evolving. But councils will assume immediate responsibility in the field of rates. Henceforth all educational institutions will be exempted from the payment of rates on property and buildings which are registered for educational purposes. A district council will consider the income foregone in this way as part of its financial support for education in the district.

50. If education of adequate quality is to be available for all 7 - 13 year old children, additional public resources will have to be directed to the education sector. For the greater part, increasing the proportion of public resources for education can only be brought about at the expense of other sectors of the economy. This requires the establishment of priorities, the will to allocate public resources in accordance with such priorities, and budgetary mechanisms that will ensure that full account is taken of these priorities when budgets are being established.

Post-Primary School Development

51. Priority for resource allocation for post-primary school development will be given to the physical rehabilitation of schools, the provision of teaching materials, the re-equipping of science laboratories, the training of school heads and other senior school officials, and promoting school inspections. The cost-efficiency and cost sharing measures outlined above (nos. 47,48) will be put in place. Provision will be made for the establishment of about 50 new Grade 8 streams each year. Additional teaching facilities will be established for Grades 10 - 12 by conversions of phased-out boarding facilities.

52. The establishment of private schools will be actively encouraged by streamlining the registration process, deregulating fees and, where financial circumstances allow, providing limited financial support. Schools and classes started by communities outside the framework of planned developments will be treated as private community schools that must charge sufficiently high fees to cover all their running costs.

53. Demographic and economic factors will make it very difficult to attain the target of seven years universal primary education during the coming decade. The same factors necessitate that the further objective of nine years universal education be regarded as a long-term goal. Educational policy will look unambiguously to seven years of primary schooling as the essential immediate goal for educational development. The modest expansions at the secondary level, outlined in no. 51 above, will be the first steps towards the ultimate goal of nine years universal education, but the journey towards that goal will be long and arduous. An outline map of the territory to be covered will be developed by undertaking an in-depth study of strategies for increasing access to secondary education, within available resources.

54. Because of the scarcity of resources all future provision at the Grade 8 level will be carefully planned and centrally controlled. To ensure that developments take place in accordance with policy, MOE will formulate guidelines for all potential providers of education. While these guidelines are being developed and disseminated, the development of basic schools will be frozen, for a minimum period of two years. There will be no further openings of such schools or classes, involving the commitment of public resources, until communities have been familiarized with these guidelines and the rationale for them. During this period, a survey will be undertaken of all existing basic schools to ascertain how they can be sustained and integrated into the education system, so that they can provide education of satisfactory quality to their students. In certain cases, the results of this survey may indicate that the basic Grade 8 and 9 classes will have to be phased out. Where this proves necessary, a generous investment program will be put in place to refurbish and rehabilitate the primary sector of the school system.

School Students

55. Quality-enhancing inputs into primary education will not bring the desired benefits to many children from disadvantaged homes, if persistent malnutrition is the lot of these children out of school. A comprehensive strategy for the delivery of primary education to all eligible children must therefore include provision for improving the nutritional status of children who are at risk. The Ministry of Health and the Ministry of Community Development, Culture and Social Services will be invited to help in identifying areas or schools where nutritional

interventions are most urgently needed. MOE will give high priority to such interventions in discussions with donor agencies and will take positive steps to encourage NGOs, charitable organizations and private benefactors to assist in funding and providing school meals for needy children.

56. The Ministry of Education will explore interventions to enhance the participation and performance of girls in school. These include special funding to provide incentives to encourage the participation of girls, the elimination of sex-stereotyping from all school books, an investigation of examinations to ascertain whether they are gender-biased in their content or structure, the establishment of additional secondary school places reserved specifically for girls, and modifications of the school timetable to take account of girls' domestic responsibilities.

57. To respond to the needs of handicapped students, MOE will take steps to include a component on teaching students with special needs in preservice and inservice training programs; to establish guidance and counselling posts for educational psychologists; to assist pre-school centres where blind and deaf children can master handicap-specific communication skills; and to arrange that handicapped students can move through the school system at a pace that matches their needs and progress. The ministry will also conduct an evaluation of accomplishments in the field of special education, with a view to assessing what more can be done to provide for the educational needs of children who suffer from mental or physical disability.

58. MOE will promote the development of pre-schools by training pre-school teachers and supervisors, facilitating the development of pre-school teaching materials, and providing professional guidance. The establishment of pre-schools will continue to be the responsibility of local authorities, communities and concerned parents.

Teachers

59. As key individuals in determining whether the school can bring its undertakings to fruition, teachers should be proficient in the subjects they teach and be resourceful in converting their knowledge into effective learning experiences for their students. They should continue to be learners themselves, advancing in the knowledge of their subjects and improving their teaching skills. They are among society's principal agents in promoting socially responsible behavior in young people whose values they help to form. They are important members of the school community and are also significant representatives of the local community, acting on its behalf in the development and formation of the next generation of adults. The wide-ranging responsibilities of teachers require that there be a comprehensive program for maintaining and improving teacher quality. This necessitates attention to their career prospects, working conditions and opportunities for continued professional development.

60. The decline in teacher morale, alleged increases in teacher absenteeism and indiscipline, and the growth in premature wastage from the teaching profession manifest some of the effects of the deteriorating economic climate on teachers' terms and conditions of service. Even the most recent large increase does not give teachers' salaries the buying power they had as recently as 1986. MOE can give no assurances that the real value of emoluments will be increased, but it will try to ensure that their further deterioration is arrested. Its financial planning is based on the assumption that this will be so.

61. Other factors of importance for the morale of teachers are the professional and administrative support with which they are provided and their standing as professionals and community leaders. To ensure that teachers receive the prompt and efficient administrative support that they need, MOE will activate the teacher management information system developed in conjunction with the Commonwealth Secretariat. In addition, as part of the process of re-organizing the ministry, clear guidelines will be developed regarding the level at which administrative decisions should be made and responsibility for much procedural decision-making will be passed to subordinate officials. This decentralizing reorganization should serve to reduce bureaucratic delays and to streamline administrative procedures.

62. MOE will hold consultations with ZANUT, with the intent of establishing a legalized professional organization for teachers. The status of teachers would be enhanced and their morale promoted if they could feel they constituted a professional group similar to lawyers, doctors or engineers.

63. The classroom effectiveness of teachers depends heavily on their knowledge of subject matter and on their pedagogical skills. Teachers need to be given regular opportunities for self-improvement in both of these areas. Future programs of inservice teacher education will be comprehensive and systematic. They will not be offered just for their own sake, but in order to make the participants more effective as classroom teachers and hence better equipped to bring about student learning. For many years to come, the main purpose of inservice education will be to familiarize teachers with new curriculum content and materials, to upgrade their actual instructional skills, and to promote their resourcefulness in using as teaching materials items that are available locally. It will not be possible for all of the needs to be served by residential or long duration programs. Much will have to be locally based, using the professional network of school inspectors and the organizational network of resource centres and resource teachers, within the framework of SHAPE. The broad training strategy that will be adopted will be the cascade model, whereby intensive training will be given to a small number of higher level trainers; these will train a larger number of lower level trainers who in turn will train personnel in the field. Although financial provision for these training costs has been included in the projected primary school running costs, these local funds will need to be supplemented by donor agency assistance in the form of personnel and back-up support.

School Heads

64. The school head plays a crucial role in promoting a school environment which stresses the importance of learning and which encourages trust, effort and mutual respect among students and teachers. For this reason, high priority will be given to the professional and administrative development of school heads. There will be a systematic program of inservice training for heads and an improvement in the supervision and support that the head can expect from the district education office. A suitable training model would be to enable all heads to participate in a month-long intensive training course at one of the teacher training colleges. Providing such training for upwards of 3,500 school heads would be a gigantic task, but because this area is considered as being so important, donor agencies will be invited to give priority to its accomplishment by providing technical assistance and support for the residential program.

65. Adequate training for the job provides no guarantee that heads will in fact manage their schools in an effective and competent manner. The present system, under which a head is almost assured of security of tenure gives undue protection to inefficient and ineffective heads. Legislation and regulations will be re-examined so as to provide that appointment as school head, or to other senior posts in school, should be for a specified number of years (with the possibility of re-appointment). To promote a greater sense of accountability to the local community, a school's PTA will be involved in all that relates to the appointment of school heads and other senior school personnel.

School Inspectors

66. Inspectors constitute the most important agency for monitoring quality in education. For the discharge of this responsibility, the inspectorate needs a larger establishment, professional upgrading of many of its members, sufficient resources for a regular program of frequent school visits, and an autonomous status. In accordance with the proposals in the FNDP, the necessary legislation will be brought forward for the establishment of the inspectorate as an autonomous body. Responsibility will then rest with the inspectorate itself to increase its establishment and to assure the resources needed for a regular program of school visits. Within the overall framework of the allocation of resources, more priority will be given to the inspectorate so that it becomes mobile and can exercise its quality-control functions.

67. The UNZA School of Education will be requested to provide a tailor-made program for the training of primary school inspectors and to arrange the modality of mounting this program in a way that best suits the needs of the inspectorate. The program should focus on curriculum at the primary level, instructional methods, and school management and supervision in the Zambian context. Resources will be sought to strengthen the School of Education so that it can mount this program.

Transport

68. Efforts to increase access to education, to rehabilitate schools, and to effect significant improvements in the quality of education, all require that the transport needs of the system be adequately met. MOE will take steps to ensure that suitable transport is available for field officers and certain institutions and that adequate funds are provided to operate vehicles. With the increase in the number of vehicles the system of monitoring their use will be strengthened. Increased financial autonomy at district and local levels should contribute to more effective and responsible management of transport. In general, while central funds may be provided for the initial acquisition of transport they will not be allocated for the repair or replacement of vehicles that have been used wrongly or for personal purposes.

The Training and Supply of Teachers

69. Teacher education is central to the efficiency and effectiveness of the total education system. Its development is considerably more than an exercise in quantitative expansions, to keep abreast with an expanding school system. Its focus is on establishing an

environment that will facilitate such learning, understanding and competence in its students that when they become teachers, they will be able to promote these attributes at appropriate levels in the schools.

70. To transform students into effective and committed teachers, a teacher training college must have a student intake of adequate personal and academic quality, an appropriate curriculum, suitably qualified and experienced staff, and sufficient teaching resources. The calibre of student intake has improved appreciably in recent years, but this improvement has not been matched by improvements in the quality of the curriculum or of college staff, while in common with all colleges and schools the teacher training institutions have suffered from a dearth of resources. There is need for a major revision of the curriculum, teaching organization and examinations for the colleges, so as to reduce the number of examinable subjects, relieve the burden of a tightly scheduled day, and promote problem-solving skills and flexible teaching styles that will take account of the real conditions in Zambia's primary schools.

71. A comprehensive staff development program will be developed for the training colleges, so as to upgrade underqualified lecturers. High priority will be given to supporting UNZA's proposed degree in primary education and to enabling a large proportion of serving lecturers to participate in it.

72. A selection board, normally chaired by the college principal, will be established at each college to make a preliminary selection of candidates for admission to teacher training programs. A joint board will be established at the national level to monitor the selection procedures at the colleges and to approve the list of successful candidates proposed by the local boards.

73. To respond to the library and resource needs of the colleges, the real value of the allocation for student requisites will be gradually increased and a proportion of the yield from the education levy will be set aside each year for these purposes.

74. The duration of the pre-service training for primary teachers will be retained as two years for the foreseeable future. This is necessitated by the severe resource constraints, which would not admit of an extension of the duration of the training. It also seems to be advisable on cost-efficiency grounds.

75. Improving the effectiveness of the training colleges necessitates strengthening their management. This means that the professionalism and effectiveness of college principals and other senior officers must be improved. Principals need to enjoy real responsibility and a high degree of managerial autonomy. In line with developments throughout the education sector, more responsibility and authority will be devolved to principals. Their authority will be further enhanced by disbursing to them directly the funds that are allocated for the running of their institutions. The successful implementation of this policy of decentralized management requires adequate inservice training for college principals and other officers.

76. The most promising teacher preparation model to adopt in meeting the needs of the expanded primary school system for more teachers is the current two-year college training program. The following measures will be undertaken to increase the teacher supply from this program:

- (a) existing college facilities will be utilized to the fullest by increasing the intake of boarding and day students;
- (b) the number of students graduating will be increased in about one-half of the colleges from 1995 onwards and in the rest from 1996; and
- (c) an additional 350 teachers will graduate from one new college in 1997, from a second college in 1999, and from a third new college in 2001.

These strategies will prove sufficient to meet the demand, provided teachers are deployed in the rational manner outlined elsewhere in this Report and provided primary school teachers are not deployed to teach in Grade 8 and 9 classes in basic schools.

77. Increases in the number and proportion of untrained teachers are not in accordance with policy. Although many of these teachers show great good will and industry, they lack the skills needed for teaching young children who are at a critical stage in their educational development. Untrained teachers are also a costly resource. Henceforth, provincial education officers will stem any further growth in the number of untrained teachers by appointing them only in situations of clear and proven need and for very limited periods of time.

78. At the levels of secondary school expansion that were proposed above, the supply of diploma-holding teachers from the current programs will be just about adequate to meet needs for the remainder of this decade. But because of the very high rate of attrition of university trained secondary teachers, the supply of such teachers is likely to fall very short of the demand. There is urgent need to reduce the rate of loss of graduate teachers by making it more attractive for them to remain in teaching. To this end, MOE will institute a full-scale review of the remuneration for graduate teachers in order to (a) remove the anomaly that allows such teachers to be better paid if they transfer to another part of government service, and (b) improve the attractiveness of a teaching career in relation to other areas of employment in Zambia.

79. Strategies directed at retaining a larger proportion of graduate teachers must be accompanied by strategies directed at increasing the supply of such teachers. The high costs of graduates produced at UNZA, the need for the School of Education to devote more of its resources to other training needs for the education ministries, and the high wastage rate that has been experienced with UNZA graduates suggest that some other method be devised to prepare teachers for the higher grades in secondary schools. One possibility is that one or more of the existing secondary teachers' colleges be developed as a constituent college of the University of Zambia, empowered to offer education degree programs. But the many implications of such a development need more extensive investigation. Other aspects of the programs for the preparation of secondary teachers that need investigation are the possibility of training all secondary teachers to teach from Grades 8 to 12, the desirable and feasible duration of the diploma program, and how to increase and retain the supply of well-qualified science and mathematics teachers. MOE will set up a review body at once to examine these issues and all other aspects of the training programs for secondary teachers.

Organization and Management of the Education Sector

80. MOE is presently working with an administrative and logistical structure that was originally created for a system of much more limited size. This structure no longer seems

appropriate for the size and complexity of the education system. It will be necessary to conduct an in-depth review, with the help of management consultants, of the structure and organization of MOE and, on the basis of this review, to reorganize it fundamentally.

81. Measures will also be taken to loosen up the highly centralized, control-oriented authority structure and to strengthen managerial capacity, especially at the intermediate level. More authority will be delegated to the intermediate and lower levels of the system. The extent of this delegation will be determined at the time of the review of the structure and organization of the Ministry of Education.

82. Managerial capacity will be strengthened by establishing training schemes for secondary school heads and their deputies and for district education officers. The needs of secondary school personnel will be met through short courses, workshops and instructional materials. The Heads of Secondary Schools Association will be invited to participate in the design and mounting of these programs. A more structured program will be put in place for education officers. The UNZA School of Education will be requested to provide a special program in educational administration for these officers. The program would have some elements in common with that for school inspectors, but would focus more heavily on school and general administration.

Educational Planning and Policy Analysis

83. Measures will be taken to strengthen the information base needed for routine management of the education system and for the development of policies; to strengthen the policy-making process and facilitate the identification of priorities; and to improve planning capabilities at all levels. Assistance will be sought to establish within the planning unit a comprehensive Education Management Information System (in addition to the Teacher Management Information System mentioned in no. 61 above). The success of this system will depend on the availability and reliability of data collection and this in turn necessitates the re-establishment of the posts of planning officer at provincial level. MOE will also seek to make it possible for the planning unit to undertake action-based research by expanding its establishment to allow for the appointment of professionals in such areas as the economics of education. While local personnel are undergoing training in these areas, technical assistance will be sought so that the planning unit is able to respond more dynamically to the ministry's information and analytic needs.

84. MOE will consider establishing a permanent mechanism, in conjunction with the University School of Education, that will facilitate closer cooperation between the two bodies and a development of the semi-formal relationship of mutual cooperation that has long existed between them.

85. Donor agency support will be sought in providing logistical and financial support for higher level planning courses for senior education officials. The building of consensus for the implementation of much that is contained in the present Report and in other documents depends heavily on such courses.

86. An educational documentation centre will be established as part of the program to develop a more effective planning, research and information capacity within MOE. The participation of the Zambia Library Services, of the UNZA library and of the Department of Library Studies in the School of Education will be sought in determining the most suitable location for this centre, how it should operate, and how best it could disseminate information about its holdings.

Community Participation in the Provision of Education

87. Community participation in the provision of education is not just an emergency stop-gap measure in times of financial difficulty. It is a preferred alternative in its own right, promising greater accountability and more efficiency. It is desirable, therefore, that community involvement in the provision of education be fostered, not just in the context of cost-sharing, but also at the level of policy-making, planning and curriculum development.

88. What goes on in a school is being done on behalf of parents and the community. Hence these should be encouraged to learn as much as possible about school affairs, to be involved in the actual work of education, and to participate broadly in all that affects the school. Teachers should take the lead in affirming that the school is not theirs but belongs to the community, and hence they should welcome the interest and participation of community members in school affairs. Equally, since it is a community asset, the school should make its skills and resources available to the community through various services which teachers and students can render. The school's greatest service could be to work with the community for the reduction of illiteracy and for the consolidation of recently acquired literacy and numeracy skills.

89. Ideally, each school should have its own School Management Board, answerable to its PTA, and empowered to engage staff and determine the budget for the school. MOE will undertake a comprehensive study of the legislative and administrative measures needed to bring a School Management Board system into operation and will examine the implications of such a system for educational provision. But even under a Board system, certain functions, such as quality control, school supervision and school inspection, would remain the responsibility of the ministry.

90. MOE will consider establishing a broadly based coordinating body that would determine how best to promote the partnership between the Government and the community in the provision of education.

91. The preparedness of communities, despite limited resources, to support school development should be more systematically tapped. To this end communities need to be educated on how they can contribute financially and participate in other ways in educational provision. Clear guidelines will be formulated to help communities in this regard.

Private Schools

92. There are three reasons for encouraging the development of private schools. First, the establishment of private schools relieves the Government of some of its financial and

other responsibilities. Second, private schools are a form of community participation in educational provision. Third, private schools have been found to be more efficient than public schools in promoting student learning. But while private schools have been part of Zambia's educational system from the outset, they play a very insignificant role in educational provision at the primary level and a relatively small role at the secondary level. Their greatest potential for expanding access to education appears to be at the secondary level in urban areas. The development of private schools is constrained by the bureaucratic procedures that govern their establishment and by the continued control of their fees. Their development is also limited by the number of users who would be able to pay the fees they charge.

93. In keeping with policies enunciated in the PFP, charges and fees in private schools will be deregulated and measures governing the establishment of such schools will be reviewed in order to streamline the registration process and facilitate more involvement by the private sector in the provision of education. A mechanism will also be devised for providing limited financial support to private schools that meet certain criteria.

94. Private schools will be integrated more closely into the entire education system through representation on appropriate planning, curriculum development and other bodies. To as great an extent as possible, they will be enabled to benefit from the measures proposed in this Report for the enhancement of quality.

Nonformal Education

95. MOE acknowledges the importance of the nonformal approach and considers that it will make its best contribution in this area by promoting more wholeheartedly the second-chance equivalency programs presently being offered by the Department of Continuing Education. The development and running of open secondary schools will receive particular attention. The first step in this direction will be an in-depth study of the open secondary school system to determine its cost-effectiveness.

96. The present Adult Education Advisory Board will be transformed into a Coordinating Council for Nonformal Education, with membership representing the agencies engaged in providing nonformal education. One of the Coordinating Council's first tasks will be to develop a comprehensive directory of nonformal education programs.

97. The development of private correspondence colleges will be encouraged by facilitating the registration of these colleges. The colleges will be helped to improve the quality of what they have to offer by the involvement of their academic staff in issues relating to curriculum and examinations and by assistance in programming their materials.

Out-of-School Children

98. The educational responsibilities of MOE extend to all children of school-going age, including those who are not actually attending school. Out-of-school children need to be helped so that they can achieve competency in reading, writing and numeracy, and acquire relevant life skills and knowledge. The Department of Continuing Education will be given the

responsibility for seeing how best these out-of-school children can be reached and taught. The Department will need additional funds for this new responsibility. The development of a special curriculum and learning materials for these children will be entrusted to the Curriculum Development Centre. The help of NGOs and community agencies will be required in actually getting to and teaching many of these children. The help of the donor community will be needed for any large-scale program directed towards the needs of out-of-school children.

Educational Broadcasting

99. A systematic evaluation will be undertaken of all aspects of educational broadcasting, with particular reference to actual use by primary schools and the success of the broadcasts in supplementing classroom instruction. The evaluation will also seek to assess the extent to which students in the programs of the Department of Continuing Education, and others for whom special broadcasts are made, make use of these transmissions. In the light of the evaluation, decisions will be taken on whether to continue with transmissions to primary schools and whether to extend the range of broadcasts for open secondary schools and other users. The evaluation will also provide information for deciding on the establishment of a special channel for nonformal education programs.

Donor Support for Education

100. During the early years of the 1980s, the total donor investment in primary education in Zambia was relatively small and the major part of the aid flow to education was not directed at inputs that have been found to be the most effective in promoting learning. This picture changed significantly in recent years because of the emphasis of two major donors, FINNIDA and SIDA, on support for basic education. But even with this changed picture, the tertiary level establishments, particularly the universities, still boast the largest concentration of donor interest.

101. Zambia faces a formidable challenge in its efforts to restore quality to its education system and to enable every child have access to primary school. It cannot meet this challenge alone, but must turn to the international community for continued and increased assistance for education. The priorities for donor assistance do not differ from the priorities for the education sector. They are to improve the quality of learning in all institutions and to increase access to primary education. In some cases, before steps can be taken in either of these directions, there is need for preliminary research to provide essential information about the problem being addressed.

102. The yardstick against which all aid interventions should be measured is their potential for direct or indirect impact on the improvement of student learning. The essential concern of a school system is to promote the attainment of learning objectives. This should also be the essential concern of donor assistance to education in Zambia.

103. All parties concerned should ensure that commitments to the provision of local counterpart funds for donor-aided projects are honored so as to enhance the local sense of ownership and responsibility for projects and to promote their sustainability when donor assistance ends.

104. Local counterparts to technical assistance experts should be individuals with sufficient seniority, experience and expertise in the field in question. They should remain in post for the duration of the project and, preferably, long after its aided status ends. Only in the most exceptional circumstances should they be transferred elsewhere. They should be adequately remunerated and be enabled to fit their project participation into a challenging career structure. Both MOE and the donor agency should regard counterparts as sharing responsibility for project activities and as having full responsibility when the technical experts are absent. They should also ensure that local counterparts have a real say in the control of resources and in actual project management.

105. MOE representatives on committees involving donors at the national, sectoral and implementation levels should be individuals who are well-informed on the sector and have appropriate decision-making authority. MOE's seriousness of purpose about donor activities and programs will be demonstrated by regular and full participation in the meetings necessitated by the work with the donor. More coordination between donors themselves could help to reduce the need for hard-pressed education officials to participate in a multiplicity of meetings.

106. Aid to education should be effectively coordinated in a way that facilitates the realization of anticipated benefits and that demonstrates Zambia's seriousness of purpose. This is a prerequisite for enhanced and continued support. It is also an aspect of Zambia's accountability to the public in donor countries. Effective coordination has remained over the years a problem area in the effective management of aid. The absence of a strong and effective coordinating mechanism can lead to duplication of effort, undesirable variations in standards and procedures and the possibility of conflict. More fundamentally, it can lead to donor-driven initiatives supplanting the local vision of educational development, with the priorities as perceived by the aid agency becoming the priorities of the recipient country.

107. In recognition of these issues, MOE will seek to improve aid management arrangements by fostering a climate of dialogue in the context of a clear determination of priorities. It will also strengthen existing mechanisms for aid coordination and, if need be, will extend these. Specifically, the EMU will be strengthened and will be transferred to become a division for educational materials within ZEPIU. The coordination of all activities relating to the physical development or rehabilitation of schools and colleges will be entrusted to ZEPIU. Responsibility for coordinating all of the training and upgrading programs considered in this Report will be entrusted to the ministry's Human Resource Development Office in liaison with the inspectorate. The technical aid division in MOE will be strengthened and will be given the necessary technical back-up so that it can serve as the overall coordinating body for all areas of aid to education.

CHAPTER 1

STRATEGIES FOR THE DEVELOPMENT OF SCHOOL EDUCATION

Background

1.1 During the last fifteen years, three major documents have set forth comprehensive strategies for the development of the education sector, with special reference to primary and secondary education. Following several years of intensive debate and discussion, the Government published the 1977 document Educational Reform Proposals and Recommendations which outlines government policies and goals for the quantitative and qualitative development of the sector. This document still forms the basis for much that concerns school development, although in a number of instances there have been significant departures from the policies and strategies that it embodies.

1.2 Following some years of uncoordinated attempts to implement the contents of the reforms document, the Ministry of General Education and Culture commissioned the University of Zambia to develop a detailed and comprehensive plan for implementing specific aspects of the Educational Reforms. This study, which was financed by the World Bank's Fifth Education Project, led to the Educational Reform Implementation Project (ERIP) report: The Provision of Education For All. The Implementation of Zambia's Educational Reforms Under Demographic and Economic Constraints, 1986 - 2000. This report was submitted in draft form in January 1986 and in definitive form the following August. The ERIP report made a thorough analysis of the issues affecting primary and secondary school provision and expressed a number of the original reform proposals in operational form, with targets and costs spelled out on an annual basis and with concrete proposals for meeting the costs. The principal thrust of the Report was towards the development of primary education. Social, political, demographic and economic developments in Zambia since 1986, and the educational insights disseminated worldwide by the 1990 World Conference on Education for All, bear out the continuing relevance of the ERIP Report's contents to the development of the school sector today.

1.3 The third document was issued a year later, in June 1987, by a working group established by the existing two education ministries to prepare an action plan which would identify areas in the education sector requiring improvements and would propose measures for effecting the necessary changes. Funding for this activity also came from the Fifth Education Project of the World Bank. The group's submission, entitled Report by a Working Group, made a number of concrete proposals and identified areas for investment. Some of the recommendations that had minimal financial implications were subsequently implemented, but no coherent action could be taken because of Zambia's continuing economic difficulties.

1.4 Significant proposals relating to the development of school education were also contained in the education and training chapters of the third and fourth National Development Plans, which were elaborated on the basis of Educational Reform. The TNDP (1979-83) concerned itself with beginning the implementation of part of the reforms, while the FNDP (1989-93) incorporated several elements from the ERIP and Working Group's reports. In particular, the FNDP embodied the Working Group's organization of issues and strategies in terms of quantity, quality and cost-effectiveness.

1.5 Preparations for the World Conference on Education for All, held in Jomtien in March 1990, drew attention to the need for more coordinated efforts to increase the level of adult literacy and for closer cooperation between MGEYS and MLSDC, the ministry with formal responsibility at that time for adult literacy and a number of non-formal education programs. In this vein, the MLSDC documents, Adult Literacy in Zambia (funded by UNICEF in 1990) and The National Literacy Campaign in Zambia, dealt with issues that are of major concern within the education sector.

1.6 Following the Jomtien Conference, the Zambia National Task Force, which had been established to design a model for a sustainable program of basic education for all, worked throughout 1990 to develop a plan of action for implementing the World Declaration in Education For All. This activity, which was supported by UNICEF, the British Council and Danida, led in March 1991 to a National Conference on Education For All to develop Education For All implementation plans and strategies for the 1990s. The conference, which was co-hosted by MGEYS and MLSDC, under the auspices of the Prime Minister, was sponsored by UNDP, UNESCO, the World Bank and UNICEF, and co-sponsored by the British Council and Danida. The outcome of the conference was a National Declaration on Education For All which took up again a number of the themes presented in the earlier documents and stressed the need for commitment and consistent support for the goals and aims of Education For All. The National Declaration also recognized that the attainment of these goals would require the mobilization on a large scale of financial, material and human resources and considered where these were to come from if acceptable levels of learning achievement were to be promoted.

1.7 Finally there are the policy documents developed by the Ministry of Finance and the National Commission for Development Planning as part of the new economic recovery program - the Economic and Financial Policy Framework, 1989-1993 (PFP), the Public Investment Program (PIP) and the Social Action Program for 1990-93 (SAP). These documents set out Government's policies for the social sector. In the field of education they emphasize the priority that is to be given to primary education, particularly in the very poor urban and rural areas, and the attention that is to be paid to institutional rehabilitation, quality improvements, and strengthening management and supervision in the sector. They also address issues of community and private participation in educational provision, cost-recovery, and the more equitable distribution of resources.

The Coordination of Strategies for School Development

1.8 A common theme running through this rich body of documents and studies is the extent of the task facing the education ministry in facilitating access by every child to quality education. In their different ways, the documents enunciate policies, strategies and tactics for the accomplishment of this task. The insights they embody and the recommendations they make are almost all still valid and have the potential to transform the school system into a potent instrument for personal and economic development. But with so much to be accomplished, there is danger lest the problems be approached in an uncoordinated manner that would not be as effective as the situation demands in achieving the desired results. The need is for a long-term strategic focus and for a coordinated set of strategies that would constitute a detailed and prioritized plan for the development of the primary and secondary school sectors.

1.9 With this in mind, MGEYS appointed a team of experts in April 1991 to develop a detailed and prioritized strategy for delivering primary and secondary education under current economic constraints. Members of the team were drawn from MGEYS, MHEST, MLSDC, CSO and UNZA (Annex 1). The specific task of the team was to identify investment needs and to give indicative costing. The insights and recommendations of the documents discussed above were to serve as background for the team's work, but the team was free to propose other policy developments and strategies in response to the current economic and demographic context of education and to the changing socio-political situation in the country. The team's report was to be in a form that could be used by educational planners and managers for the implementation of educational policies and for coordinating and harnessing donor support for education. Subsequent to the establishment of the Ministry of Education (MOE) in November 1991, the Review Team was instructed to continue with its work, bearing in mind ongoing transformations and developments in policy. Development of the team's report was supported by the World Bank Education Sector Rehabilitation Program.

Overview of the Report's Contents

1.10 This report on Strategies for the Development of School Education in Zambia makes major and far-reaching recommendations, some of which require adjustment of government educational policy. The title of the report, Focus on Learning, underlines the fact that the principal purpose of schooling is student learning and hence that unremitting attention must be given to making student learning the first priority in all schools. The bulk of the report deals with primary education since it was the firm conviction of the Review Team that MOE should concentrate in the first instance on providing seven years of education for every child of primary school age and on enhancing the quality of that provision. To achieve this, the Team found that it would be necessary to give the highest priority in the mobilization of human, material and financial resources to:

- (a) ensuring that the focus in all schools is on learning;
- (b) physically expanding primary schools and rehabilitating existing ones;
- (c) developing books for primary schools and equipping these schools with an abundance of books (including library books) and educational materials;
- (d) transforming the secondary selection examination so that it serves truly educational objectives;
- (e) enabling under-nourished, handicapped and other disadvantaged children to profit from school education;
- (f) improving teacher education and, in so far as school expansions demand, expanding facilities so as to increase the number of trained teachers;
- (g) fostering teacher morale and competence through improved professional and administrative support and through a comprehensive program for in-service teacher education;
- (h) strengthening the organization and management of the education system and of individual schools, with special attention to the critical role of school heads;
- (i) enabling the inspectorate to carry out in an effective way its school-monitoring and quality-control functions.

1.11 It is the considered view of the Review Team that all other educational developments during the coming decade must remain subordinate to those just outlined.

1.12 At the secondary level, the over-riding priority is to improve the quality of what is currently available, both in basic and regular secondary schools. This necessitates the availability of more books, educational materials of all kinds and science apparatus. It also implies the rehabilitation of about 75 schools. As at the primary level, the revitalization of secondary education also requires special attention to improving the managerial leadership capabilities of school heads and their deputies. The increase of provision at the secondary level is not a high priority, although some expansion will occur, though only on a modest scale. The problems created by the rapid establishment of basic schools are such that there should be a temporary halt to the expansion of these schools until they have been studied in depth and until strategies for increasing access to junior secondary education have been thoroughly assessed.

1.13 The Review Team proposes that in financing primary and secondary schools attention be given to:

- (a) increasing the proportion of public funds devoted to the education sector;
- (b) extending the scope of the existing education levy so as to generate additional funds for educational materials;
- (c) re-ordering the allocations within the education sector so that primary education receives a larger share of the available resources;
- (d) reducing the amount spent on boarding and student welfare by charging realistic boarding fees;
- (e) charging tuition fees in all post-primary schools;
- (f) rationalizing the deployment of teachers in both primary and secondary schools;
- (g) reducing the amount spent on non-teaching staff in secondary schools;
- (h) involving parents and PTAs in the purchase of books and educational materials, with subsidies for such purchases being directed to needy PTAs and no longer to the producers of such goods;
- (i) mobilizing donor support for primary school expansions, school rehabilitation, educational materials, strengthening of management and organization, in-service education, examination improvements, and school inspections.

1.14 The Review Team also proposes that effective support and encouragement be given to the development of private and community schools, especially at the secondary level, and that the possibility be considered of some form of public subvention for these schools. In the Team's view, community participation in the provision, management and financing of education should be the rule and not the exception.

1.15 The Team recognized the potential of non-formal education in meeting personal and national needs but was of the view that further information was needed before this potential could be fully exploited. Because of the magnitude and diversity of tasks that MOE faces, in a situation of limited human and other resources, the Team considered that the ministry's programs of continuing education should focus on fostering competence in the area of general education.

Feasibility of the Proposals

1.16 In making its report, the Review Team is aware that there are numerous obstacles to the implementation of its recommendations. Some would doubt the political feasibility of giving priority to primary schools over the expansion of basic schools. Others may ask whether the managerial capacity exists to implement what is proposed here. Still others may point to the country's grave financial problems and economic constraints and ask: can Zambia afford to meet the costs of all that is proposed here?

1.17 The answers are straightforward, though their acceptance requires a clear vision of priorities and a firm determination to translate these into realities. A political commitment to social equity implies consistent support for the development and improvement of the primary schools; the development of an effective and efficient system of management is an integral part of the proposals themselves; while as to financing, it is acknowledged that there must be a radical change in the structure of resource allocation in the public sector in general and in education in particular. But if resolute, generous and imaginative steps are not taken now to provide every child with good quality primary education, the problem will grow altogether too large to deal with in later years, given the rapid increase of the child population. Investment at the primary level is the most certain way of ensuring that a basic human right is met. Zambia's economic future will be determined in large part by the capacity of her people to acquire, adapt and advance knowledge, a capacity which depends very largely on the extent to which children attain the literacy, numeracy, communications and problem solving skills that should be promoted in primary schools. Investment in these schools provides the basis for subsequent healthy economic development. Neglect of the primary schools will condemn the country to continued developmental starvation and economic malnutrition.

CHAPTER 2

THE CONTEXT FOR A REVIEW OF INVESTMENT STRATEGIES IN EDUCATION

2.1 Strategies for the development of school education must take account of three factors: what the system is aiming at, where it is now, and what is the policy framework for the attainment of its goals. This necessitates that the strategies be set in the context of (a) the nature of Zambian society and what the education system should be striving to achieve in the circumstances of that society; (b) the evolution of the school system and developments in its financing; (c) adjustments in policies affecting education; and (d) agreed priorities for the education sector. This chapter will examine each of these factors in turn.

The Nature of Zambian Society

2.2 Zambia is evolving into a new kind of society inspired by democratic values and characterized by fundamental respect for the dignity and rights of all human persons. In the face of grave economic problems it is seeking to ensure increased justice, liberty and equality for all, by freeing people from want and facilitating living conditions worthy of human dignity. It is promoting genuine political participation in ways that reduce the intrusiveness of the state in social and economic life, while enabling it to play a more critical role in promoting the common good. This new society is a cooperative and developing venture of individuals and groups in which each one grows in the opportunity to be fully human and each one accepts responsibility for promoting the human development of others.

2.3 The modern technological and economic character of this emerging society is such that individuals within it may have difficulty in acquiring the understanding, developing the skills, and forming the attitudes which will enable them to function in it with satisfaction to themselves. Even less do they seem able to control the direction of its future development. The individual today is precipitated into a world abounding with resources but marred by their misuse, rich in products but impoverished by their uneven distribution, guaranteeing human rights to each one but denying their exercise to many. This world is steeped in science and subject to economic forces that are largely out of local control. It is a world that does not offer the security of the past but is one where values are changing, new lifestyles are evolving, and socio-cultural patterns are being radically transformed.

The Role of Education

2.4 It is the role of education, and of schools as the principal institutionalized form of educational provision, to prepare the individual to live in this society, to develop into the new type of person needed to meet the challenges of life in Zambia at the beginning of the twenty-first century. The educational system must respond, therefore, to the needs both of the individual and of society. Hence its essential objective in Zambia is to foster the fullest possible development of each individual for his or her personal fulfillment and as a significant member of the Zambian community. This entails:

- a thorough and sound intellectual formation, which includes a growing ability to reason reflectively, logically and critically;
- an appreciation for the achievements, cultures and traditions of the past;

- a careful and critical study of the social and physical sciences and of technology, such that it will lead to a basic grasp of scientific method;
- the development of the imaginative, affective and creative dimensions of each student in all courses of study;
- the development of character traits regarded as important and of a personal sense of moral values and moral responsibility;
- an appreciation of the importance of work in human development;
- the harmonious development of physical qualities and attributes that promotes the ability to use the best qualities of each individual to contribute to the greater advantage of the group;
- the provision of a substantial and recognizable preparation for adult life.

2.5 In attaining these goals, the schools have the task of stimulating students to master certain segments of organized knowledge and of evaluating the extent to which they do so. Ideally, the curriculum should be centered on the student rather than on the material to be covered, promoting active student participation rather than passive reception. Important steps towards this active student involvement include personal study, opportunities for personal discovery and creativity, and the encouragement of personal forms of expression. In this climate of learning, the task of the teacher is to help all students to become independent learners, to assume responsibility for their own education. Since formal schooling for the majority of Zambian children must end at a relatively early age, whereas education is a lifelong process, the school must try to instil in students a satisfaction in learning and a desire to learn. It is important to learn certain material; but for all learners, and especially for those who must leave school early, it is more important to learn how to learn and to desire to go on learning all through life.

2.6 The teaching methods adopted in the schools, and the institutional organization and management, should help to awaken the individual's political consciousness so that the student becomes increasingly aware of the existence of social power and its components and of the forces working in the school, the local community and the nation. The student-centered teaching perspective will encourage students to express their own ideas freely and to be tolerant of the views of others. This debate of ideas and confrontation of opinions will be a practical expression of democratic principles and will foster the democratic virtue of respect for others, whatever their race, tribe, age, gender, religion, educational background, or social or economic status.

2.7 Through the organization of its various activities, the manner that it communicates, and the regulations and discipline that it imposes, the school system promotes a formation in values. Several of these, such as being energetic in acquiring information on which to base opinions or being mentally more disposed towards the present and the future than towards the past, are essential for one who is to live in a modern society. Others, such as dedication to hard work, are necessary for personal and national development. Still others, such as an instinct for honesty in all transactions or the resistance to all forms of depravity and to the self-destructive tendencies caused by drugs and alcohol, have more of a moral character. The school has the

delicate task of helping the student to weigh these up and embrace them by a personal choice. The spiritual values inherent in the quest for harmonious relationships with other human beings, with the surrounding world, and with the supernatural, are further dominant guiding principles that the school must foster in accordance with the wishes of parents. Also important is the self-discipline expected of each student and manifested in persevering application to serious study, orderliness, punctuality, and conduct towards others that respects the human dignity of each individual.

2.8 Because the duration of formal education for most children will be relatively brief, the school must cooperate with the other educational agencies in meeting students' essential learning needs. The school system should respond to the needs for functional literacy and numeracy and for promoting a scientific outlook and a basic understanding of the processes of nature; it should also foster positive attitudes towards cooperation with others, national development, continued learning, and the development of ethical values. Of itself, it cannot meet the needs for the knowledge and skills required for raising a family, managing a household, or making a living. What it can do, however, is to animate the other educational agents in society - the family, the mass media, the churches, various local groupings -- to collaborate in ensuring that these essential learning needs are met. The school's principal contribution to developing the life skills required by all young people will be to give them rigorous training in fundamental communication and numeracy skills so that their capacity for subsequent education and training is enhanced.

2.9 Sufficient progress has not yet been made in Zambia towards recognizing in practice that men and women share a common humanity and common attributes. The equal right of women and girls to the levels and fields of education available for men and boys, though acknowledged in principle, is often negated in practice. In particular, girls constitute an unacceptably low proportion of the enrollments in secondary and tertiary institutions and the fields of study are so apportioned that women and men are shown as having and exercising different options in their career choices. The priority in according equal educational opportunity to girls and women arises from their basic human right to education and from the key role that the education of women plays in development. Socio-economic factors, especially the economic levels and expectations of families, are powerful determinants of girls' educational participation and achievement, but school-related factors also play a role. The school's task will be to foster in all members of the educational community the deep conviction that every human being has a dignity which is independent of gender and which reflects the individual's unique inner worth. Together with the other educational agencies, the school must help to eradicate all beliefs that go against the fulfillment of women. In particular, it must seek to eliminate every practice and attitude which demeans, excludes or under-represents women and girls or which shows itself more favorable to men and boys.

2.10 At a time when the earth's resources are being damaged or dissipated through wasteful practices, deforestation, soil erosion, over-fishing, atmospheric, soil and water pollution, and in other ways, the education system has the task of instilling a reverence for creation as encountered in one's own environment and a desire to participate in maintaining a healthy ecological balance. Only thus will the earth remain fruitful for the generations attending, or about to enter, school.

2.11 Understanding little about their past, many Zambians today have an uneasy sense of homelessness and rootlessness. Several seem unable to reconcile traditional values and approaches with the imperatives of urban living, though to a great extent their mode of responding to social, cultural and economic situations is dominated by a traditional outlook. Rapid urbanization has also hastened the demise of many customs and traditions. This is a loss which the schools have done little to prevent. Indeed, they too have played a role by downgrading the languages and cultures of Zambia. Henceforth, the education system will reverse this trend and will encourage a healthy appreciation for one's own and other cultures and an ability to be creatively critical of the contributions and deficiencies of each. By giving a more prominent role to local languages, expressions, rites, symbols and arts, the schools will endeavor to ensure that the living cultural traditions of Zambia are safeguarded from further erosion and that opportunity is provided for their enrichment and refinement.

2.12 The goals for the education system that have been enumerated in the previous paragraphs are all embraced in one single fundamental aim: the education system will seek the integral, harmonious development of the physical, intellectual, affective, moral and spiritual endowments of all students so that they can develop into complete persons, for their personal fulfillment and for the common good of the society of which they are already members and in whose responsibilities they will share as adults.

2.13 To translate what has been said into practice, these general goals will be broken down into a series of intermediate aims and more specific objectives. It will be the task of every educator to analyze the general goals and to formulate more specific objectives. But this task will belong in a special way to school inspectors, curriculum developers, teacher educators, textbook authors, and others who determine much of the substance of what goes on in schools. Teachers and others will strive more purposefully to achieve the overall aims of education when these have been translated into actual activities to be undertaken in the school.

Quantitative Educational Developments, 1964-1990

2.14 During the period since 1964 Zambia has made great strides in the provision of facilities for formal in-school education. From a colonial situation where access to education beyond the most elementary level had been available for only a few, educational opportunities at all levels have been expanded at a very rapid rate. The enrollment in primary schools increased fourfold in the period 1964-1990, growing at an average annual rate of 5.5%. The development of secondary school enrollments has been even more impressive, increasing more than twelve-fold in the space of twenty-five years and growing at an average annual rate throughout these years of more than 10.5%. In 1990, there was room in the primary schools for approximately 9 out of every 10 children of school-going age while one out of every four could proceed into secondary school. In terms of numbers, there were 1.452 million children enrolled in primary schools in 1990, of whom approximately 47% were girls; at the secondary level there were some 170,000 enrolled, of whom 38% were girls.

2.15 Quantitative developments at the higher levels of education have been equally spectacular. Two universities have been established and in contrast with the frequently lamented figure of just over 100 graduates at the time of independence the country now enjoys an annual output of approximately 900 university-trained individuals in a wide variety of disciplines and fields. The education sector's own needs are met by an annual output of some 1,800 trained

primary teachers from 11 colleges and 550 qualified secondary teachers from the University of Zambia and other institutions. A coordinated policy on training for technical and vocational areas was adopted in the late 1960s and followed through in the following years, with formal pre-service and in-service training at crafts, technician and technological levels in a network of technical institutions.

2.16 But the rapid numerical expansion of the education system has not been maintained since 1985. Primary school enrollments, which had grown by almost 30% in the period 1980-1985, increased by less than 10% in 1985-1990. The deterioration was even more marked in Grade 1, where enrollments grew by more than 35% in 1980-1985 but by less than 4% in 1985-1990. The average annual growth rate of Grade 1 enrollments in 1985-1990 was only 0.91%. This was during years when the child population continued to grow at an average annual rate of more than 3.2%. The result is that in the wake of two decades of steady growth, the gross enrollment ratio in primary schools began to fall after 1985 and almost certainly it is still declining. In 1985 this ratio stood at 96%, but by 1990 it had fallen to 88%.

2.17 The reasons for the slowing down of primary level expansion are to be found in the strategies adopted since 1975 to increase the enrollment rate. For the greater part this increase was made possible, not by additional investment in primary schools, but by more intensive use of existing facilities through double, triple and even quadruple sessions, and through allowing class sizes to grow ever larger. But in the absence of investment there are limits to the possibilities these strategies provide for quantitative expansions. These limits appear to have been reached about 1985 by which time almost all facilities were being used to the maximum extent possible. Since there was no further scope for increasing the number of sessions or for enlarging classes further, and since there was virtually no investment, it was inevitable that in the context of a rapidly growing population, primary school enrollments would begin to drop.

2.18 The numerical situation in 1990 was that even with facilities being used to their maximum, and in many cases beyond sound educational (and even health and safety) limits, there was no room in primary schools for about 190,000 children of primary age (7 - 13 year-old). The situation was at its most serious in the Eastern Province, where only about two-thirds of the school-aged children were enrolled in primary schools, and in Lusaka where the proportion was about three-quarters. At the Grade 1 level, there was room in Lusaka's primary schools for only two-thirds of the 7 year-old population and in the Copperbelt and Eastern Provinces for only four-fifths. Further up the system, there continues to be a bottleneck at the Grade 4 to Grade 5 transition, with only about 91% of those who complete Grade 4 being able to proceed into Grade 5. The numbers affected in this way fell from 22,000 in 1980 to 13,000 in 1985, but since then they have increased and now stand at about 18,000 (which is approximately the number of those who complete the full secondary program). The Grade 4 to 5 bottle-neck is a problem of rural schools only, with the restriction on transition affecting girls more than boys.

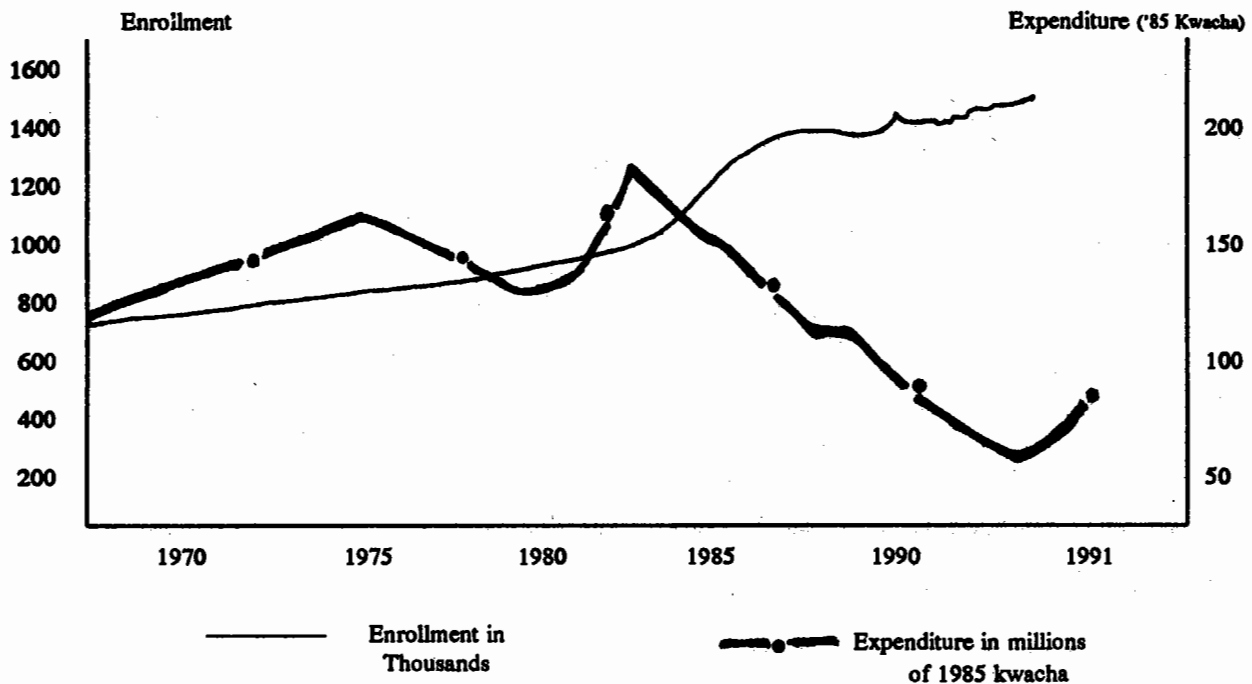
2.19 The most striking aspect of developments at the post-primary level has been the rapid proliferation of basic schools, that is, primary schools to which Grades 8 and 9 are added. In 1982 there were 7 such schools. Today there are more than 600 and they account for approximately 47% of the school-based Grade 8 enrollment of 63,500. The infrastructure for basic schools is provided largely through community efforts, but all subsequent costs are borne by Government. Because of the unique set of problems presented by this new category of school, basic schools are given more extended consideration in a subsequent chapter.

Issues of Quality and Financing

2.20 The quantitative expansion of schools, colleges and universities has been achieved, however, at great educational cost. The low level of investment for the sector's infrastructure was matched by equally low levels of spending on recurring departmental charges. Personal emoluments for teachers and non-teaching staff absorbed increasing proportions of the recurrent education budget. A significant part of the budget was also devoted to welfare costs associated with boarding and student allowances at all levels above the primary. The proportion spent in this way has increased quite dramatically since 1980 and accounted, between 1988 and 1990, for more than one-fifth of all educational expenditures. Much more limited resources were available for supplying institutions with books and other educational materials, for carrying out necessary maintenance and repairs, and for providing the system with the back-up and the monitoring of inspectors and others. The virtual absence of funds for maintenance in a situation where efforts to increase enrollments resulted in over-utilization of facilities means that a large number of schools have fallen into a serious state of disrepair. The result of the low level of inputs is that there is a reported decline in the level of student achievement, with considerable doubt whether many of those who complete Grade 7 leave school with literacy and numeracy skills that will survive after school. In other words, the price that has been paid for the quantitative developments that are so striking is a serious deterioration in the quality of education.

2.21 The quantitative and qualitative problems that currently beset educational provision can be attributed in part to the declining level of public resources for education and in part to structural deficits in the way funds for the sector are utilized. In 1981-85 the education sector accounted for 13.8% of total public expenditure, but for 1987-91 its share was only 9.8%. This sharp drop occurred when the education system was still expanding numerically, even if at a slower rate than in earlier years. In 1980, K269.5 million (constant 1985 kwacha) was spent on the educational needs of 1.15 million students in educational institutions of all kinds (primary and secondary schools, colleges, university), whereas in 1989, K151.0 million was spent on the needs of 1.65 million students: the total number of students increased by half a million, but the global expenditure decreased by K118.5 million. The diagram on page 12 brings out very clearly the primary school situation of increasing enrollments and declining expenditures. Most of the decline occurred since 1985. There was some improvement in the allocation for education in 1991, but this does little to bring expenditure per student back to the level it had in the mid-1980's.

Figure 1: Development of Primary School Enrollments and Expenditures, 1970-1991



2.22 The structural problems in the utilization of available funds consist in the high proportion that must go to teachers' emoluments; the increasing share of limited resources that is pre-empted for personal welfare costs of boarders and other students; the disproportionately high spending per student at higher levels in comparison with what is spent per primary student; and the recent phenomenon of significant reductions in the proportion of the budget that is devoted to the primary level.

2.23 Salaries and allowances accounted in 1991 for 97% of the allocation for primary education and 65% of that for secondary. A further 25% of the secondary allocation was destined to meet boarding costs. With commitments like these, very little remained at the secondary level, and effectively nothing at the primary level, for such quality-enhancing inputs as the purchase of books, science consumables and other educational supplies.

2.24 Throughout Sub-Saharan Africa the annual spending on each university student is about 55 times the spending on each primary student. By standards elsewhere in the world this is high, but by standards in Zambia it is low: in 1989, spending on each student in Zambia's universities was 186 times higher than spending on each primary student. This ratio rose significantly during the 1980s indicating that priority in the allocation of resources was directed more towards the tertiary than towards the primary level.

2.25 A further indication of the low priority status enjoyed by primary education is the way its share of educational funds dropped since 1985. Up to then it had been receiving approximately 45% of the annual recurrent budget for education, but thereafter the proportion declined fairly steadily to reach its lowest ever value of 30.6% of actual expenditure in 1990.

Budget figures for 1991 and 1992 signal considerable improvements, to 37.2% and 38.9% respectively. But the total allocation, recurrent and capital, for primary schools still remains low at 31.4% and 31.9% of the education budgets for 1991 and 1992.

Adjustments in Policies Affecting Education

2.26 Transformations in Zambia's socio-political structures and economic developments in the direction of trade liberalization and the market have had their impact on the education sector. Arising from the changed socio-political and economic environment, there have been some major adjustments in educational policies and strategies. These deserve note because of their bearing on strategies for the development of school education in the 1990s.

2.27 The most significant changes that have occurred concern the provision and financing of education. Until very recently, the view prevailed that the Government should be the principal provider of educational services. The attitude towards voluntary agencies and private providers was essentially one of benevolent tolerance. Their participation in educational provision was not prohibited, but their major role was understood as supplementary to that of the state, by meeting needs which financial limitations prevented the Government from addressing. Although it expressed appreciation for the educational contributions of voluntary agencies, Educational Reform (1977) effectively marginalized these bodies when it stated that the ultimate goal was that the state should make educational provision for everyone (p. 77). Several educational developments were, in consequence, predicated on the view that it was the Government's responsibility not merely to ensure the availability of educational services, but also to provide and manage these. This view still pervades much public and private thinking about education. It is primarily to the Government that people look for the satisfaction of their educational needs.

2.28 But the thinking in official government documents changed significantly in recent years. The Interim National Development Plan (INDP, 1987) stated in clear terms that "the responsibility for the education of children rests primarily with the parents and it is they who must ultimately provide the necessary resources for education services" (ch. XVII, 22). The FNDP (1989-93) gave unqualified support to the development of private schools, a policy position that was subsequently endorsed by the PFP's general encouragement of private sector participation. The recognition of parents' rights and responsibilities has led by a natural progression to a clearer understanding of the community's role in all that concerns education. Consequently there have been developments towards more pluralism in educational provision. The implications of this pluralism and of greater participation by the private sector have not all been worked out, but clearly these are factors that must influence proposals for the development of school education in the 1990s.

2.29 At the level of education financing, there has been a departure from the concept of free education to the more limited concept of free tuition at the primary level. In principle, beneficiaries are now expected to make a major contribution to boarding and similar costs, although in practice their contribution remains small in relation to the total actual costs. But manifestly, the principle of cost-sharing has been accepted. It remains to be seen whether it can be applied in a cost-effective manner where it is already in operation and whether it can be extended to areas such as tuition and book costs in secondary schools.

Priorities for the Education Sector

2.30 Confronted with the evidence for a growing crisis in education, the **Zambian Government** has set as its most general educational priority "to reverse the decline in the quality of and access to education that has resulted from the difficult economic situation" (PFP, p.16). More specifically, it "has set as its principal goal to reorient public expenditure toward primary education" (PIP, p. 139). It is also government policy, as part of the economic restructuring program, to increase the recurrent departmental charges for education (and other social sector areas), thereby reducing the proportion that must go to salary payments. Public documents have also expressed concern at the lack of proportion between public spending per student at the universities and in primary schools and have expressed the intention of rectifying this imbalance by requiring university students to meet more of their personal and tuition costs. Implementation of the policies that have been enunciated would see an increase in the volume of public resources devoted to the education sector and within the sector a reorganization of commitments that would remedy the structural defects that prevent funds being used in ways that respond to national priorities and the objectives of the sector.

2.31 The educational priorities and investment strategies outlined in this Report have been formulated in the spirit of these policy statements of the Government. Implementation of the measures proposed here will bring primary and secondary education back on to a proper course. The proposals are designed to reverse the decline in the quality of school education, to universalize access to primary education, and to provide for modest expansion of the secondary system. The adoption of the measures proposed will in many instances entail difficult choices: difficult intersectoral choices in giving higher financial priority to education above some other sectors of the economy, and difficult intra-sectoral choices in giving priority to primary education above other levels. But a well-resourced education sector which accords high priority to primary education will amply repay the investments it requires through the many social and economic benefits it will bring.

2.32 The measures that are outlined in the following chapters are directed principally towards meeting the essential learning needs of every child. Their implementation will require the mobilization on a very large scale of human, material and financial resources to provide for all the physical facilities, learning materials, teachers, inspectors, education managers, and transport that will be required. While it is expected that the donor community will respond to some of these needs through multilateral and bilateral aid, the greater part must be met from Zambia's own resources, through public and private support for the education system. High priority will be accorded to education in the allocation of public funds, but simultaneously there must be a more intensive effort by all the people to provide the system with the financial, material and manpower support it needs. This will necessitate departure from the idea that the responsibility for educational provision rests almost entirely with the Government. The people themselves will have to assume more of this responsibility, though always with government back-up. Public funds will be used to ensure that essential educational services are available to all and to extend additional services to those who have the ability to profit from them but cannot pay for them. Government will concentrate its resources on the areas that are considered to be the most important and will ensure that these resources are used to the greatest effect. This does not mean that other areas will be neglected. But it does mean that priority in the mobilization of public resources will be given to meeting the basic learning needs of every child.

CHAPTER 3

PRIORITIES IN THE DELIVERY OF SCHOOL EDUCATION

The Priority of Primary Education

3.1 The basic national policy in the education sector is to provide every eligible child with good quality education in Grades 1 - 7. From this it follows that providing good quality primary education for all school-aged children, within the shortest possible time-span, is the foremost educational priority.

3.2 This priority is based on equity, social, economic and educational grounds. Zambia has always recognized the basic right to education and policy statements have repeatedly affirmed that providing for the exercise of this right through universal primary education must be given precedence over other long-term educational goals, such as expanding secondary or basic schools. Moreover, primary education brings impressive social benefits. Child mortality rates of educated mothers are lower than those of mothers without education, while women with a full primary education tend to have fewer children than those with incomplete or no education. Children of educated parents are more likely to enroll in schools and to complete more years of school than children of uneducated parents. The primary school is a major agency in inculcating new attitudes, values and ways of behavior, and in opening up the minds of students to new ideas and methods. Those who have completed primary school are likely to be more active in community affairs and to participate more dynamically in the process of change and development than those who have had little or no schooling. The economic benefits of primary education are also positive. There is abundant evidence to show that primary education promotes farmer productivity and that, in relation to the amount invested, the returns from primary education are very much higher than those from secondary or university education. There is also increasing evidence to show that countries that invested more heavily in improving the quality of primary education have made greater economic advances than those which invested less, while evidence from across the world bears out that providing the poor with primary education is a key approach to the reduction of poverty.

3.3 The educational grounds for concentration on primary education are that it is at that level that the foundations are laid for further education and training. Performance in secondary schools will obviously improve with better graduates from primary schools; as this improvement works its way up to higher levels, the entire education and training system benefits. On the other hand, when quality is poor at the lower levels, considerable resources must be spent at each grade and level remedying the deficiencies carried forward from the lower level.

"Poor primary schools compromise the entire system of human capital development. They produce graduates who are poorly prepared for secondary or tertiary education and ill-equipped for lifelong learning. The consequence is an insufficient number of truly educated managers, workers and parents who can efficiently contribute to development" (World Bank, Policy Paper on Primary Education, 1990, p. 11).

3.4 A further consideration that is of importance in the universalization of primary education is that the more widespread primary education becomes, the greater is its positive impact on agricultural productivity, fertility and nutrition. Individuals appear to find it difficult to adopt new practices, even beneficial ones, if they are foreign to the society to which they belong. If

primary education is to realize its full potential in bringing social and economic benefits, it must be spread to every sector of the community and be universalized.

3.5 These equity, social, economic and educational considerations justify the high priority that is now being accorded to the expansion and improvement of the primary sub-sector. But it should be clearly understood that priority for primary schools does not mean neglect of secondary schools or higher-level institutions. The education system forms too much of a unity for that to be allowed. While better primary school graduates will promote improvements at the secondary and higher levels the improvement of quality at these levels will also benefit the primary schools. If higher standards and norms are prescribed at the tertiary level, this will affect the secondary level which in turn will affect the primary level. The priority that is being accorded to primary education must be seen, therefore, in the context of an integrated education system and of qualitative improvements affecting all levels. The broad educational strategy for Zambia in the years immediately ahead will be to promote quantitative growth at the primary level and qualitative improvements at all levels. But for the reasons already outlined, and because there has been so much neglect in the past, more detailed attention and more generous support will be given to the enhancement of quality at the primary level.

Priorities for the Development of Primary and Secondary Schools

3.6 Within the policy framework of according highest priority to the quantitative and qualitative development of primary schools, the following strategies will be adopted:

- (a) the necessary human, material and financial resources will be provided for the physical expansion, development and rehabilitation of primary schools and, to the extent necessitated by these developments, of the primary teacher training colleges;
- (b) emphasis will be put on schools as institutions where students are supposed to learn and teachers are supposed to teach. This will entail
 - (i) providing educational materials, textbooks, supplementary readers and library books to primary schools;
 - (ii) improving the quality of preservice teacher education and promoting the ongoing professional development of serving teachers;
 - (iii) reforming the secondary selection examination;
 - (iv) developing and facilitating the professional and managerial competence of primary school heads, school inspectors and education officers;
 - (v) improving the overall management, organization and planning capacities within the education sector as a whole;
 - (vi) fostering the community's demand for and interest in primary

education by curriculum improvements and measures designed to respond to the special needs of disadvantaged groups.

3.7 At the secondary level, priority in the allocation of resources will be given to

- (i) the physical rehabilitation of classrooms, laboratories and specialist rooms;
- (ii) the provision of textbooks, library books, and other educational materials;
- (iii) re-equipping science laboratories and providing consumables;
- (iv) improving the professional and managerial competence of school heads;
- (v) facilitating the professional activities of school inspectors.

3.8 Implementing some of these strategies and putting in place cost-efficiency measures that are proposed later in this Report will require considerably more information on the education sector than is presently available. Sufficient information for considered decision-making is lacking in such areas as the deployment and use of primary and secondary school teachers; the number and use of non-teaching staff in secondary schools; the physical state of primary schools and the extent of the rehabilitation programme that needs to be undertaken. Data is also needed for several aspects of basic schools, including the learning actually achieved by students, and teachers' accommodation needs in the rural areas. High priority must be accorded to filling this information gap and to developing a management and information system that will provide a sound basis for educational planning.

The Allocation of Resources

3.9 The attainment of these strategic goals will necessitate the commitment to the primary sub-sector of a growing proportion of national resources. This requires the reversal of the trend in recent years during which the primary sub-sector accounted for a declining proportion of educational expenditures, which themselves declined as a proportion of national spending (see Chapter 2 above). Public policy statements have committed themselves unequivocally to the reversal of this trend: "Emphasis in education expenditures is to be given to primary education " (PFP, p.16). This means that resources will have to be directed into the primary sub-sector away from the other education sub-sectors (secondary, technical, university education; less essential services; administration), as well as into the education sector away from other sectors of the economy. These are the inescapable implications of reordering public expenditure towards primary education (PIP, p.139).

3.10 But even the most generous allocation of national resources will not suffice to meet all the needs of the primary sub-sector, needs which have accumulated through considerable under-funding over the past twenty-five years and which are increasing rapidly under pressure from the high rate of growth of the child population. Hence, there will be a continuing need for aid from abroad to supplement national resources in the effort to revitalize and develop the

primary education sub-sector and to effect substantial qualitative improvements in secondary schools. Without such aid, the primary schools will not be able to attain their principal objectives of being able to admit every child of school-going age and of providing that child with an education of undoubted quality and worth, nor will the secondary schools be able to strengthen their students' general intellectual skills and to prepare them for adult responsibility as workers or as tertiary level students.

CHAPTER 4

THE EXPANSION AND REHABILITATION OF PRIMARY SCHOOLS

The Development of Primary Schools, 1992 - 2002

4.1 Since 1985, primary school expansion has fallen sharply behind population growth, especially in the major cities and in the Eastern Province (cf. 2.16 - 2.18 above). As a result there is not enough room in primary schools for all 7-year old children. Moreover because of the lack of developments in the 1970s and 1980s as many as 450 rural schools end at Grade 4, imposing on students the need to compete, through locally administered examinations, for Grade 5 places in other schools. The consequence is that an estimated 18,000 11-year-olds cannot continue from Grade 4 into Grade 5. Because of inadequate expansion at the upper primary level, this number has been increasing since 1985.

4.2 In addition, it is only through a combination of triple and even quadruple sessions and very large classes that the schools are able to accommodate the numbers they do. Both of these strategies are seriously undermining the quality of education. More than two sessions a day means that many children in Grades 1 to 4 are being taught in school for fewer than three hours a day. This is considerably less than the international average of between 4.5 and 5 hours of daily instruction at the primary level. The situation is worsened in several schools, especially in urban areas where the class size -- sometimes reaching more than 100 students -- is unteachably large.

4.3 It is clear, then, that there is an urgent need for the physical expansion of the primary school sector so that:

- (a) hitherto unsatisfied needs and demands can be met;
- (b) the size of classes can be reduced to what can be adequately accommodated and taught in a normal classroom; and
- (c) the practice of triple and quadruple sessions can be ended.

Despite its educational drawbacks, double session teaching will have to be retained for Grades 1 to 4. If all eligible children are to have access to primary education, this practice must continue for the foreseeable future. Any other strategy would require human, financial and material resources of such magnitude that they simply could not be provided.

4.4 Even when the fullest use is made of double session teaching in Grades 1 - 4, providing all the developments that will be needed for universalizing primary education will be a daunting task. Approximately 17,000 new classrooms, 800,000 new desks, an average supply of 3.5 million textbooks a year, and an additional 20,000 trained teachers will be needed during the coming decade if every eligible child is to spend seven years being taught by trained teachers in an uncrowded classroom, sharing a desk and a basic set of textbooks with another child. The magnitude of the task that is to be accomplished can be judged from the fact that at present there are about 30,000 trained teachers, some 20,000 classrooms (more than half of which are believed to be in need of major repair or even of replacement), with 160,000 usable two-seater desks, while the supply of textbooks in 1985-1990 averaged less than one million copies a year. Even if

unlimited funds were available, the needs of the primary schools would greatly exceed the national capacity to build at once all the classrooms needed, make all the desks, and print and distribute all the textbooks.

4.5 All of the needs, however, do not occur at the same time. Many developments are certainly required immediately, to cope with unmet needs and the large backlog. Others have to be phased in progressively over the coming decade to meet the needs of the ever-increasing child population. To cater for the numbers actually in the schools at the moment, there is immediate need for approximately 7,500 new classrooms, 400,000 two-seater desks and 3.5 million textbooks, but in principle the teacher supply is adequate to meet current needs. To cater for the growth over the coming decade of the child population and to give all future 7-year old children access to seven full years of primary education, upwards of 1,000 new classrooms and 40,000 new desks will have to be brought into use each year, the annual output of teachers from the training colleges will have to increase from the current 1,850 to 2,150 by 1995 and to 3,150 by the year 2000, while the supply of textbooks must be maintained at an average of 3.5 million copies a year.

4.6 The vast national effort that all of these developments imply must continue on into the next century if the child population continues to grow at its present rate. The developments that have been outlined are needed so that by the beginning of the new century every child of school-going age will be able to find a place in school. But continuing efforts and expansions will be needed after that to sustain what will have been achieved at great national cost and to provide for a school-aged population that will continue to grow steadily in numbers.

4.7 What has been sketched out above refers to only four components of the school system - teachers, classrooms, desks and textbooks. These are key elements in any educational system, but they will fail to have their anticipated effect if they are not supported by other educational inputs, all of which have considerable cost implications. There will be need, for instance, for a wide range of educational materials and supplies, including supplementary readers and library books; for enhanced quality control through the inspectorate and examination systems; for improved management and organization at the levels of the schools themselves and of the education ministries; for effective and elaborate planning, research and information activities at central, provincial and district levels; and for a system of ongoing maintenance and repairs. It would be wasteful of resources if developments were restricted solely to increasing enrollments, classrooms, desks, textbooks and teachers. Commensurate provision must be made at the same time for the other needs since the primary sub-sector forms an integrated system which demands that the end-activities of actual classroom teaching be supported by a well-organized and adequately financed supply, supervisory, management, evaluation and maintenance system.

4.8 The methodology for estimating the expansion needs that have been outlined for the primary schools and the norms used for such variables as class size, classroom use and teacher allocation are given in Annex 2. The projections that are arrived at should serve as a guide to the needs at national and provincial levels, but they do not constitute a prescriptive plan for educational development. Any plan for the development of primary schools should pay more attention to local conditions than is possible in a Report of this nature. The plan should also be elaborated with the full participation of those who are to be served by the schools as well as of those who are to work on its implementation. This necessitates detailed school mapping exercises at the district and local levels. But when the findings of these exercises are consolidated, the

resultant pattern of growth at the provincial and national levels should be quite similar to what is outlined here.

4.9 The application of the methodology implies the use of certain norms, each of which in turn implies a policy decision. Every such decision will have cost implications. More generous norms relating to class size, classroom use and teacher allocation will lead to a more costly system, while more stringent norms can lead to considerable cost-savings. But every decision about norms also has educational implications. More generous norms may lead to better quality in educational provision, though they do not always do so. More stringent norms may affect the educational environment to such an extent that satisfactory student learning cannot take place. The norms that are proposed in Annex 2 keep both cost and educational implications in mind and seek to strike a balance between being too lenient and too severe.

The Utilization of Primary Schools

4.10 Two problems of a different nature arise in connection with the utilization of primary schools. One is the under-utilization of facilities in some rural areas. In certain areas, internal migration has led to some primary schools being under-enrolled. Experience has shown that where lack of upper primary facilities contributed to such migration, back-migration may occur when these facilities are provided. Some alleviation for this problem may be found, therefore, by increasing the possibilities for every child entering Grade 1 to be able to continue to Grade 7. In sparsely populated rural areas this will be accomplished largely by upgrading the existing schools into multi-grade schools for Grades 1-7. This upgrading requires resources for teacher orientation, additional teaching items and self-instructional materials, and for the transport needed for the supervision and monitoring of these schools.

4.11 In some other areas various reasons lead to children being withdrawn from school for extended periods. Sometimes children are required to participate in cultural activities that cannot be reconciled with normal school attendance, but in most cases this causes no more than a temporary and relatively brief interruption of schooling. Child malnutrition, diarrhoeal diseases, severe malaria and other forms of illness lead to the prolonged and sometimes total absence of many children. But the principal reason for the non-enrollment or non-attendance of children is the economic value of the child's labor. Children are taken from school to take part in fishing, agricultural, vending, child-minding, home-care and other activities that have a bearing on the family's ability to generate income. Also, in some cases children are not enrolled, even though facilities are available, because families cannot afford the cash payments associated with schooling, whether these be for school funds, for educational materials, or for school uniforms.

4.12 Different approaches will be required for the solution of these problems in different areas and different schools. In some it may be appropriate to provide for compulsory school attendance. In others it may be necessary to adjust the school day or the school calendar to take account of the economic activities of families and communities. A curriculum that is more relevant to the local situation would help to stem the exodus from many schools. School nutrition schemes may be required in some schools (cf. para. 9.7 below), while in still others it may be necessary to dispense with the need for school uniforms. Flexibility of approach and responsiveness to the real needs of families will be essential, therefore, in addressing the problem of the under-utilization of facilities.

4.13 Quite different is the problem arising from the extended catchment areas of many urban primary schools. Apart from the inadequacy of provision in several densely populated areas, unsatisfactory planning in the past has led to schools being poorly sited in that they may be too near each other, too far apart, or badly located (e.g. on the periphery or even outside areas of high population density). This uneven distribution of schools on a locational basis gives rise to many problems. Urban day students frequently live far from their schools and must make long daily journeys. These are tiring and costly and are responsible for much late-coming to school. They lead to absence from the home for much of the day, a factor which gives rise to considerable social problems, especially for girls. Some stratification of school enrollment, based on parents' socio-economic status, is also occurring, with specific schools catering more for those in a particular socio-economic group than for those within walking distance. The absence of definite catchment areas for each primary school may also lead to pressure on the facilities in certain schools, while others have excess capacity.

4.14 School zoning would help to solve these problems. Zoning would involve a clear demarcation of catchment areas for each school and restriction of enrollment to children within the demarcated area. A system of school zoning could make provision for the prior right of parents to choose the kind of education that will be given to their children by allowing parents to send a child to a school outside the zone of residence, provided they paid the full economic cost of that child's education. MOE will examine the feasibility of introducing well-defined school catchment areas wherever these would serve a useful purpose, subject to the condition that children are to be educated in accordance with the wishes of their parents.

The Rehabilitation of Primary Schools

4.15 The deterioration of the physical condition of primary schools has been so extensively documented in recent years that it will suffice to draw attention to the problem by quoting from one source:

"The situation of primary schools is grave in the extreme. Persistent lack of funds for the maintenance of buildings and furniture, security and even simple upkeep, has led to the current state of affairs where most schools have deteriorated to a shocking degree. It seems that once a certain (degree of) damage and neglect has been reached, vandalism becomes chronic. A high proportion of schools lack window panes, furniture is damaged and not repaired or stolen, and latrines are blocked. The learning environment is anything but wholesome." (Supporting Zambia's Education Sector under Structural Adjustment. Report to FINNIDA, 1990. P. 57.)

4.16 Action is urgently needed to repair, maintain and protect what already exists and in some cases to provide replacement facilities. Deciding on what action to take is made difficult by the absence of comprehensive and detailed information on individual schools regarding their current physical condition; their repair, replacement and expansion needs; the state of their desks and other furniture; their storage facilities; what services they have (with special attention to their water source and to their toilets); their supply of tools and maintenance materials; their timetable and organizational pattern. There is very little systematic information on most of these points. There is no central or provincial register of primary schools that specifies their size, staffing, enrollments and catchment areas, their organizational framework, physical facilities and general

physical condition. Without this information it is difficult to put in place a coherent plan for their rehabilitation. It is even more difficult to estimate the likely cost of such a rehabilitation program.

4.17 Urgent attention will be given to filling this information gap. A major study will be undertaken at once of every primary school in the country to assess its current physical condition, its organizational pattern (the shift system, what is the timetable, how it uses its classrooms) and its most pressing needs. While such a study will be centrally directed, its conduct will depend heavily on the participation of district education officers and the cooperation of school heads. While this study is being planned, consideration will be given to how the information gathered is to be recorded; how to develop a system for keeping these records up-to-date (cf. 11.14 below); and how they can be most effectively made available to the appropriate planning and maintenance officers, inspectors and other education officials.

4.18 But even in the absence of this detailed information, it is clear that it will be a major undertaking to rehabilitate and refurbish all the primary schools that are in need of external interventions. The problem is so large that it is even difficult to know where to start. But it would be a mistake to begin work in a haphazard way, as this would almost certainly lead to the dissipation of resources. Clearly, the rehabilitation needs of all the schools cannot be addressed simultaneously. But it is equally clear that without more information on the state of the schools, it is not possible to identify those which are in the worst condition and in the most urgent need of attention.

4.19 Rather than waiting for this information, the problem will be brought to a manageable size by giving priority attention to certain categories of schools which have certain features to commend them. The needs of schools falling outside these categories will be attended to when the priority groupings have had their needs satisfied. The categories of schools on which attention should first be focussed are:

- (a) incomplete schools (ending at Grade 4); almost all of these are in rural areas;
- (b) resource schools, since these have a multiplier effect;
- (c) schools with triple or quadruple sessions, since the intensive use of facilities in these schools is likely to have occasioned considerable deterioration; special attention to these schools would also be part of the process of doing away altogether with triple and quadruple sessions;
- (d) schools in high density urban areas, especially in Lusaka, Kitwe and Ndola;
- (e) schools that cater for the handicapped;
- (f) schools built with non-permanent materials (temporary structures);
- (g) the primary section (Grades 1 - 7) of basic schools which are to lose their Grade 8 and Grade 9 classes (cf. 8.23 below).

4.20 Some schools may fall into more than one of those categories. In fact, considerable overlap seems likely between schools in categories (c) and (d), but the extent of such overlap will not be known until there is exact information on the schools that offer more than two sessions a day.

4.21 The categories given above are not ranked by order of importance. There would be merit, however, in having one donor agency concentrate either on one type of school across the country or on schools belonging to the various categories within one province or district depending on the resources available. The two models for agency intervention would then be:

Model A: at National Level

AGENCY					
Incomplete Schools	Resource Schools	Schools with Triple Sessions	Schools for Handicapped	High Density Urban Schools	Primary Level of Basic Schools

Model B: at Provincial or District Level

AGENCY					
Incomplete Schools	Resource Schools	Schools with Triple Sessions	Schools for Handicapped	High Density Urban Schools	Primary Level of Basic Schools

4.22 An advantage of Model B, where one agency would be involved with schools from the various categories in one province or district, is that this leads to a concentration of agency management and financial resources. It also helps to overcome problems of different standards between agencies and avoids having teams from different agencies working within a single area, a situation which communities find difficult and which has the potential for creating intra-community conflict. Concentration of this kind would also make it easier for an agency to evaluate the impact of its interventions. There is the further advantage that some prioritization of provinces and districts on the basis of needs and previous donor assistance would be possible, while the information requirements for any rehabilitation program would be more easily met at provincial and district levels than nationally.

4.23 One general disadvantage of any system of categorizing schools for priority attention is that in actually reaching the priority schools, supply vehicles and building and maintenance teams may pass near schools which are in as poor a state as, if not a worse condition than the targeted schools. But some account could be taken of this when the logistics of the rehabilitation exercise are being worked out.

4.24 The rehabilitation and refurbishment of schools would focus on the following:

- replacement of unsafe or decrepit structures;
- major repairs of salvageable structures. The FINNIDA 1990 Report specifies these as comprising:
 - security for the resource room and office;
 - window shutters in place of broken window panes (no glass to be provided since it is too easy to break and too difficult to replace);
 - structural repairs: cracks to walls and floors; replace defective roof

- timbers and roof sheets;
 - painted plasterwork for chalkboards; no fitted blackboards to be provided as these are perishable and stealable as well as expensive;
 - repair or replace latrines;
 - deepen and re-equip wells as required and if necessary dig new ones;
 - structural repairs to teachers' houses;
- provision of movable desks or construction of immovable desks (made from bricks and concrete) and of teacher's rostrum and table.

It should be noted that teachers' houses are included in the rehabilitation program. If a school is to function properly, especially in the rural areas, its teachers need to be suitably accommodated in houses that are safe, secure and in a decent state of repair.

4.25 Focusing on these areas alone will not ensure that what has been regenerated at great cost will subsequently be maintained. Two other interventions of a more long-term nature are required for this. One is training for school heads and teachers in the management and maintenance of the rehabilitated facilities. Ideally, this should be catered for as an integral part of the rehabilitation program. To rehabilitate schools without leaving in place a system for their ongoing maintenance and repair is to court a recurrence of the same problems after a few years. Provision for training school heads on school maintenance is built into the overall program of in-service training that is proposed in Chapter 9 below, but the matter is stressed here because of its critical importance as part of the rehabilitation exercise.

4.26 The second intervention is to facilitate a regular program of visits to rehabilitated schools by inspectors and education officers. The objectives of the visits would be to provide regular guidance to school heads and teachers on the use and care of the refurbished facilities, to monitor the state of buildings, furnishings and resources, and to help with any problems arising.

4.27 A further critical issue is the involvement, at almost all stages, of the Parent-Teacher Association in the rehabilitation of primary schools. Even though decisions may be made centrally about which schools are to be rehabilitated, efforts will be made to bring about the active participation of the PTA, through meetings that will consider the repairs that are to be made, how the community can participate in the exercise, and how the community will be expected to help in maintaining the school when the formal rehabilitation program has come to an end. Guidelines will be developed that will spell out the respective rights and responsibilities of PTAs, local government bodies and central administration in the rehabilitation of schools and their subsequent maintenance. In particular, the guidelines will indicate clearly what constitute minor repairs and outline replacements for which PTAs will be directly and financially responsible, and what constitute major repairs or developments for which they might expect some assistance from local or central government resources. The guidelines will take account of the proposed transformation of PTAs into cooperatives and the implications of this for school ownership, management and maintenance.

4.28 Two recent reports on primary schools in Zambia refer to the need for a training manual in school construction and maintenance, aimed at both PTAs and teachers. The 1987 Winblad Report (Community Self-Help in the Construction and Maintenance of Primary Schools) states that the "widespread distribution of a self-instructional manual" must be part of whatever self-help model is employed (p.18) and later refers to a "comprehensive, detailed manual aimed

at PTA members and teachers on how to plan, finance, build and maintain classrooms, school latrines, desks and staff houses" (p. 20). More recently, the 1990 FINNIDA Report speaks of working out a school-based maintenance system through active participatory research and seminars/workshops, the outcome being a "manual which would address management, organizational and protocol issues, giving step-by-step guidance" (p. 58). The development, production and dissemination of such a manual would help to facilitate the rehabilitation process and to maintain in good order what had been restored. Rehabilitation activities will not be delayed pending the production of such a manual, but at the same time its development and dissemination to PTAs, community leaders and teachers will be given high priority.

Special Consideration for Handicapped Children

4.29 As access to primary education becomes more universal, the number of handicapped children in schools will also increase. It is desirable on educational and social grounds to integrate such children into normal schools and classes, wherever this is possible. In this way they will be better prepared for integration into the various aspects of society when they become adults, while the non-handicapped children in whose company they learn will come to accept them and their disabilities in a non-judgmental way. To facilitate this integration, the special needs of handicapped children, especially the physically handicapped, will be taken into account in designs for new schools and when rehabilitating existing schools.

Chapter 5

THE PRIMARY SCHOOL CURRICULUM AND LEARNING MATERIALS

The Primary School Curriculum

5.1 The principal purpose of a school system is student learning: learning to think, investigate, question, reflect, discover, appreciate; achieving competency in the essential skills of reading, writing and numeracy; acquiring knowledge and skills that enhance the quality of life; laying the basis for skills that can be useful in making a living or providing goods and services; forming a sense of values and growing in the ability to evaluate a situation. This is what school is about. This is what a school curriculum should promote. School subjects, each with its own syllabus, and the organization and allocation of instructional time, are the practical expression of the curriculum. On their own they cannot meet all the curriculum objectives. But taken collectively, the subjects taught in school should be effective in promoting the attainment of the curriculum objectives; taken individually, they should support and interact with one another. This means that in a properly designed curriculum subject compartmentalization is at a minimum. This is particularly the case in the primary school where students' understanding and skills are very limited and have yet to be consolidated.

5.2 The curriculum for Zambia's primary schools does not match up to these ideals. Its concern is principally with cognitive knowledge and skills almost to the complete exclusion of other dimensions. Even within the cognitive domain it is directed more to the acquisition of factual, verifiable bits of knowledge than towards the easy mastery that arises from genuine understanding. It stresses the passive role of students as recipients of knowledge transmitted by teachers, but does little to stimulate independent thinking, discovery, self-expression, or an investigative attitude. There are rigid boundaries between the various school subjects and few attempts to capitalize on the linkages between different areas. There is also an absence of realism and relevance in the way much of the curriculum content takes little account of community needs and interests or of the socioeconomic realities that will face the majority of students upon completion of their primary school.

5.3 The primary school curriculum also suffers from:

- being overloaded; new materials or areas of learning are added periodically, but they are not fully integrated into the curriculum and no part of the existing curriculum is omitted. The inclusion since 1976 of production activities as part of the school curriculum is the most notable example of this;
- being developed from the top down, without appropriate input from the communities whose needs it should serve or from the teachers who are to implement it;
- being uniform for the whole country and hence lacking the flexibility that will enable it to respond to different local circumstances.

5.4 A further major issue in the primary school curriculum is the policy that English should be the language of instruction from Grade 1. This policy has clear administrative advantages in facilitating the posting of teachers and the transfer of public servants. It has the

educational advantage of emphasizing from the outset of schooling the need for competence in the official language of commerce and public life. But these advantages are more than offset by the negative consequences of the policy, even in the liberal way in which it is applied. Too early an emphasis on learning through English means that the majority of children form hazy and indistinct concepts in language, mathematics, science and social studies. A number of studies in Zambia have confirmed that children's subsequent learning has been impaired by this policy. The use of English, to the exclusion of local languages, as the medium of instruction in schools leads to a downgrading of these languages. The "English equals education" mentality does little to foster an appreciation for one's cultural heritage. This stress on English from the beginning of school also serves to enshrine the isolation of the school from the community. Attempts at closer integration between the school and community are likely to encounter problems if the community perceives the school as an alien institution because of this heavy emphasis on foreign language learning and use. Finally, the implicit message of the English medium policy is that schooling should direct one away from traditional society towards ways of life, areas of employment, and living circumstances that require the use of English.

5.5 All of these problems point to the need for fundamental and substantial reform of the primary school curriculum. In the absence of such reform, other measures aimed at improving the quality of primary school education may have their effect but their end result will be improvement in the external forms of learning only and not the acquisition by students of authentic understanding and competence. Without radical curriculum reform, the primary school is likely to remain at the periphery of the community and to be perceived merely as providing a stepping stone to secondary school. What goes on in the school will not be seen as having relevance or importance for the community. It will remain alien and the school calendar itself will continue to disrupt the seasonal economic activities of many communities.

5.6 Reforming the curriculum will run up against the problem that major curriculum changes must generally be accompanied by changes in learning materials. As will be seen below, efforts are being directed towards meeting the need for school textbooks by reprinting existing titles while new materials are in the process of development. The needs of schools are too great for either of these activities to be postponed, pending revision of the curriculum. Fortunately, the materials being developed in the new English primary course have been designed so that they will continue to be suitable even if there is a change in the policy of using English as the medium of instruction from Grade 1. But the development of all primary materials will have to keep possible curriculum changes in mind. As the direction and scope of the curriculum reform become clearer it will be necessary to develop or commission materials that embody the new approaches. But clearly any change in the English medium policy will necessitate the creation of suitable materials in local languages for use in the lower grades of the primary school.

5.7 A further essential aspect of the school curriculum that has a strong bearing on the quality of education is the duration of the school day. Not surprisingly, evidence from research points clearly to a positive association between the number of hours of instruction and student achievement. The more time teachers spend actually teaching, the more students learn. In Zambia, the number of hours supposed to be spent in classroom instruction in Grade 1 to 4 is already dangerously low in comparison with practices elsewhere. This short time allocation is reduced even further by teacher absences, unscheduled school closings, and other disruptions. The use of teachers and facilities for double session teaching in Grades 1 - 4 limits the possibility of extending the length of the instructional time in the lower primary school, but an increase would be possible in upper primary classes.

5.8 A final issue relating to the primary school curriculum is that for the foreseeable future Grade 7 will be terminal for all but a minority. The curriculum, therefore, must take account of the fact that primary education, from Grade 1 to Grade 7, is the only formal education that the majority of students will get. A major consequence of this is that it should be firmly oriented, especially in the upper grades, towards the needs of the majority who will end their schooling at this point and not of the minority who will proceed to secondary school. For too long, the primary school has been viewed in terms of its role in preparing students for entry to secondary school, whereas due to the circumstances of Zambia, its proper role is to prepare students for entry to life.

TABLE 1: Length of School Year in Hours

	Grade 1	Grade 6
Zambia	630	990
Developing Countries*	942	1042
Sub-Saharan Africa**	955	979

* average for 46 countries, January 1991; IIEP data

** average for 20 countries, January 1991; IIEP data

5.9 This does not mean that the primary school would equip its students with specific occupation-related skills. Given the age of the students and the resources that would be needed for this, it would be quite impossible for it to do so. The school's task is more fundamental. It should lay the foundation on which future skills acquisition and future learning can build. This entails a solid grounding of students in communication and numeracy skills and in broad scientific and socio-cultural understanding. It also necessitates emphasis on one of the most vital of all skills for a school-leaver, the skill of how to learn. School-leavers must have learned how to locate, organize, utilize and apply knowledge for themselves. Their learning experiences should have acquainted them with some of the features of the local economy and commercial life (this points to the need for community involvement in designing a curriculum that is flexible enough to respond to local circumstances). What they studied in school should have introduced them to knowledge and practices needed for individual self-reliance (such as how to read and follow instructions, managing simple personal accounts, being involved in a small-scale enterprise, how to raise a loan). These are aspects that are not sufficiently stressed in the current primary school curriculum. But because of their importance for school-leavers, they will receive more attention in the future in curriculum guides, actual classroom teaching and the final Grade 7 examinations.

5.10 Practical skills are also important in the primary school as part of general education and for their own value in helping students to develop such powers as coordination, attention to detail and ability to observe. But at the primary level they do not have a vocational role. There is room in the primary school for practical work in certain widely applicable areas, especially those with domestic, agricultural or horticultural uses, but it would be a mistake to expect that on completion of primary school students would be able to use any skills learned in this way to make a living. The measure of the primary school's success is not that its graduates can practice domestic, agricultural or other skills, but that they can learn, in the home or elsewhere, how to practice them. Many of these skills are taught much more successfully in the home than in the school. Here, more perhaps than in any other area, the school should support the home and complement what is being taught there. It should not seek to duplicate what is already being taught successfully in the home, but should deepen that knowledge by examining the principles that underlie much of the home-based learning and by highlighting the continuity between what was learned in the home and what is learned in school.

5.11 This discussion makes it clear that in a primary school practical subjects and work activities are meant to serve educational objectives. Their function is to contribute to the purposeful development of the whole person as part of the overall educational process. In certain circumstances, economic value might attach to school practical and work activities. School cleaning work obviously represents a saving in labor, but it has the more important educational aim of instilling into students a sense of responsibility, orderliness, care, and pride in possession. Vegetables and other items produced as an integral part of the agricultural science class might be sold for cash or be used for school meals, but such economic value is only of secondary importance in the framework of school activities. The essential purpose of all the activities that form part of the formal school curriculum is that they should result in student learning. Schools are institutions where students are supposed to learn and teachers are supposed to teach. If goods and services are produced as part of that teaching and learning, any economic gain should be welcomed as an unsolicited bonus. But precious and limited school learning time should not be directed purposefully towards economic objectives. The rationale for the inclusion of any activity within the prescribed curriculum is the contribution it can make to the social and educational development of the student. This, and not economic objectives, is the proper concern of the curriculum. This does not preclude the establishment by the school of a production unit as part of its extracurricular activities, to supplement its educational endeavors or to augment its income. Neither does it preclude the establishment of profit-making ventures by interest groups in a school. But in future such undertakings will take place outside the prescribed learning periods. The focus of the schools will be on learning and not on production. Since production activities will no longer be part of the formal prescribed curriculum, more time will be available for the instruction of students in the essential core subjects.

5.12 In the light of these considerations, MOE will institute a review of the primary school curriculum in order to:

- (a) rationalize the current subject-based curriculum by integrating the primary school subjects into the five core areas of language, mathematics, science, health science, and social studies;
- (b) emphasize student achievement in reading, writing and numeracy;
- (c) foster abilities in self-expression, independent thinking and problem-solving;
- (d) incorporate areas of knowledge, life-skills and entrepreneurial skills relevant to a primary school leaver;
- (e) involve the participation of communities and teachers in the design of the curriculum;
- (f) develop a curriculum that is relevant, diverse and flexible;
- (g) establish the main local language as the basic language of instruction in Grades 1 - 4.

5.13 In addition, consideration will be given to extending the time available for learning. The teaching day for lower primary classes will be extended to a minimum of four

hours while that for upper primary will be extended to six hours. Even with this extension the teaching time in lower primary will still remain very short. Because of this it will be necessary to ensure that almost all of this limited time is devoted to what are manifestly learning activities and that a large proportion of the available teaching time is given to the essential areas of reading, writing and arithmetic. A consequence of this is that in Grade 1-4 the time allocated to work activities will not be allowed to exceed two half-hour periods per week, while in Grades 5-7 practical subjects and work activities will be allocated up to five periods (about 3.5 hours) per week. The syllabus for the individual practical subjects will give guidelines on the allocation of time between theory and practical activities. So that the most profitable use can be made of the teaching time available, MOE will pay special attention to the improvement of administrative procedures so as to reduce the need for teachers to be away from schools during official instructional periods.

Learning Materials

5.14 It is a truism that students cannot reach relatively satisfactory levels of learning and achievement in the absence of appropriate learning materials. Studies confirm the instinctive belief that the availability and use of textbooks and other learning resources can have a positive effect on student learning and on the overall quality of education. It is with this in mind that the per student spending on educational materials is frequently used as an index of educational quality. The positive effects of learning materials on the cognitive achievements of students have been found to be all the greater where literary and other resources do not commonly occur in the home or the wider society. When their production costs are compared with their beneficial impact on student achievement, textbooks and other learning materials may be regarded as the single most effective school input. The vitality and quality of an education system are revealed very plainly by the relative abundance of books, writing materials and educational aids of all kinds, while the virtual absence of such items bespeaks real educational impoverishment. Suitable buildings, sufficient furnishings and well-trained teachers will have no more than a relatively slight educational impact in the absence of an adequate supply of educational materials. But where sufficient materials are available, learning achievement can be high even if buildings, furnishings and teaching personnel are below the standard one would desire.

5.15 These considerations constitute a very strong case for providing Zambia's primary schools with the learning materials they need. Unfortunately, the situation in schools has been allowed to deteriorate to an alarming extent, with a critical shortage being experienced of essential textbooks, writing materials, supplementary learning materials (word cards, workbooks, readers, mathematics materials) and other materials. This situation has come about partly because of the shortage of materials and partly because of the poor quality of the materials available.

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
In millions of current kwacha	7.49	11.44	18.22	17.57	30.00	63.00
In millions of 1984 kwacha	2.85	2.80	2.88	1.23	1.16	1.35
Enrollments (millions) (Primary & Secondary)	1.593	1.531	1.587	1.595	1.633*	1.675*
*estimates						

development in 1986-1991 of the centrally controlled allocation for student requisites for primary and secondary schools. The spending on these items was always very low, but it was more than halved in 1989 and fell again in 1990. There is some recovery in 1991, but this was partly offset by the increase in enrollments. Expenditure from public funds on educational materials for each primary student in 1991 was estimated to be about K40 or US\$0.50. This is only 10% of what experience elsewhere suggests should be spent as a minimum (US\$6.0 per primary student). Zambia's small allocation of resources does not suffice to keep schools supplied with chalk, writing materials, equipment and consumables for science and domestic economy, mathematical instruments, and similar materials required by schools. It would be even less adequate if it had to extend to student textbooks and teachers' handbooks. Had they been available, the standard English and mathematics books for Grades 1 - 4 would have consumed the entire 1990 vote.

5.16 Fortunately, SIDA and FINNIDA have been providing strong additional support for the provision of learning materials in schools. There are three components to the Swedish aid: the annual production and supply of approximately four million exercise books to primary schools, funds to enable MOE pay the local production costs of books produced with Finnish aid, and the production of teachers' handbooks. The Finnish aid has supported development of the local capacity to write and produce textbooks and has underwritten the manufacture and distribution to schools of approximately six million books since 1985. At the secondary level, mathematics, science and English books are being written and provided for Grades 8 and 9 under the joint FINNIDA-SIDA-ZEMP scheme, the ODA has presented mathematics and science books for all senior classes, and the EC is currently providing sets of books for the Literature in English classes. The effect of these interventions is that the textbook situation in schools is better than it could have been if reliance had been placed on Zambia's resources alone, and that it is better today than it has been for several years past.

5.17 But the situation is still far from satisfactory in that there are not yet enough textbooks in schools for use on a sharing basis by all students; there are too few supplementary readers and almost no library books; and there are not enough teaching support materials. These shortages are partly the result of the insufficient funding that has been outlined and partly the result of inadequate or non-existent local production capacity for the necessary school items.

5.18 The annual production figures for the books produced with Finnish aid are given in Table 3. The norms for book provision at the primary level are a three-year book life and one book to be shared by every two students. The Book Sector Study, conducted for the EC by the British Council, was of the opinion that because

TABLE 3: Annual Production of School Books under ZEMP, 1985 - 1991 (in thousands)

	1985	1986	1987	1988	1989	1990	1991
Primary							
Textbooks	1384	500	89	168	548	800	679*
Suppl. Readers	-	-	-	-	1643	66	-
Secondary							
Textbooks	-	-	-	-	-	116	176*
TOTAL	1384	500	89	168	2191	982	855*

*estimates

of the type of binding used in Zambia the book-life could not extend to three years. But even if it did, very few of the books made available before 1988 would still be in schools. A reasonable estimate, on the basis of Table 3, is that there are some 2.2 million usable course books in primary schools, together with 1.6 million supplementary readers, mostly in English. The

distribution of these books, by subjects and grades, together with the actual 1990 enrollments, is given in Annex 3. On the presumption that all schools have received the supplies of books destined for them it would seem that needs are being met in English in Grades 1-3 and 5, in mathematics in Grades 4 and 5, and in social studies in Grades 5, 6 and 7. Although no formal course books are available for any of the Zambian languages, there were enough supplementary readers in various Zambian languages in 1990 for a student-to-book ratio of three to one. The supply of supplementary English readers for Grades 5, 6 and 7 has been well attended to: 58 titles have been printed in 26,000 copies each and sets distributed to schools, so that upper primary students have access to a fairly wide range of additional English reading materials. But there is a lack of science books for all grades and of mathematics books for most grades. Some of this lack is due to the failure of the local printing industry to execute orders, notably for the Grade 6 and 7 mathematics and Grade 7 environmental science books.

5.19 The two-stage approach adopted by FINNIDA for the production of school books is effective and should continue. In the first stage, existing titles are reprinted, possibly with minor amendments or adjustments, and distributed to the schools as quickly as possible. This is the arrangement that prevails with the mathematics, social studies and ZPC English books. In the second stage, new textbooks embodying new approaches to the curriculum are developed, as is the case with the new English primary course that began in Grade 1 in 1991 and with the ZEMP books for the secondary level. Emergency measures can address the first level, where the manuscripts already exist, but the success of these measures depends on the local book-manufacturing capacity and, should it be inadequate, on the readiness to have printing undertaken outside the country. Both of these issues are addressed below. Since the second stage involves the slow process of developing new materials, it requires a long-term investment. The materials to which it leads may be better and more relevant than what is in use, but it takes several years before they get into the schools (and longer before teachers become familiar with their approach and content). While the new materials are being developed the cohorts of students who are passing through the system must have their needs met by the emergency or first stage of the operation. Since the second stage results in the production of materials with a fresh approach to the curriculum content, an important component is orienting teachers to the new materials. Failing this, the new books will not have their desired impact on classroom teaching, and in many circumstances teachers may lack such confidence in adopting the new approach that they make little use of the newer materials. Providing for teacher orientation to new curriculum materials requires investment over a long period and a well-designed programme of teacher education. The orientation process for some teachers, however, can be built into the manuscript development stage if serving teachers are involved in the creation of the text and in the testing out of new versions. Teachers with this kind of experience can be called upon to impart their knowledge and understanding to their colleagues.

5.20 Zambia faces three problems in generating and supplying educational materials to schools in the quantities that are required: (a) the actual development of the materials; (b) the technical production of these materials; and (c) financing the provision of these materials.

Manuscript Development at the Curriculum Development Centre

5.21 Thanks to the ongoing impact of ZEMP, considerable institutional capacity has been developed at the CDC for the generation of good quality school textbooks. The FINNIDA support for this work is likely to continue until at least 1996. In keeping with the original plan

of operations for ZEMP much of the support will be for the completion of ongoing work in developing materials for secondary school English, mathematics and science, though the development of materials will continue in primary English and, to some extent, in the various Zambian languages. There is scope, however, for additional work in the development of materials for primary schools, notably for mathematics and science (inclusive of agriculture), but without neglecting social studies and the important areas of home economics and industrial arts.

5.22 If the CDC is to accomplish these tasks it should be adequately funded. The development of new materials cannot go ahead unless the centre has the resources it needs to mount training and writing workshops and to try out new materials in the field. For these purposes it must have sufficient staff, functioning and well-supplied reprographic facilities, adequate transport, and the funds needed for its workshops and field operations. In common with other areas in the education sector, the CDC saw its financial allocations drop steadily during the 1980s, but this trend has now been reversed and in real terms the centre's funding for 1991 was larger than it had ever been. But as with other areas, much of the large increase budgeted for 1991 was taken up by salaries - salaries for new members of staff as the establishment was filled and increases in salaries and emoluments for all staff. Nevertheless, the proportion of the centre's budget devoted to operational expenditures increased significantly in 1990 and again in 1991 when for the first time provision was made for seminars and workshops. This is a step in the right direction. What is needed now is for this very small 1991 allocation (K50,000) to be increased so that the centre can perform the tasks expected of it. The very good work it has done so far in manuscript production has in large measure been made possible by resources made available from FINNIDA, ODA and EC. Donor assistance will clearly be needed by the CDC for a long time to come, but it will also be necessary for Zambia to deploy local funds for the support of the Centre's operations. The possibility that some of these local funds might come from royalties payable by publishers on materials developed by the CDC will be investigated.

5.23 In developing materials for the schools, the CDC should allow itself to be guided by the observations in the 1991 ZEMP Evaluation Report about (a) speeding up the entire process of manuscript generation and (b) keeping costs in mind at all stages of manuscript development. Because resources are limited, the curriculum should be dealt with selectively so that a single year of study will require only one student textbook which is not too large or costly to produce and does not take too long to develop. The centre should also take account of the recommendation made in the 1987 report, *Enhancing Educational Quality in Zambia*, that it provides for a curriculum coordinator to deal with broad issues of overall curriculum quality and pragmatic decision-making regarding techniques, resources, procedures, etc., in the curriculum development process.

5.24 In the years immediately ahead, CDC will continue to dominate the generation of textbooks and other curriculum materials for schools. But even at present it exercises no monopoly in this field since, as the 1991 ZEMP Evaluation Report noted, "prescribed textbooks are the exception rather than the rule in Zambia's schools" (p. 30). Moreover the past few years have seen an increase in the number of privately produced school books and in the number of unsolicited manuscripts that the inspectorate submits to the CDC for appraisal (*ibid.*, p. 87). There is clearly a growing potential in the country to produce materials for schools outside the framework of the Centre's manuscript development process. The scope for this potential should increase with the growth of the publishing industry, when commercial publishers would

commission authors to write school textbooks. Such a development would introduce healthy forms of competitiveness into the whole field of school-book writing. It would also enable CDC to give more of its attention to the nature of the curriculum as such, to developing subject specific syllabuses that would respond to the changing and varying circumstances in the country, to preparing teachers' guides, and to evaluating the impact on student achievement of the curriculum as designed and implemented. CDC's role in the actual writing of books for schools will become progressively less. Its present dominance in the preparation of school textbooks should, therefore, be regarded as something temporary that will gradually give way to a more open market situation for school-book development. In view of this, MOE will lend strong support to independent authors and publishers who are prepared to venture into the field of publishing for Zambia's schools.

5.25 In the free market situation that will eventually obtain for school-book development, the CDC will continue to be responsible for the production of teaching syllabuses and guidance materials for teachers. It may also wish to produce trial materials in certain curriculum areas that it is developing and it is likely to retain a large measure of responsibility for the development of books in areas where market forces are not operating as expected. To facilitate work of this nature, donor support will be sought to equip the Centre with the necessary facilities.

Technical Production of Books and Other Materials

(a) Books

5.26 The book publishing industry in Zambia is not well developed. There are only six commercial printing houses of any size and most of these show preference for the publication of non-book materials. Much of their equipment is old and generally unsuitable for the long print runs and binding operations needed for school books. The local industry also lacks sufficient staff skilled in editing, designing, illustrating, typesetting, printing and binding. Almost all the raw materials used in book production have to be imported and with heavy duty and taxation the cost of such materials is very high. If they wished to undertake the production of school books in large quantities most of the existing companies would need large investments. The development of publishing capacity for school-books has also been inhibited by the special status enjoyed by KKF, a parastatal foundation that has now been transformed into the Zambia Educational Publishing House (ZEPH). A principal objective of the Foundation was to produce the textbooks required by the education system, but unfortunately it failed to do so in the numbers required. The current capacity of the ZEPH is estimated to be considerably more than two million average-sized textbooks per year, but the combined production levels in 1988, 1989 and 1990 were only a little more than a million titles. As noted already, the ZEMP project saw the production in 1985 - 1991 of some six million titles, but during these six years less than two million of these were manufactured by KKF; the remainder were printed elsewhere in Zambia (275,000), in Zimbabwe (1.258 million) or in Finland (2.601 million). These are disconcerting figures that show that although ZEPH has the technical capacity to meet between a half and three-quarters of Zambia's school book needs, its structures and modes of operation prevent it from doing so. A thorough reorganization, along the lines proposed in the 1987 report, Enhancing Educational Quality in Zambia, and the 1991 ZEMP Evaluation Report, needs to be undertaken urgently so that ZEPH is transformed into an efficient commercial operation. If this is not done, the large volumes of public resources (in the form of tax benefits) and aid support

from Norway and Finland will fail, as in the past, to supply schools promptly with textbooks in reasonable numbers. The radical measure of privatizing ZEPH, to make it more effective in a competitive educational market, should also be considered.

5.27 But further steps are needed. Even if it were operating at full capacity ZEPH would not be able to meet all the needs for primary and secondary school-books. Private commercial companies need to be encouraged to enter this field and to participate in the publication of books for schools. The first step in throwing open the market for school publishing to the private sector has already been taken by MOE's formal policy statement welcoming and approving such participation. What is needed now is a mechanism that will ensure that the private sector is given fair access to the market for school-books. But more has to be done. There is need to evaluate ZEPH's continued status as the privileged supplier of books and other materials for schools, with special attention to its tax privileges and its receipt of aid-funded machinery and equipment for which it does not pay counter-value funds. There is also need for Government to review the whole question of taxes on raw materials needed for book production. The aggregate duty payable on wood-free book paper is 43.75%, on ink it is 50%, and on film it is a staggering 62.5% (in all three cases there is a 5% import levy in addition). At these levels of taxation, from which ZEPH is presently exempt, it is uneconomical for the private sector to enter the field of book publishing since the products would be so highly priced that they would be unaffordable. There is urgent need to reconsider the economic implications of these tariffs in view of their adverse consequences for the provision of books urgently required for the improvement of education. Through their maintenance, Zambia runs the risk of taxing quality education and knowledge out of existence.

5.28 Private companies have also expressed reluctance to undertake the printing of school books because payments by Government are so uncertain and are made so late. Much of ZEPH's operations are being paralysed by cash flow problems arising from delayed, and consequently devalued, payments. The establishment of a Trust Fund for Educational Materials, proposed below, may go some way towards solving this problem, but unless private companies are assured of fair access to the market for school books and of prompt payments for their products, they are not likely to make a significant contribution to meeting the needs.

5.29 Other measures would be for the Government to support the development of publishing and printing skills by enhancing the training capacity of Evelyn Hone College; to give high priority and full support to commercial publishers seeking access to loans for the development of their book manufacturing plant; to encourage new investment in the printing industry and the establishing of new printing and publishing houses; and to facilitate international publishing houses in the establishment of subsidiaries in Zambia.

5.30 Most of these are long-term measures that will take upwards of two years to make their impact on local capacity. In the meantime, there is a growing backlog of titles for printing and there is need for re-prints to replace worn books and to cater for the increasing school population. The ZEMP Evaluation Report proposed that a realistic assessment should be conducted of the capacity within Zambia to clear the backlog before the end of 1992 and that titles that could not be produced by then within Zambia should be put out to tender abroad, preferably within the Southern Africa region. Steps should be taken to implement this proposal, taking account of the replacement needs for ZEMP books printed in 1989 and 1990. In subjects where there are no locally developed or traditionally used titles suitable for reprinting, it will be

necessary to buy existing books off the shelf, very likely from international publishing companies.

(b) Other Educational Materials

5.31 The production and supply of other educational materials likewise needs investment and government support and encouragement. ZEPH and private printing companies seem able to meet the market demands for exercise books, though the quality is low, the range is limited and the prices are high. Using UNDP funds, UNESCO has set up a small production facility for science apparatus, but this is not capable of producing the quantities of glassware and simple equipment required by the primary schools and does not aim to produce the more sophisticated items required at secondary level. Almost all of these have to be imported, as must science consumables, which are usually hard to come by even when needed for examinations. Other items required in large quantities that have to be imported include pencils, ball-pens, erasers, rulers and mathematics sets. Teaching or demonstration items that are required in smaller quantities, such as globes, blackboard rulers and set-squares, and geography and science models, must also be imported. On the other hand, chalk of good quality is produced locally and the supply seems to be adequate, though there may be distribution problems. SIDA has had a set of maps printed and distributed to all primary schools, but most schools lack wall charts, educational posters and other display materials. ZEPH's publication list includes a wide range of language and arithmetic teaching aids (word cards, number wheels, flash cards, etc.) but none of these have been available for several years. As mentioned already, ZEMP has supported the production of supplementary readers for Grades 5 - 7 in English and the major Zambian languages. But the range of supplementary reading material does not extend to social studies, the creative and industrial arts, science or other areas. Essentially, there is no provision for libraries in primary schools and very inadequate provision in the secondary schools that boast such a facility.

5.32 Priority in meeting the diverse needs for educational materials will be given to providing primary schools with a basic set of general teaching aids and apparatus (globes, charts, blackboard, etc.). Because of the importance of mathematics and science, high priority will also be given to supplying all schools with the appropriate science materials and consumables and to improving the supply of rulers and mathematics sets. As with the publishing industry, Government will encourage the development by the private sector and by NGOs of small industries for the local production of these and other educational materials, but initially much will have to be imported. As part of the programme of rehabilitating primary schools PTAs will be helped to develop secure storage facilities at their schools for educational and other materials.

(c) School Libraries

5.33 In the long term, library facilities should be provided at all educational institutions, with the dual purpose of catering for the reading needs of school students and of the community in which the school is located. Such a development should be an integral part of a comprehensive programme for promoting, consolidating and capitalizing on reading skills. Although this would be a costly development it would not be a luxury. The necessary investment in reading materials, storage and management would be amply justified by improvements in the general quality of education and the elevation of the overall educational status of the population. A clear finding from studies conducted elsewhere is that the existence and use of a school library

contributes to a significant improvement in student achievement. Initially the objective of developing school libraries will be pursued by making sets of primary level books available to schools in rural and high density peri-urban areas, in order to compensate for the lack of reading materials in the homes of most students in such schools. Experience with the scheme will shed light on how it might later be extended to other schools.

Financing the Provision of Books and Educational Materials

5.34 As with all other educational inputs, the long-term aim should be to develop a financing system that will enable Zambia to pay for its own needs. In the short and medium terms, this will not be possible because of the difficult economic situation. But structures should be set in place and procedures set in motion that will make it possible for Zambia to assume more of the financial responsibility for the provision of educational materials. Until there are significant improvements in the economy, large amounts of donor assistance will be needed to ensure an adequate supply of books and other items for all institutions of learning. But in every area, Zambia should also use its own resources for these purposes and by and large the real value of these resources should increase annually. In the following paragraphs, some proposals are made for the increase and more rational use of local resources. These proposals have been put forward in a climate of some uncertainty when Zambia is endeavoring to establish systems that will ensure the adequate and sustainable financing of educational materials. Experience and more intensive investigations may show the need for other measures. To allow for this, MOE will commission an in-depth study of the financing of textbooks and other educational materials, with the objective of finding a sustainable balance between government, local authorities, parents and (in the interim) donors. The long-term objective will be to replace donor financing by local financing.

5.35 Local resources for educational materials can come from either public or private funds. Public expenditures in this area have been very small in recent years (see Table 2 above) and there is a clear need for a substantial increase. Because teachers' salaries constitute such a large and inescapable part of annual educational expenditure, it may be felt that it would not be possible to increase the allocations for educational materials. This view must be firmly resisted since very little educational good can come from maintaining teachers and students in schools if they are not provided with the resources that are essential for their work. It is opportune here to note that while education is central to economic development the beneficial economic outcomes will come about only if the education provided is of reasonable quality. It has been shown in other parts of the world that communities that invested more heavily in the quality of the primary education of their children tended to experience higher levels of economic development a decade later. A larger investment in educational materials, without which there can be no such thing as quality of education, is the price Zambia must pay now if in the future it is to reap the benefits of economic progress.

5.36 In order to ensure that there is a proper level of public spending on educational materials, a capitation system will be established whereby budgetary allocations for primary and secondary schools will be linked to enrollments. Initially the per capita allocation will not be large and will fall far short of the figure of US\$6.00 per student proposed by the World Bank. But it will be considerably larger than what has hitherto been the case. Moreover, its real purchasing power will be maintained from year to year and every third year it will be adjusted

upwards. The proposed allocations are shown in Table 4. These allocations will be funded by adopting various measures: an increase in the overall budgetary allocation to the education sector; a redirecting of a larger part of the education budget to educational materials and away from boarding and other personal welfare costs at the secondary and higher education levels; a more cost-effective use of teachers so as to reduce the proportion of educational spending that must go on salaries.

TABLE 4: Proposed per Capita Allocations, for Education Materials in Primary and Secondary Schools, 1993 - 2002.

	1993 - 1994	1995 - 1997	1998 - 2000	2001 - 2002
Lower Primary	K100	K125	K150	K200
Upper Primary	K150	K175	K200	K200
Junior Secondary	K250	K300	K350	K400
Senior Secondary	K400	K500	K600	K750

The Educational Materials Trust Fund

5.37 The budgetary allocation for student requisites would need to be unrealistically large, in relation to the rest of the education budget, if it were to cover all the needs for textbooks and other educational materials. Moreover, there will be difficulty in the immediate future in providing resources even in accordance with the low levels of per capita allocation proposed above. An additional source of funds of some magnitude will be necessary if adequate provision is to be made for this essential school input. To meet this need, legislation will be brought forward for the establishment of an Educational Materials Trust Fund which will receive its finances from a variety of sources. The scope of the existing educational levy will be widened so that it applies to individuals (above a certain income level) as well as to companies. In its present form the levy has shown that there is considerable potential within the public financing system for raising additional funds. In 1989, it raised K50.9 million; in 1990 the yield was K266.6 million, almost five times more than was actually spent that year on student requisites and learning materials. Broadening the scope of the levy should enable it to raise a very substantial sum. At least half of the proceeds from the new levy will be used annually to finance the Educational Materials Trust Fund. Consideration will also be given to introducing other forms of taxation (such as a levy on foreign exchange transactions or on foreign travel payments) to provide a resource base for the Fund. Should the decision be taken to privatize ZEPH, the proceeds will be used to help finance the Trust Fund. The Fund, which will be registered as a charity, will also be empowered to receive donations from individuals and organizations. Finally, donor agencies will be invited to support the Fund. This they could do either by direct subventions or, as proposed in the Zambia Declaration on Education For All, by transforming part of Zambia's annual debt service obligations into an arrangement whereby Zambia would pay counter-value funds into the Trust Fund.

5.38 The fund will use its resources to support the production of school books (principally textbooks for primary schools) and other educational materials, to supply initial

stocks of such materials to existing schools (initial stocks for new schools should be part of the capital provision for new undertakings) and to subsidize PTAs in purchasing additional or replacement stocks. The Fund will be managed by the recently established Educational Materials Unit in MOE. So that the Unit may deal effectively and promptly with all issues relating to the supply of educational materials it will be relocated within ZEPIU.

Private Involvement in Financing Educational Materials: PTAs

5.39 At the private level considerable capacity exists to contribute systematically to the costs of educational materials. Several strategies will be adopted to exploit this capacity. One has been mentioned already, namely, the extension of the educational levy to individuals at certain income levels. A second will be to require PTAs to raise a proportion of the costs of educational supplies for their schools, the proportion varying in accordance with the economic status of the school's catchment area. A third will be to require students to purchase their own routine consumables (exercise books, pencils, ball-pens, erasers, rulers). PTAs will use their funds to replace damaged or lost books and materials and to increase the school's stock of supplementary readers and teaching aids. Because there is wide variation in the economic status of PTAs, the Educational Materials Trust Fund will be used to subsidize the PTAs of schools in disadvantaged areas, possibly through a type of coupon scheme, so that their purchasing power would be enhanced, but control of purchases and responsibility for materials bought would remain within their own hands. On the basis of initial experience this scheme could be extended to more schools and could encompass a wider range of educational materials. A prerequisite for the success of such a scheme would be the availability of the necessary materials through the regular retail outlets.

5.40 If subsidies were to be made available to enable needy PTAs to purchase educational materials, they would no longer be paid to the producers of such materials, whether by way of privileged tax concessions such as ZEPH currently enjoys or by way of free inputs from donor agencies. Consequently the producer would find it necessary to charge the full market price for the product. The apparent disadvantage of this is offset by the numerous advantages of making the consumer the direct beneficiary of subsidies for educational materials: (a) the subsidies can be targeted at those who are most in need; (b) because realistic prices can be charged, producers will find it attractive to enter the market for educational materials or to diversify and improve their range of products; (c) the increased local purchasing power given by consumer subsidies will stimulate the local retail trade in books, stationery and other educational materials, to the advantage of all parties. A further benefit is that by enhancing the purchasing power of PTAs it is likely that the sense of accountability for the school's assets will also be enhanced. A PTA that buys materials from its own resources, even when helped by subsidies, is likely to buy only those that are really necessary and useful, to ensure that these are actually used in the classroom, and to see to it that they are treated with care and are securely safeguarded against vandalism and natural hazards.

5.41 In keeping with what has just been said, and with recommendations made elsewhere in this Report about increased institutional autonomy, MOE will examine the feasibility of entrusting funds for the purchase of books and other educational materials to schools so that they can deal directly with educational publishers and suppliers. Such a procedure would very likely result in a more efficient use of funds, though some of the gains might be offset by the administrative costs of widespread financial decentralization, by the higher charges suppliers

would levy when dealing with a multitude of relatively small purchases, and by the increased dangers of malpractices.

The Role of Donor Agencies

5.42 Even in the most optimistic circumstances, public and private local resources will not be adequate for the production and provision of all the educational materials required by Zambia's schools. For the foreseeable future, therefore, donor assistance will continue to play an important role in ensuring that schools have the books and other materials they need. Such assistance would most profitably be directed to:

- (a) immediate reprinting of existing titles to meet current primary school needs as quickly as possible, even if this means that the printing must be done outside Zambia;
- (b) developing new primary course books for mathematics, sciences social studies and home economics; this would be in addition to the work currently being carried out by ZEMP;
- (c) equipping all primary schools with a set of basic-teaching materials (globe, blackboard instruments, etc) and safe storage for these;
- (d) supporting local production of non-book educational materials;
- (e) providing schools in disadvantaged areas with sets of supplementary readers and other primary level library materials;
- (f) providing basic science apparatus to primary schools and re-equipping secondary school laboratories with essential items of equipment and with consumables;
- (g) strengthening local capabilities for the technical production of books and educational materials (by supporting training, facilitating industry's access to funds for necessary equipment and materials, providing technical assistance for production or distribution, etc.);
- (h) subsidizing the purchase of writing materials by students from poor families;
- (i) allocating resources to the Educational Materials Trust Fund for the purchase of initial stocks of materials for all schools or for enabling needy PTAs to purchase these for their schools.

5.43 In almost all the areas outlined successful programs of assistance will require persistent commitment of interest and funds over an extended period of time, perhaps for as long as ten years. Because of the low production capacity that is found in Zambia, much that is needed will in the first instance have to be imported. But an over-riding aim should be to move away from a situation of import-dependency. For almost all materials this implies a two-stage approach: in the first stage materials are imported, but simultaneously local production capacity is

being developed so that a second stage can be phased in when the majority of materials will be produced locally. Start-up costs for new local lines will be considerable and the lead time before local products get into schools is likely to be long. But donor agencies should be prepared to invest in enhancing local capacity for the production of materials that are required in large quantities, so that a sustainable production system remains in place when agency assistance ends. If a local capacity to produce educational materials is not developed Zambia will remain, as heretofore, dependent on supplies from abroad, with all the uncertainties and additional costs this entails. Continued dependence on agency support is also more likely to persist in a situation where no local production capacity has been developed.

Donor Coordination

5.44 Increased donor assistance for educational materials and the involvement of a larger number of agencies in this area point to the need for effective coordination of such assistance. The various programs of assistance should be mutually supportive and reinforcing, but at the same time they should take account of Zambia's limited absorptive capacity and the limited institutional capability to manage a variety of aid programs all targeted towards educational materials. The establishment of priorities, major strategic issues, and developments towards a locally sustainable system for the production, provision and sale of educational materials, are the responsibility of the Zambia Educational Materials Coordinating Committee (ZEMCC). In many respects the Educational Materials Unit (EMU) is the secretariat for ZEMCC. But at present the EMU is too small a unit to be able to deal with the day-to-day coordination of the activities of several donors. Moreover it does not yet have the technical expertise needed for such a coordinating role. The importance of donor coordination, and the likelihood of increased donor participation in the field of educational materials, underline the need to strengthen EMU with additional staff, including the provision of technical assistance from a donor agency.

CHAPTER 6

EXAMINATIONS

Purposes of Examinations

6.1 In June 1928, 261 teacher trainees sat for the "third grade teachers' certificate." This was the first public or externally set examination held in Zambia. Since that time, public examinations have assumed an ever-growing importance and today they play a dominant role in the concerns of the public, in the lives of students and teachers, and in the academic work of the schools. The education system as we know it today would be unthinkable without examinations. Countries such as China that did away with externally set selection examinations quickly re-introduced them because of the educational chaos, corruption and virtual anarchy that followed their abolition. Because of their role as gatekeepers, whether to higher levels of education or to wage employment, examinations are likely to remain a permanent feature of the educational landscape. In difficult economic times it is even likely that their salience will increase. This makes it all the more necessary to ensure that their potential for making a beneficial impact on teaching and learning be exploited to the full.

6.2 Ideally, externally set examinations should serve a variety of purposes. Educationally, they should foster and support the attainment of sound curriculum objectives. The instructional curriculum -- that is, what is actually taught in the schools -- reflects to a large extent the content of examinations. The examinations send signals to teachers and students, pointing out what they should regard as the important aspects of the curriculum and the kinds of knowledge and skills that are valued. If the examinations are well designed and in conformity with the official curriculum, then chances are improved that teachers will teach what they are supposed to teach and students will learn what they are supposed to learn. Moreover, examinations serve as an incentive for both teachers and students. The successful performance of their students is a powerful source of professional satisfaction and public justification for teachers; on the other hand, teachers are often blamed, and may blame themselves, for student failures. For students, the extrinsic motivation to do well in an examination can develop into intrinsic motivation, leading to interest and personal enjoyment in a subject. In addition, examinations tell how successful schools and the educational system as a whole have been in meeting the objectives laid down for them. They reveal, or if properly employed could reveal, where teaching has succeeded and where it has failed. They show up areas of the curriculum that need greater attention and areas where remedial work is needed. Finally, examinations also serve to assess the educational attainments of the individual student. They thereby indicate and certify the level of competence reached by the student on completion of his program. The certificate that is awarded provides an objective record of the student's accomplishments in different areas of the curriculum.

6.3 Socially, examinations have an accountability function. They provide a regular index of performance that allows comparison over time and comparisons between schools. In this way they keep the public informed of how well the schools and the school system are doing their job.

6.4 Administratively, examinations provide a basis for selecting those who are to enter the next stage of the education and training systems. Educational opportunities at the higher levels will remain scarce for the foreseeable future, especially if economic growth is slow. The only cheap, efficient, equitable and objective way that society has been able to devise for the

allocation of these scarce educational opportunities and benefits is by means of examinations. Attempts in other countries to control entry to higher educational levels by means other than public examinations have, for the greater part, been a failure. Hence the use of examinations for selection at various points within the education system is likely to remain as a function of considerable importance.

Reforming Examinations to Promote the Quality of Education

6.5 A properly designed examination should take account of all these purposes, although it is acknowledged that there can be difficulties in catering for all of them simultaneously. But the area where stress is most required, and where reform is most urgently needed, is in the educational purposes of examinations. Hitherto in Zambia, as in other countries whose educational systems are very broad at the base but narrow rapidly the higher one goes, the emphasis in examinations has been on selection. This is understandable. Given that the number of places in Grade 8, Grade 10, and higher institutions is quite limited, the public examinations, as selection mechanisms, are of the utmost importance to students, parents and teachers. Since this situation will continue indefinitely, steps should be taken to capitalize on the potential thus created so that public examinations become a potent instrument for enhancing the quality of education. The incentives arising from the selection function of examinations should be pressed rigorously into service for the improvement of education.

6.6 There are four ways in which examination reforms can contribute to improving the quality of education. First, by manipulating the kind of question asked, examinations can be used to improve the curriculum as it is actually taught in the schools. Specifically, for the Grade 7 composite examination this means:

- (a) asking more questions that test comprehension and application and fewer questions that test little more than the recognition of the correct answer or the recall of unconnected facts;
- (b) asking questions that relate to the real-life situation of the majority of candidates, that is those who are to terminate their formal education at this stage.

6.7 Analyses of Grade 7 papers have shown that they contain too many knowledge questions which require only recognition or recall of facts, generalizations and principles. On the other hand, they contain too few questions that test the higher-order skills of comprehension (the ability to grasp and understand the meaning of concepts, symbols, etc) and application (the ability to apply and use rules, concepts and principles in circumstances which the student has not previously experienced). It is also the case that instead of having a real-world concrete reference, questions often deal with highly abstract theoretical situations. Ability to deal with matters in a theoretical, abstract way is an important skill for those who will proceed to Grade 8 and beyond. But the Grade 7 examination stresses this skill at the expense of the ability to deal with the concrete circumstances of rural life, shopping and marketing, travel, and self-employment, which are the areas of skill needed by the majority of students who will end their formal education on completion of Grade 7. The consequence is that there is little incentive for the primary schools to foster the higher-order skills of comprehension and application, which are needed by all students, or to teach what is relevant to local conditions and realities and what

will be needed by students who do not proceed into Grade 8.

6.8 Secondly, while maintaining its selection function, the examination system can help to improve teaching and learning in schools by providing feedback information on aspects of students' performance. Public examinations generate an enormous amount of detailed information about the performance of students and schools. If this were analyzed and passed back to schools, teachers would quickly see where their teaching had been successful, where there was room for improvement, and the precise kinds of improvements that should be made. Unfortunately, this mine of information that could lead to substantial improvements in the whole teaching and learning process tends to be ignored. Human performance depends critically on feedback, but the potential for improving school performance through feedback from the vast amount of information collected as part of the examination system is not systematically exploited.

6.9 Thirdly, the modes of assessment used in examinations should reflect the goals of the curriculum. The Grade 7 examination deals exclusively with cognitive skills which are assessed through the traditional pencil-and-paper type examination. There is no real assessment of practical, oral, aural, or psychomotor skills, all of which are stressed in the official curriculum. Within the cognitive area, there is no evaluation of the student's ability to write a continuous piece of prose, since all the questions are of the objective, multiple-choice type. Because these various skills are not examined, it is likely that many of them receive little attention in the schools. There is clear need to include an assessment of writing skills in the Grade 7 examination, through the introduction of a composition or of essay-type responses. The marking of these will be troublesome and costly, though if each candidate writes no more than two compositions (one in English and one in a Zambian Language) the labor and cost involved would very likely be less than that required for the marking of the Grade 9 examinations. The assessment of practical, oral, aural, and psychomotor skills presents greater problems that can hardly be solved unless there is some form of school-based assessment. The possibility of introducing this is examined later.

6.10 Fourthly, the areas included in examinations should be curriculum areas that are considered important. Teachers teach what is examined. Students study and learn what is examined. Curriculum areas that are not examined are not likely to be taught or learned. Hence, the important curriculum topics within a subject should be reflected in the examination. Also, subject areas that are considered important should be examined and should contribute to selection decisions. The present practice is to attach theoretical importance to Zambian Languages and to practical subjects. But the examination results in these areas do not contribute in any way to the overall mark for secondary selection. The message which this practice communicates to students is clear: in their eyes, these subjects are less important than others that are bookish and academic because it is only the latter that contribute to the all-important decision about their progress to Grade 8.

6.11 To sum up what has been said, it is no exaggeration to state that no single intervention could have a greater impact for the improvement of the quality of education in the classroom than a meaningful reform of the examination system. The Grade 7 examination, and to the extent applicable, the Grade 9 and Grade 12 examinations also, would contribute significantly to improving educational quality if

- they placed less emphasis on recognition and recall of facts and more emphasis on higher-order skills such as comprehension and application;
- they asked more questions that are relevant to the real-life situation of students, especially rural students and those likely to terminate their formal education at this point;
- they provided detailed feedback information to the schools on aspects of student performance in various papers;
- they examined writing skills and, if possible, practical, oral and aural skills;
- they paid more attention to what are considered to be important curriculum topics and areas.

6.12 The human and material resources needed to effect these reforms in the examination system are considered at the end of this chapter.

School-Based Assessments

6.13 The assessment of students can be conducted internally by the schools, externally by an outside examining body such as the Examinations Council, or by a mixture of externally set examination and school-based or continuous assessment. The distinctive characteristic of school-based assessment is

"the use it can make of teachers' intimate and detailed knowledge of all the work of individual pupils across a wide range of activities and objectives, including the informal curriculum and the affective area, oral as well as written work, and practical as well as theoretical work. And it makes use of the teachers' knowledge of pupils built up over a period of time." (Assessment for All. HMSO, Edinburgh, 1977. p. 24).

6.14 The use of school-based assessment serves to reduce the over-riding importance and stress-inducing burden of examinations that are fully external. By using information deriving from school records it takes into account that the only place with enough information to do justice to a student is his school, where his teachers are well-placed to judge his standards, achievements, and potential for further education. Educational measurement experts tend to agree that a student's score on a 40-minute test may often provide a less representative picture of his attainment than the impressions of the teacher who has observed the whole of his work over several months. School-based assessment is also of value in areas such as practical and project work that cannot be meaningfully assessed by traditional externally set and administered examinations. There is the further advantage that school-based assessments provide a basis for decisions about a student whose participation in a final external examination is affected by illness or other personal circumstance.

6.15 These advantages have led in recent years to a more extensive use of school-based assessment procedures in the overall assessment of students in developed countries. In Zambia, such procedures are used, though on a limited scale, at the secondary level where the school's evaluation of project work contributes to the overall grading in some Grade 9 subjects and where school reports can influence the grading of practical subjects at School Certificate level. The manifest advantages of continuous assessment and its potential for enhancing the quality of school learning raise the question of the extent to which its use can be increased so that in time the results for all subjects in the Grade 7, 9, and 12 examinations would be based partly on the terminal, externally set examination and partly on the accumulation of school-based assessments.

6.16 The first answer to this question is that a great deal of groundwork must be laid before the extensive use of any school-based assessment system could be introduced. Teachers would need to be trained in the use of continuous assessment strategies. Special assessment exercises, centrally developed but locally administered, monitored and marked, would have to be produced. Teachers would need guidance in what to look for in the daily routines of teaching and learning, as well as in the preparation and use of tests for specific purposes. A system of record-keeping would have to be developed and teachers familiarized with its use. Teachers would also have to be persuaded about the benefits of giving the substantial amounts of additional time that school-based assessment and the associated record-keeping involve; failure to address this issue in some European countries has put the success of teachers' participation in school-based assessment in jeopardy. Moreover, great care would be needed in using and scaling the evaluations from individual teachers and schools so as to allow for comparability between schools and to eliminate any tendencies towards undue leniency or severity or towards any unconscious bias or favoritism.

6.17 Moreover, in the circumstances of Zambia's primary schools, there is some doubt whether continuous assessment procedures can be used successfully in view of the very large class size in so many schools. Continuous assessment techniques depend on the teacher's intimate knowledge of the students and considerable attention to their evaluation through observation, class responses, homework and various tests. The application of these techniques requires smaller classes than are the norm in many Zambian schools.

6.18 There is also the issue of the acceptability to the public of decisions based in part on a system of continuous assessment. This could be critical at the primary level where communities are more intimately connected with schools than at the secondary level and where the continuous assessment grades come predominantly from a single class teacher and not, as in the secondary schools, from a number of subject teachers. Aside from the question of the community's confidence in the judgements of the teacher, there is the risk that it might hold him personally responsible for Grade 8 selection decisions. This would put the teacher under very strong pressure to avoid unfavorable judgements on students and to inflate continuous assessment grades. On the wider front, so much is at stake in secondary selection that the system needs to be absolutely transparent. The public must be able to see that it is objective and fair and free from all personal bias and subjectivity. In 1976, during the national debate on the draft statement on educational reforms, the Zambian public expressed its uneasiness about the prospect of including school-based assessment grades in the selection process for Grade 8, but was less hesitant about the use of this method at higher levels. The public's views are probably no different today.

6.19 For these various reasons, the time does not seem to be ripe at present for including continuous assessment as part of the Grade 7 composite examination. Much more preparatory work is needed before there can be an advance to this stage. It would be preferable to deploy available resources to improving the examination system along the lines that have been outlined above than to complicate matters by deflecting a considerable proportion of them to the introduction of continuous assessment as part of the Grade 7 examination system. For it should be acknowledged that the use of school-based assessment has extensive resource implications, both for its conduct within schools and for its moderation and coordination. Since resources are limited, the first priority should be to use them for the improvement of the conventional externally set examination. It should also be noted that an examination reform that is more limited in scope is more likely to succeed than one which addresses too many issues at once. But at the same time, because of the many undoubted advantages, a commitment should be made to the eventual introduction of continuous assessment as part of the overall Grade 7 assessment. The prerequisites for such a move would be (a) significant improvements in the quality of the externally set examination; (b) adequate preparation of teachers; (c) development of suitable testing exercises; (d) adequate funds for the implementation of the system; and (e) a sustained public relations exercise on the merits of continuous assessment and the safeguards that would accompany its introduction. In the meantime, the teacher education curriculum at all levels should disseminate an understanding of continuous assessment procedures and teachers should be encouraged to make the fullest possible use of them for internal diagnostic and guidance purposes. At the same time, the use of school-based assessment as part of the overall assessment procedure in secondary schools should be cautiously extended.

The Role of English in Examinations

6.20 Overall performance in all public examinations, and subsequent selection to higher educational levels, depends critically on performance in English. English is one of the six subjects that contribute to the Grade 8 selection mark; a pass in the Grade 9 and Grade 12 examinations requires a pass in English; admission to almost all schools at the universities, to teacher training, and to other third-level institutions requires a credit (O-level pass) in School Certificate English. The insistence on proficiency in English is understandable in that it is the principal language of instruction and is also the language of public and commercial life. But this insistence has some unfortunate outcomes. The prominence given to English in the Grade 8 selection is counterbalanced by the devaluation of local languages at the same selection point. Students sit for an examination in a local language; but although this contributes to the Grade 7 certificate, it is not taken into account when the selection decision, which is probably the most important educational decision in a student's life, is made. The message this conveys to students is that proficiency in a local language is not important. This runs counter to what the school should be doing in trying to foster students' appreciation for their cultures and traditions and pride in their national heritage. The importance of local languages should be highlighted by ensuring that they contribute meaningfully to Grade 8 selection decisions. Several practical problems would attend the inclusion of local language performance as a seventh subject area for every candidate. But these problems could be overcome by accepting for selection purposes performance in either English or a local language, provided overall language performance was satisfactory. MOE will work with the Examinations Council to devise a formula along these lines that will give due prominence to local languages in the Grade 7 and Grade 9 examinations, while maintaining the need for proficiency in English.

6.21 Because proficiency in written and spoken English is essential for students in Grade 10-12, English is a compulsory subject in senior secondary schools. This situation will be retained. But it does not follow automatically from this that qualification for the award of a full School Certificate should depend on a pass in English. This penalizes students who may be gifted in mathematics, science, technical subjects, general subjects, or arts and crafts. The School Certificate is a group certificate that attests to a candidate's ability to perform satisfactorily in a range of subjects, all taken on one examination occasion and selected from different groups. The character of the certificate would be retained if English was incorporated into the language group and candidates were required to pass in subjects drawn from the language group and three or four other groups. This change would make it possible to give more prominence to local languages at this level, while third level institutions and employers could still decide, in the light of their own needs, whether to require a certain level of performance in English.

The Marking of Grade 7 Essays

6.22 As currently set, the Grade 7 examination is entirely multiple-choice and is computer marked. It was proposed above that in future the examination should include tests of writing skills through free-style compositions. These essays cannot be computer marked. They must be marked by teachers. This will be a costly exercise, non-multiple-choice examinations being between two and five times more expensive to design and grade than multiple-choice examinations. But the benefits in stimulating the development of the ability to write continuous prose, and hence in consolidating literacy skills, will justify the additional expenditure. With the numbers presently taking Grade 7 (about 200,000) it should be possible for 500 teachers to double-mark one full set of essays in about three weeks. Additional time and expenses would be incurred in transcribing these essay-grades to central records and in combining them with the grades from the multiple-choice part of the examination. It would probably be advisable to introduce an essay component into the Grade 7 examination by stages, first for English, then for Zambian Languages, and later for social studies or science (if there was reason enough to do so in these subjects). In this way the extension of the essay-type questions could be based on experience of the logistical, organizational and professional problems involved in marking such a large number of essays. Moreover, in the present difficult economic situation the assumption of the additional costs that this form of assessment involves should be restricted to English as the most universal language.

The Use of Technology in Examination Marking

6.23 Considerable delays have been experienced in recent years with the computer processing and marking of examinations. One result is that the commencement of Grade 8 and Grade 10 classes has been delayed well into the first term of the school year. This curtails the school instructional period, which is already brief enough. The delays in completing selection procedures raise the question whether reliance should continue to be placed on computer marking or whether there should be recourse to manual marking of examinations. Notwithstanding the size of the operation, manual marking is possible in principle, but it would occasion considerable organizational and security problems and would also be quite costly. A further disadvantage of manual marking is that it does not lend itself to the analysis of student responses that would provide the basis for feedback to schools. This is no loss at the moment when the quality of the Grade 7 examination does not warrant any feedback. But it would be a serious loss if detailed

information could not be readily obtained on student performance when the content of the examination questions had been reformed along the lines proposed above.

6.24 Account must also be taken of the increasing number of students who will be taking examinations during the coming years. The Grade 7 enrollment is projected to increase from 213,720 in 1992 to 282,600 in 2000 (Annex 2-2). The development of basic schools has resulted in the doubling over a short period of time of the numbers taking the Grade 9 examination, and this growth will continue, although at a much slower rate. The growth in numbers of those taking Grade 12 is more controlled, but developments lower down the education system will lead to increased examination numbers here also. External candidates, who formerly sat for the University of London examinations, will also increase the numbers at the Grade 12 level.

6.25 So that it can respond to the challenges of such a rapidly expanding examination system and meet its present obligations in a timely fashion, the Examinations Council must be strengthened administratively and professionally. A major component of such strengthening would be to provide the Council with its own computer system so that it can meet its current and projected future needs. With an expanding system, and with the need to provide detailed feedback information to MOE and the schools, the Council cannot continue to rely indefinitely on access to the Ministry of Finance computer for Grade 7 marking and on the University of Zambia for many examination-related activities. What is called for is a sufficiently powerful main frame computer, optical mark readers, data entry facilities, line printers, and other ancillary equipment, together with a network of PCs and appropriate software. The acquisition of this equipment will necessitate providing the resources needed for its accommodation and installation. It will also necessitate additional space for the computer and other staff who must be engaged if the processing of all examinations is to be brought under the direct control of the Council.

6.26 While high priority attaches to the acquisition of a suitable computer system, MOE and the Examinations Council both recognize that this alone will not solve all the examination-marking and processing problems. The complete answer involves more than a computer. Existing software must be transferred to the new system and new software applications must be developed; when systems have been transferred they must be tested extensively; throughout the period of changeover, back-up systems must be maintained; and at all stages ongoing staff training must be undertaken. Each of these activities requires technical and material resources. Each also requires time. As noted below, donor agencies will be invited to help the Council in meeting these needs. At the same time, the Council will devise various contingency measures for use with the present system and during the period of transition and, in particular, will establish comprehensive back-up procedures for use in the event of a break-down in any of its computer-marking or processing systems.

The Time Needed for the Production of Examination Results

6.27 Ideally, examination results should be published before the beginning of the subsequent school year. But it is not possible to conduct all the processing and marking of Grade 9 and Grade 12 papers in the short period of barely six weeks between the closure of schools in early December and the commencement of the new school year in mid-January. Even when the writing of certain Grade 9 subjects is completed, teachers who are required for marking are tied down by their work with other classes in their schools. When marking gets underway, it must

often be done under pressure and teachers may still be marking scripts up to a day or two before the beginning of the new school year. This is not good either for the examination marking or for the teachers, who can get no vacation between one school year and the next. To address this problem MOE will introduce a new calendar in which the school year will end when the Grade 9 examinations begin and which will give a longer school vacation at the end of the school year and shorter ones during the year.

Examination Security

6.28 Security is an important consideration in any examination system. It becomes even more important when success in examinations can lead to such significant personal benefits as progression into Grade 8 or Grade 10, admission to university, or entry to formal employment. There are several points within the existing examination system where security needs to be strengthened. The building which the Examinations Council occupies is shared with another ministry. As a result, little by way of security can be imposed on visitors, who have almost uncontrolled access to offices in the building. The building itself needs modifications, such as the blocking in of windows and the installation of additional security doors and burglar bars, to make it more secure. Additional security is also required in the printing and distribution of examination papers. Since for the foreseeable future question papers will be printed by outside printers, the Examinations Council will need the resources to keep an effective security system in place when the printing is actually being done. It will also need additional resources to improve the quality of packaging so as to reduce the possibility of interference during distribution. District education offices and schools will need secure storage facilities for question papers and answer scripts, while at the time of actual examination writing schools will need to ensure that students have sufficient working space and are not so placed that they can easily read one another's answer papers. The crowded condition in many schools and the shortage of desks make it very difficult to ensure this. MOE and the Examinations Council will each attend to these and other issues relating to the security of examinations and will commit the necessary resources to its improvement and maintenance.

Examinations and the Curriculum

6.29 The Examinations Council is statutorily responsible for formulating the syllabus for examination in each subject. Such a syllabus should give no more than a schematic outline of the material to be covered and some indication of the expected level of competence. The organization of this syllabus into a teaching syllabus, supported by appropriate textbooks and other learning materials, is the responsibility of individual teachers, backed up by the activities of the Curriculum Development Centre. In practice, however, the distinction between an examination and a teaching syllabus has become blurred, to the extent that the Examinations Council has at times concerned itself with what are details of a teaching syllabus. Additionally, matters have been so interpreted that overall responsibility for the structure of the school curriculum and for the allocation of time has been transferred from MOE and the Curriculum Development Centre to the Examinations Council. In view of the increasing technical burden of improving examination questions, dealing with a rapidly expanding system, and streamlining all that relates to examination processing, the Examinations Council's role in future will be confined to its statutory responsibility of formulating syllabuses for examinations. On the other hand, the Curriculum Development Centre and the Inspectorate will deal with the general structure and balance of the curriculum and will provide guidance for teachers and schools in organizing the examination syllabus into a teaching syllabus.

Resources Needed for the Improvement of Examinations

6.30 The most serious problem Zambia faces in efforts to improve the quality of examinations and to make better educational use of their outcomes is the shortage of qualified personnel. Because Zambia does not have the measurement and examination specialists needed, it will be necessary to seek their services under appropriate bilateral and multilateral arrangements. The services of such technical cooperants would be needed for at least five years in order to set up an improved examination system along the lines proposed, but additional time would be needed to train local staff and to ensure that the system that had been established could be sustained.

6.31 The most urgent needs are for

- (a) a test development specialist who would strengthen the Grade 7 examination's ability to test higher-order skills while ensuring that questions were relevant to real-life situations and to the needs of the majority who will end their schooling on completion of Grade 7;
- (b) an examination or measurement specialist to analyze the data generated by the examinations and propose ways to improve both the quality and management of the system; and
- (c) a computer expert to set up the programs that are required for analyzing the examination data.

6.32 These skilled professionals would form the core of an examinations research unit which eventually would be able to extend its activities to the improvement of the examinations in secondary schools, to investigating the predictive validity of the Grade 7 papers and of the examination as a whole, and to various examination-related issues. In addition to their research and examination-improvement functions, these professionals should also have a training function, at the levels both of counterpart training for their own posts and of training in examination techniques and procedures for various subject specialists.

6.33 But as in almost every other area of educational reform, examination reforms will not have the desired effects unless they are supported wholeheartedly by teachers. This implies the need for large-scale programs of in-service teacher education. There are two dimensions to this. One is that every teacher needs to be informed about the proposed changes and their relevance for his teaching. The other is that selected teachers must be trained in the marking of essays. Much of this latter can be conducted on the job by devoting the first two or three days of the marking period to the theoretical and practical problems of examination marking. Experience in Kenya has shown that when this training occurs in the live situation of actual Grade 7 essays to be marked the work becomes more than a marking exercise; it is an intensive period of in-service training as well. The Zambia Action Plan for examination improvement includes provision for in-service teacher education, but only at the secondary level. The training of secondary level examiners and markers is of undoubted importance, and funds must be allocated to enable current activities to be maintained. But the area where there is the most pressing need for examination improvement, and in consequence for teacher education, is at the primary level. Hence, local funds must be allocated and funds solicited from abroad to support the necessary

programs for familiarizing teachers with any new examination procedures or emphases and for training primary school teachers in the marking of examination essays.

6.34 Resources will also be needed for the training of other personnel. Some training can be given on the job by the examination professionals appointed under technical cooperation arrangements. But more extended and more formal training will be needed for some subject specialists and examination officers. The Zambia Action Plan estimates that there is need for a total of 132 man-months of training abroad, over a five-year period, for such personnel and for a further 54 man-months of local training for data-entry and general management personnel. But the possibility should be investigated of conducting more of the training locally by establishing a middle-level training facility in conjunction with the University of Zambia and by assisting the University to mount special courses and programs geared towards examinations and educational measurement.

6.35 The examination reforms that have been proposed involve detailed and systematic feedback to schools on aspects of examination performance. Almost of necessity this implies some kind of publication or bulletin that would go out to schools. Provision should be made for financing such a bulletin. It would be counter-productive if schools had to purchase a publication of this sort, but some of the costs could be offset if it was cast in a manner that made it intelligible and of interest to the general public so that they would willingly buy copies. The Examinations Council could also generate funds for this and other activities by producing for sale booklets containing past examination papers and copies of the school curriculum and syllabus.

Competency Testing

6.36 Taking its lead from initiatives at the Jomtien World Conference on Education for All, the Zambia National Conference on Education For All has called for the establishment of clearly defined competency-based levels of achievement in key areas and the development of objective measures of performance in literacy and numeracy. Moreover, the Goals and Strategies for the 1990s speak of defining competencies for each grade and core subject and terminal competencies for Grade 7. But while the proposal has much to recommend it, the difficulties of specifying essential competencies should not be under-estimated. Nevertheless it is desirable that objective measures be established, indicative of the level of performance society would expect primary school children to display in reading, writing and arithmetic at least. With suitable modifications, these performance levels would also specify the goals to be aimed at in literacy work with adults, especially low-income women. The aim here would be not to rest satisfied with the mere participation of adults in literacy programs, desirable as this may be in itself, but to press towards the further goal of enabling them to attain minimum specified levels of competence in reading, writing, and, where appropriate, numeracy.

6.37 The specification of competency levels and the design of instruments to measure their attainment fall more within the scope of the Curriculum Development Centre than of the Examinations Council. But so much interaction could be expected with the test development specialists in the Council that work of this nature could be undertaken as part of the Council's research and development activities, though always in close cooperation with the Curriculum Development Centre. Zambia does not have the personnel to undertake this work alone, and even when competency levels have been established and suitable tests developed, their application, analysis and use would require further large inputs of expertise and materials. It

would help towards these developments if Zambia were to become a full member of the International Association for the Evaluation of Achievement in Education (the IAEA), but external assistance would be needed to enable her to participate in the Association's activities. There would also be need for a research specialist who could help to develop local expertise in defining essential competencies, designing tests, and participating in IAEA activities.

School Record Card

6.38 A comprehensive record relating to their period at school should be available to all school leavers. This need is not met by the conventional certificate, which merely lists the subjects studied and grades obtained. What is required is a document touching in some detail on all subjects and all school-based activities and covering the whole period of school life. Such a record would include the results of external examinations, but it would not be based entirely on the outcomes of a single occasion when the student is tested under stressful and artificial conditions on what is necessarily a limited range of knowledge, understandings and skills. It would include the outcomes of school-based assessments and a distillation of the detailed knowledge of a student's aptitudes and accomplishments that teachers gather over the course of years. A final school report of this form necessitates that schools maintain comprehensive records in an accessible form. The Curriculum Development Centre will be entrusted with the task of devising such a record form and of disseminating information on it to school heads and teachers.

Psychological Services Unit

6.39 The information contained on a comprehensive school record form may indicate special student needs for educational guidance and/or for psychological assistance. During the 1970s, MOE had the beginnings of a flourishing schools psychological service, but the unit involved became increasingly involved in the preparation of the Grade 7 examination and eventually was absorbed by the Examinations Council. There are many matters relating to special learning disabilities and remedial teaching that necessitate the re-establishment of this unit. With the universalizing of access to full primary education, and eventually to Grades 1-9, the ability range of students will increase as the less able students will not be selected out. Teachers who are to help such students, especially the slow learners, will need the backing of an adequately staffed psychological services unit. The unit would also provide guidance to schools on how to cater in their organization and teaching for the needs of handicapped children, who will be admitted to schools in increasing numbers. The unit, which will be based in the Curriculum Development Centre, will work closely with the examination specialists developing competency tests.

CHAPTER 7

FINANCIAL IMPLICATIONS OF THE PROPOSED DEVELOPMENTS

The Running Costs of the Expanded Primary School System

7.1 In recent years direct expenditure on the recurring costs of primary schools has comprised two principal elements: personal emoluments, which accounted for up to 97% of the 1991 budget, and miscellaneous charges, which accounted for the remainder. There was no direct provision in the budget entries for primary schools for teaching materials, for in-service training, or for repairs and maintenance. The failure to provide for these has contributed in no small measure to the decline in the quality of education and the deterioration of the infrastructure. To reverse these trends it will be necessary in the future to make express provision for learning materials, in-service training, and routine repairs and maintenance in the budget for primary schools. To ensure that the budgetary allocations are readily available for the specified educational purposes, it will be necessary to change the existing disbursement system whereby all funds for schools are issued through the office of the provincial permanent secretary. In future these funds, and all other funds for school purposes, will be disbursed through MOE headquarters directly to provincial education officers (cf. 11.11 below).

7.2 The inclusion of these new entries in the budget for primary schools means that in any one year the allocations for primary schools will comprise five major elements:

- personal emoluments;
- teaching materials
- in-service training
- repairs and maintenance
- all other departmental charges (services, duty travel, stationery, etc).

7.3 Estimates for the annual running costs of the primary schools are derived by attaching appropriate figures to each of these elements. Personal emoluments will continue to be the most costly item, but because of the inclusion of the other elements emoluments will not be as dominant as they have been up to now. The 1992 budget for primary teachers' salaries and emoluments is K3513.8 million. This is for an estimated 35,200 teachers, giving an average of just K100,000 per teacher, irrespective of qualification or responsibility level. All benefits, including housing allowances, are included in this figure. In view of this, the average emoluments for a primary teacher during the period 1992 - 2002 are taken to be K100,000. Clearly, the nominal value of this sum will increase due to inflation, but it is assumed that in keeping with policy efforts to restore morale in the public sector, teachers' emoluments will at least retain their purchasing power, even if they do not increase in real terms.

7.4 The annual allocation for learning materials is based on the per capita allocations proposed in 5.36 above (Table 4). Allocations for in-service training and for routine repairs and

maintenance are each pegged at 2.5% of teachers' emoluments, while the allocation for the remaining recurrent charges is left at its 1991 rate of 3% of the total budget.

7.5 On the basis of these allocation assumptions and of the projected numbers of students and teachers (given in Annex 2), the annual recurring costs of primary schools are found to increase from K1959.7 million in 1991 to K5,949.6 million in 2002, all figures being expressed in constant 1991 kwacha (Annex 4). Since it is intended that by the year 2000 every eligible child should be enrolled for the full seven year primary course, this achievement of universal primary education by 2000 implies that teachers' emoluments and other departmental charges grow in the manner shown in Table 5.

TABLE 5: Growth of the Primary School Budget for the Achievement of Universal Primary Education in 2000.

	<u>1991</u> (Budget)	<u>2000</u> (Projection)	<u>Growth</u> <u>Rate</u>
	(in millions of 1991 kwacha)		
Personal Emoluments	1915.6	4556.4	10.1%
All Recurrent Departmental Charges	44.1	783.9	37.7%
Recurring Primary Costs	1959.7	5340.3	11.8%

7.6 Personal emoluments must grow at an annual average real rate of 10.1% over their 1991 level and other departmental charges (teaching materials, in service training, repairs and maintenance, all other goods and services) at an annual real rate of 37.7%. Provision for all primary school running costs must grow at the annual real rate of 11.8% over the 1991 level.

The factors contributing to these high rates of growth are:

- (a) the projected increase in the number of teachers, from an estimated 32,320 in 1991 to a projected 45,564 in 2000;
- (b) the assumption that there will be no decline in the real value of personal emoluments from the current average value of almost K100,000;
- (c) the inclusion on a per capita basis of provision for student requisites (teaching materials) when the school enrollment will increase from an estimated 1.6 million in 1991 to a projected 2.34 million in 2000;
- (d) the inclusion of provision for in-service teacher education and for routine repairs and maintenance; and
- (e) proportionate increases in other departmental expenses.

7.8 The increase in personal emoluments, which accounts for the largest part of the increase, is inescapable if teachers are to be adequately remunerated and if there are to be enough trained teachers to staff the expanding primary system at an average student-to-teacher ratio of 50 to 1.

7.9 The growth in the recurrent departmental charges is necessary for the restoration and subsequent maintenance of a minimum level of quality in primary schools.

7.10 Because personal emoluments are projected to grow at a slower rate than recurrent departmental charges, their share of spending at the primary level will fall from 97.8% in 1991 to 85.3% in 2000. Recent information on the proportion of primary school expenditures devoted to emoluments in other countries is not available, but the mean for a number of low-income countries in the period 1975 - 1986 was 84.7%. A better balance will have been achieved in the primary school budget if, as projected, the proportion for emoluments drops to 85% while that for other charges rises to 15%.

7.11 The projected increases should be viewed in the context of the spending on education during the past decade. Recurrent expenditures on primary schools declined from a peak of K122.3 million (1984 kwacha) in 1982 to K28.2 million in 1990, but rose in 1991 to K41.9 million. The factors contributing to this pattern of growth were:

- (a) the decline in overall government expenditures from K2189.1 million in 1982 to K1072.8 million in 1991;
- (b) a decline in the proportion of public expenditure accounted for by education, falling from 13.5% in 1982 to 13.0% in 1991 (but with the average of 9.8% for 1987 - 1991 being much lower than the average of 13.8% for 1981 - 1985);
- (c) a decline in the proportion of recurrent education funds devoted to primary education, from 45.4% in 1982 to 37.5% in 1991;
- (d) the 1991 increase of nearly 2000% in the allocation for housing allowances, and the August 1991 increase of 100% in salaries, factors which led to all of the increase for 1991 being absorbed by personal emoluments.

7.12 The development of the primary school budget projected for the 1990s would see the recurrent expenditure on primary schools reach K114.3 million (in constant 1984 kwacha) in the year 2000. This is the level it was at in 1983. At that time the enrollment was 1.19 million, but in 2000 the projected enrollment will be 2.34 million. This means that the projected recurrent spending in 2000 will be K48.8 per enrolled student. This is only slightly more than the 1986 per capita spending of K41.7. In these terms, it is clear that even though the projections imply the high annual growth rate of 11.8% throughout the remainder of the 1990s, they remain quite modest, since they do no more than bring spending on primary education back to levels it was at in 1986 when it was already acknowledged to be very low.

7.13 This process of bringing primary school expenditures back to earlier, more healthy levels will have to continue for several years after 2000, but it will be a significant achievement if by that year:

- (a) there is room in Grades 1 - 7 for every 7 - 13 year-old child;
- (b) classrooms are not overcrowded and triple sessions are no longer needed;
- (c) the primary school budget makes provision for such quality-enhancing inputs as teaching materials, systematic programs for teacher improvement, and maintenance of facilities;

- (d) per student expenditure reaches the level it had in 1986;
- (e) teachers' emoluments constitute a greatly reduced proportion of educational spending.

7.14 The projected increase in expenditures at the primary level has implications for expenditures in other parts of the education sector and in other sectors of the economy. The issues involved are:

- (a) the proportion of the education budget that will be devoted to the primary schools and how this affects provision at other levels; and
- (b) the proportion of total public expenditure that is devoted to education.

Intra-Sectoral Allocation of Funds

7.15 As noted in 2.25 above, the distribution of funds across the various areas of education has changed significantly during the past ten years (Table 6). The share of recurrent expenditure accounted for by the primary schools stood at 45% up to 1984, but thereafter it declined steadily until 1990 when the very low proportion of 30.1% was reached. There was a recovery to 37.5% in 1991 (revised budget), but this is still

	1980 - 1984	1985 - 1989	1990 - 1991
Primary Schools	45.0	39.0	34.2
Secondary Schools	20.7	20.4	20.4
Teacher Training	2.8	3.0	4.7
Technical Education	6.6	5.4	5.1
University & Bursaries	16.0	19.0	15.3
All Other	8.8	13.3	20.3

very low by comparison with the 1985 mean of 48.6% for low-income countries (excluding India and China). In 1985, Kenya spent almost 60% of its recurrent education funds on primary education and Zimbabwe spent 66%. The tendency in low-income countries is for the proportion spent on primary education to rise, but in Zambia it has fallen rapidly and dramatically since 1984. The Government has already undertaken to reverse this trend by re-orienting public expenditures towards primary education. In view of the way the budget for primary schools must grow if all eligible children are to receive primary education of some quality, the impact of this re-orientation on the total education budget and on developments in other education sub-sectors must be evaluated.

7.16 The running costs of an improved primary sub-sector, expanded to cater for all children, are projected to be K5340.3 million in the year 2000, implying an annual real growth rate of 11.8% over the 1991 level (Table 5). If primary education continues to account for 37.5% of recurrent educational spending, as was the case in 1991, then the budget for the remainder of the sector must also grow at the real rate of 11.8%. Considering that educational expenditures declined at the real annual rate of 9.4% during the past nine years, it seems unlikely that such a turn-about would be achieved that they could grow at the rate of 11.8% over the coming nine years.

7.17 A more likely scenario is that the proportion spent on primary education would increase, as the PIP suggests it should. If recurrent spending on primary education in the year

2000 accounts, as in earlier years, for 45 % of such expenditures on education, then the total recurrent educational spending must grow at an annual rate of 9.0%. Manifestly this is a higher rate of growth than the economy could sustain. Its achievement would increase the recurrent funds for all other educational areas by approximately 90% over their 1991 level.

7.18 A third scenario sees primary education accounting for two-thirds of the recurrent education funds, so that Zambia would approximate the practice elsewhere in the region. The implication here is that recurrent expenditures on education would grow at the real rate of 4.6%. This may be a more attainable figure, but it implies a reduction of 20% in recurrent spending on all other areas in the education sector.

7.19 What these possibilities bring out is that if universal primary education of some quality is to be attained by the year 2000, difficult choices and sacrifices will have to be made. Developments in other sectors of the economy will have to be foregone for the sake of education and developments in other areas of education will have to be sacrificed for the sake of primary education. But these self-sacrificing decisions at this time will result in substantial benefits for the other sectors of education, which will be resourced by a larger pool of much more literate, numerate and skilled primary school-leavers, and for the economy as a whole, which will be stimulated by the greatly improved educational level of the population.

7.20 The implication of bringing the allocation for primary school expenditures up to 50% or more of the recurrent education budget is that very little leeway will be left for any of the other levels to increase their recurrent spending. Hence developments at these levels must be kept under strict control. The reality that has to be faced is that resources may be barely adequate to maintain existing levels of provision, with some improvement of quality, at the secondary and tertiary levels. There will be very little room for expansions at these levels, though some must occur in teacher education if the schools are to be properly staffed. What is in question here are the resources needed for the running costs of the sector -- for salaries and allowances, educational materials and supplies of all kinds, routine maintenance, ongoing staff improvement, and normal administration and overheads. The funds for capital developments might conceivably come from other sources, but every capital development implies additional running costs and it is these costs that offer no scope for expanded provision of any substance at levels other than primary and teacher education. Such increases as may be possible for secondary, technical and university education will be devoted, therefore, to restoring desirable levels of quality in these areas and not to supporting increased and unsustainable provision (except in the most limited and rigorously controlled ways).

7.21 The practical outcome of this policy is that ongoing projects will be completed but no new projects will be commenced except in the teacher training or primary education sub-sectors. This applies to basic schools as much as to regular secondary schools. The resources will not be sufficient to run an expanded primary system that caters for every child, and to train the teachers needed, if some of these limited resources must be diverted to meet the running costs of basic schools. It will not be possible to make progress towards universal primary education while at the same time sustaining the rapid expansion of basic schools in the way this has been occurring in recent years. Hence, the future development of these schools will be subject to the same controls as all other educational developments, and because of the inadequacy of resources

such developments will be few. Because the number of primary school-leavers will increase steadily during the coming years, the tightly controlled and slow growth of secondary and basic schools will make it difficult to maintain, let alone raise, the proportions going forward to Grade 8. Given the increase in Grade 7 numbers it will be a significant accomplishment if a transition rate of 25 - 30% is still in place in 2000. Achieving this would entail establishing an additional 10,000 - 15,000 Grade 8 places, and paying the extra costs implied by these additions, at a time when almost half the recurring funds for education must be devoted to the requirements of the primary schools and possibly another 5% to training the teachers needed for these schools.

Cost-Efficiency and Cost-Sharing Measures

7.22 Because resources for running expenses will be so scarce, it will be more necessary than ever to ensure that they are used in the most effective way that is consonant with educational objectives. It will also be necessary to try to raise additional funds for education from the public at large and from the users of educational services.

Cost-Efficiency Measures

7.23 The projections that have been made for the number of primary teachers needed in 2000 are based on an allocation of one teacher for every two Grade 1 - 4 classes and one teacher for every Grade 5 - 7 class, with some further provision to cover teachers on leave and to allow for imbalances in distribution. This gives an average student-to-teacher ratio of 50 to 1, which is acceptable, though somewhat on the high side. The educational cost of this arrangement is that students in Grades 1 - 4 will be taught in classrooms for no more than 4 hours a day or 720 hours a year. This is the present situation, but it marks Zambia's educational impoverishment. In a survey conducted in January 1991, the IIEP (Paris) found that the average length of school year for Grade 1 in 46 developing countries was 940 hours, or 5.25 hours a day (cf. Table 1 above). Clearly, students in Zambia are not receiving the same amount of teaching as students in other countries. They would receive even less if the student-teacher ratio was raised above 50. Because of the implications for all further learning, which has to build on the basis of what is acquired in Grades 1 - 4, this cannot be allowed to occur.

7.24 The student-teacher norm of 50 to 1 is the largest single determinant of educational costs. While this norm cannot be made more stringent, its application can be made more rigorous. This will be accomplished through the following cost-efficiency measures:

- (a) provinces, districts and schools will be allotted a definite number of teaching posts in accordance with the number of classes and the subjects being taught, and teacher salaries will attach only to these posts;
- (b) while the norm for class size will remain as 40, double session teaching will be supported only if there are 26 or more students for each session. If the numbers fall below this, there will be single session teaching (with slightly enlarged classes) and a consequent saving on personnel;
- (c) schools in rural areas with small enrollments will be reorganized on a multi-grade

basis, thereby saving on teaching staff;

- (d) as enunciated in the FNDP, spouses employed by the education ministries who follow their partners to another location will be placed on unpaid leave if there is no vacant teaching post for them at the new station;
- (e) graduating teachers from the training institutions will be placed on the payroll only against actual vacancies;
- (f) a teacher on full salary will be required to teach for at least 27.5 hours a week, the current weekly duration of Grade 5 - 7 teaching. Teachers who teach for more than 30 hours will qualify for an overtime allowance. School heads and those in other posts of responsibility will be required to teach for minimum periods that will take account of their other commitments.

7.25 In addition, discussions will be held with the Teachers' Union in an attempt to rationalize the present leave arrangements. It frequently happens that teachers take leave during school term, when substitute teachers must be paid to replace them, and are on duty during school vacations when their services at schools are not required. This practice is a costly legacy from colonial and more prosperous times when leave arrangements were designed with the needs of expatriates in mind. The very real needs of teachers for adequate leave and of the schools for their services would both be safeguarded if the greater part of school vacations was officially regarded as leave, with no leave being granted during school terms. This points to the need for new conditions for the teaching service that will take account of the real needs of schools. It is not possible to take due account of these needs when conditions of service and standing orders for teachers are modelled closely on those in the rest of the civil service. Regulations and procedures for teachers should be internally consistent and be dictated by educational requirements and not by the requirements of the civil service as a whole.

7.26 The implementation of these measures depends on there being a great deal more information than exists at the moment about the deployment of teachers, their teaching loads, and the organization of individual schools. The first step, therefore, will be to carry out a survey of primary schools to determine the real extent of double and triple session teaching, the potential for multi-grade reorganization, actual staffing and teaching loads, and the reasons for the continuing use of untrained teachers when in principle the number of trained teachers is more than sufficient to meet the current needs of schools.

7.27 Non-teaching staff impose a considerable strain on the budget for secondary schools. For 1991, more than one-fifth of the resources allocated to secondary education were destined for administrative and ancillary staff. These staff account, in fact, for about one-third of the emoluments payable in secondary schools (K195.44 million in 1991 out of a total emoluments provision of K618.44 million). The proportion of resources devoted to non-teaching staff in secondary schools has always been high, but the magnitude has increased recently with the large increase in housing allowances. It is doubtful whether the allocation of non-teaching staff to secondary schools bears any relationship to their size or requirements. On the basis of data from the Trades Training Institutes, it seems possible that up to a third of the non-teaching staff in

secondary schools may be boarding-related. If this is so, it means that secondary school boarding is a more costly charge on the public purse than had hitherto been estimated. It is clear that there is need to rationalize the deployment and utilization of such staff by establishing and applying suitable norms. In pursuance of this aim, a census will be taken of publicly-funded non-teaching staff in all secondary schools. Norms will be established, responding to the schools' needs and the resources that are available, and the number of non-teaching staff will be reduced accordingly.

Cost-Sharing Measures

7.28 The development costs of new schools and school extensions will be met on a shared basis between the community and the Government. The community will also share in the cost of rehabilitating the schools and subsequently in their maintenance. In rural areas this sharing will be in the form of self-help undertakings, with the community providing labor and other inputs, and the Government providing specifications, materials and the technical assistance. Under the most favorable conditions, the community's share of these developments might amount to 40% of the total costs. In urban areas, which experience a close identification between the community and the school, developments will be financed by similar self-help schemes (though cash contributions may replace payments in kind). Where such schemes do not prove feasible the developments will be provided by the Government, but users of the facilities will be levied with an annual charge in lieu of their self-help contribution. Resources generated in this way will go to a revolving fund that will be used for further school developments in urban areas. Some charges will be levied on all users of developments provided in this way, but the charges will take account of the economic circumstances of the community being served by the school so that poorer parents are not discouraged from sending their children to school.

7.29 District councils will also be required to bear some share of educational costs. With the financial independence that is being granted to the larger district councils, and that will eventually spread to all councils, some financial responsibility for the development and maintenance of schools will pertain to councils. The forms that district council involvement in education might take are still evolving, but it can be expected that some form of local authority system will develop, co-financed by local and central government, but administered and run by the local authorities. District councils should also be able to raise funds that would relieve government of some of its financial responsibility for school maintenance, educational materials, secondary school boarding costs, and bursaries for needy students. It would be premature to make firm decisions on these matters before the councils have had some experience of the implications of their financial independence. But in one area councils will assume immediate responsibility. This is in the area of rates. Hitherto, government schools and colleges have been exempted from the payment of rates, but through their annual grants from Government councils were compensated for what they had to forego in this way. Aided institutions have regularly been assessed for rates. For a period these were paid from ministry funds, but with the decline in resources the ministry could no longer make these payments. Neither could the aided schools, many of which are faced with persistent demands from local councils for rate payments. School and college education is a major social service that Government, aided and private institutions provide for the young people in a district. It is also a service that brings extensive social and economic benefits to the whole community in a district. In view of this it seems inappropriate

that rates should be levied on such institutions. Hence educational institutions of all types and levels will henceforth be exempted from the payment of rates on property and buildings which are registered for educational purposes. A district council will consider the income foregone in this way as an element of its financial support for education in the district.

7.30 The proportion of public funds that has been used to pay for boarding, accommodation and other personal student costs, at all educational institutions, has risen in recent years to more than 20% of the total recurrent spending on education (Table 7). If the resources used in this way had been available for other more strictly educational inputs, schools and institutions would not be in their present sorry state. These transfers to personal needs are minimal at the primary level, but they are highly significant in secondary schools where the cost of provisions for 56,000 boarders (one-third of those in regular secondary schools) accounted in 1989 for almost two-thirds and in 1990 for almost half of the spending on secondary schools (cf. Appendix 18). They are also significant at the tertiary level where transfers account for at least one-third of the recurrent public expenditure.

TABLE 7: Proportion of Recurrent Education Funds Devoted to Student Welfare Payments

	<u>1980</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
Boarding, bursaries & welfare costs as % of recurrent exp. on education	9.43	14.54	16.32	16.51	20.14	24.38	24.25	15.03*	13.08*

*budgets

7.31 It had been expected that the re-introduction of boarding fees in 1986 would reduce the prominence of boarding in public spending on secondary schools. Such a reduction would have made the utilization of public funds more equitable and more efficient. But what has happened instead is that since 1986 boarding costs have greatly increased as a proportion of secondary school expenditures, while the value of the fee payable has been rapidly eroded because of inflation. To effect a significant reduction in the public cost of secondary school boarding, the following measures will be adopted:

- (a) economic boarding fees will be charged in all government and aided secondary schools, but because of differences in economic circumstances and in the availability of goods, fees may differ between provinces, districts and schools;
- (b) the extent of boarding will be reduced by establishing streams of day-students at all boarding schools and phasing out boarding in urban and peri-urban schools;

- (c) all new schools will be day schools, but where the population is so scattered that provision must be made for boarding, this will be done in such a way that the hostels and dining facility form an entity distinct from the school so that they can be operated independently by PTAs or other bodies;
- (d) as indicated already; there will be a retrenchment in the number of boarding-related ancillary staff (cooks, waiters, kitchen hands) who are paid from public funds;
- (e) to safeguard the educational opportunities of those in genuine need, a bursary scheme will be maintained. The administration of this scheme will be decentralized so that the resources allocated for this purpose can be speedily and effectively disbursed.

7.32 The concern of this report is with the provision of primary and secondary education in the current adverse economic situation. Its brief does not extend to higher education. But when dealing with cost-sharing it cannot ignore the potential that exists for a larger measure of cost-sharing at the tertiary level, especially at the universities where unit costs are running at over 100 times those in primary schools (Table 8). In a major policy development in 1989 the Government

announced measures aimed at requiring beneficiaries of higher education to make a contribution towards the cost of their tuition and at shifting public resources from student welfare to educational

TABLE 8: Relative Unit Costs at Primary Schools and Universities, 1985-89

	1985	1986	1987	1988	1989	1990
Expenditure per university student as a multiple of expenditure per primary student	90.9	159.9	166.7	70.2	154.5	119.0

provision. The beneficial financial impact of these measures has yet to be experienced. As with the secondary boarding fees, there is the problem that the boarding fees established for teacher training and technical institutions in 1989 still operate, although inflation has reduced their value to about a quarter of what they were in 1989. The result is that the student contribution is disproportionately small. Thus for 1991, K136.55 million was allocated from public funds for student boarding and allowances at teacher training colleges, but only K4.21 million was collected in fees; K107.66 million was allocated for salaries and all other running (tuition) costs, but tuition fees realized no more than K1.14 million. The situation at the universities is similar where the planned total student contribution in 1989 was less than one quarter of the estimated lodging and meals costs and where in addition to its general subvention to the universities the Government was committed to meeting about 85% of the tuition and boarding costs of sponsored students.

7.33 Contributions of this size made by beneficiaries of higher education will not be financially significant. The scheme is doing little as yet to generate a reasonable level of resources but is proving troublesome to operate. It is unlikely that in its present form it will succeed in its aim of making substantial additional public resources available for purely educational purposes. Neither will it succeed in achieving a more equitable distribution of public

funds, which is an objective that a system of fees should seek to promote. There is some danger that the returns from a scheme that is not popular in many quarters will be so small that it may be decided to terminate it altogether. This would be very regrettable. The basis for progress has been laid in the adoption of the policy position that beneficiaries contribute towards their educational costs. A review of the present arrangements should now be undertaken, with developments towards the adoption of the student loan scheme foreshadowed in the policy statement. A well designed and properly managed student loan scheme, which was effective in achieving a high rate of loan recovery, would greatly enhance student participation in increasing the financial resources for higher education.

School Tuition and Examination Fees

7.34 At present, Zambian students are not required to pay tuition fees in government or aided primary or secondary schools. Tuition in primary schools will continue to be free, since this is the most basic level of education that should be freely accessible to all. Likewise, since the terminal Grade 7 examination is an integral part of the primary cycle, there will be no examination fees for students who are taking this examination for the first time.

7.35 At the secondary level, however, there is more room for the imposition of fees, since access to this level will be available for only a minority who, as a consequence, will enjoy considerable privileges in terms of potential for further training and employment. Hence, fees will be charged at the secondary level, the monies recovered in this way being used to free up other resources for the improvement of primary and secondary education. Also, the feasibility of establishing fee-paying secondary schools, that would charge economic fees, will be examined, but with due consideration for equity in the use of public resources. Details of the scale of fees will be published regularly by MOE, but in general the fees payable in basic Grade 8 and 9 classes will be less than those payable in regular secondary schools, while those payable for Grades 8 and 9 will be less than those for Grades 10, 11, and 12. As with boarding fees, a decentralized bursary scheme will be established to help in cases of genuine need. In order to encourage more girls to continue with secondary education, the scale of fees for girls will be lower than that for boys. All handicapped children will be exempted from these tuition fees. Remission of tuition fees, in whole or in part, will also be used as an incentive for academic performance and to stimulate progress in science and mathematics.

7.36 The level of examination fees payable for the Grade 9 and Grade 12 examinations will be as specified from time to time by the Examinations Council.

Study of the Financing of Education

7.37 It is clear from what has been said that the sustainable financing of education will depend increasingly on a partnership between central government, district councils, communities, parents, beneficiaries, and voluntary organizations. Government welcomes the participation of all the other bodies, since this gives concrete expression to the moves towards a more pluralistic society in which the role of government in the provision and financing of social services is reduced and that of the other partners is increased. But the mistake should not be made of thinking that communities and beneficiaries can easily assume an ever-increasing share of

educational costs. The falling levels of real income being experienced by many families and the real poverty of several rural and urban households must be considered. Account must also be taken of the danger that increasing demands for school-related payments might lead some families to withdraw children, especially girls, from school. Better information is needed on these and several other issues to provide a sound data base for future policies on the financing of education. At present the only up-to-date information on families' willingness and ability to pay for education is the finding of the expenditure and incomes survey in June 1991 that the average household expenditure on education was K861 or 1.6% of annual expenditure on all items. A more substantial body of information than this is required. Information is also needed on costs at the institutional level to serve as a basis for policy interventions for increasing efficiency in the use of resources. Related to this is the issue of decentralizing more financial responsibility to the school level and the possibility of entrusting to schools the funds destined for educational materials, repairs and maintenance, and other departmental charges. Providing all the information that is needed will necessitate a comprehensive study of the financing of education in Zambia. The outcomes of this study will lay the basis for rational policies and measures that will provide for the future sustainable financing of education.

Inter-Sectoral Allocations

7.38 A further point to be addressed is the overall allocation of public funds to the education sector. This has fallen off sharply in recent years and, as Table 9 shows, the decline has affected the allocations for both recurrent and capital expenditure. A marked improvement is signalled in the 1992 budget, with total

TABLE 9: Proportions of Public Expenditure Devoted to Education, 1970-1991

	1970-1985	1986-1991	1991*	1992*
Total Expenditure on Education as % of Total Public Expenditure	12.1%	9.4%	13.0%	14.4%
Recurrent Education Expenditure as % of Recurrent Public Expenditure	14.2%	10.2%	13.7%	16.0%
Capital Education Expenditure as % of Capital Public Expenditure	6.4%	4.4%	10.6%	10.1%
*budgets				

spending on education accounting for 14.4% of total public spending. Historically, the highest commitment of public resources to education occurred in 1983 and 1984 when total education expenditures accounted for 15.2% and 16.8% of the total public expenditures for the respective years. These levels compare favorably with the 1985 median value of 15.3% for 19 low-income countries. But the small proportion of public funds devoted to education each year since 1986 shows that Zambia has accorded lower priority than other countries to developing and maintaining its education system. The increase awarded in 1992 is a welcome change in education's fortunes, with a significant improvement in the overall provision for learning materials from 2.1% of recurrent expenditure in 1991 to 7.5% in 1992.

7.39 If the benefits of education are to be spread to all 7 - 13 year-old children, and if that education is to be of adequate quality to serve as a substratum for economic development, it is imperative that additional public resources be directed to the education sector. This could be accomplished to some degree by raising additional funds specifically for education, in accordance

with the proposal in the section on educational materials that the scope of the existing educational levy be broadened considerably. But for the greater part, increasing the proportion of public resources devoted to education can be effected only at the expense of other sectors of the economy. This requires the establishment of priorities, the will to allocate public monies in accordance with such priorities, and the necessary mechanisms to ensure that full account is taken of these priorities when budgets are being established.

7.40 At the same time, care must be taken that the education system does not absorb an excessively large share of the national budget. The education system must grow if it is to meet the basic educational needs of all the people and the legitimate aspirations for further education of as many as possible. But accompanying this growth there is the ever-present danger of committing the system to expansions which, when they mature, would consume more of the annual budget than the country could afford. This long-term impact was in mind when it was stated above that in the years immediately ahead budgetary resources should be concentrated on increasing access to primary education and improving its quality, with no more than limited and very tightly controlled expansions at other levels. Although hard and fast figures cannot be prescribed, it would seem reasonable to suggest that the education sector should be allocated 15 - 20% of total public spending. Anything outside this range should be examined with care, as being either too little or too much.

Indicative Capital Costs

7.41 The investment program for the improvement and expansion of primary education will include the following components:

- (a) rehabilitation of schools. Although precise details are not available, it is likely that some 2000 primary schools will need to be rehabilitated at a cost of K1.25 million (US\$10,000) per school;
- (b) construction of new classrooms. There is need for approximately 13,000 additional classrooms by the year 2000. Including provision for storage and initial teaching equipment, these would cost K1.375 million (US\$11,000) each;
- (c) an additional 650,000 two-seater desks, to cater for the current shortfall and for expansion needs. Locally produced desks cost in the region of K3,750 (US\$30) each;
- (d) sufficient books to allow for sharing, two students to a book, in all principal subjects and with book life lasting three years (even when books are used twice a day for double session teaching). This will require approximately 3.5 million books a year, at an average cost of K375 (US\$3) per book;
- (e) educational aids for all primary schools. There are 3,500 primary schools at present, but to allow for increases and for a double supply of aids to larger schools, enough sets will be obtained for 4000 schools. A set of suitable teaching aids will cost in the region of K160,000 (US\$1,250);
- (f) teachers' houses in rural areas. The needs here remain critical, At several rural schools teachers are still accommodated in school stores or

classrooms. It will not be possible, even over a ten-year period, to build all the houses that are needed, but a start will be made by providing for 400 new houses a year (6 to 8 in each district), each costing K2.8 million (US\$22,500);

- (g) expansion of teacher training colleges to ensure the supply of trained teachers needed for the growing primary system in the mid-1990s. Expansions will be made to nine colleges, increasing the output of trained teachers by 600 to 750. The indicative costing is K190 million (US\$1.5 million) per college. At the time of the expansion work, other improvements will be undertaken in the colleges, notably in the laboratories;
- (h) construction of new teacher training colleges. To maintain the supply of teachers needed, one new college must have its first student intake in 1995/1996, a second college must be ready for the 1997/1998 intake, and a third for the 1999/2000 intake. Development of a new college will cost K500 million (US\$4 million).

The schedule of annual investments needed for this program during the period 1992 - 2000 is set out in Annex 5. The data on which the annual investment program is based are derived from Annex 2. The investment schedule gives basic development needs but does not include all quality enhancing inputs. These are set out schematically in Chapter 14 below. The investments that will be required are so great that they cannot be met from local resources. Zambia will require abundant help from the donor community if it is to succeed in its objective of expanding and improving the primary schools so as to satisfy the educational needs of all primary-level children.

CHAPTER 8

SECONDARY AND BASIC SCHOOLS

Development Programme

8.1 The highest priority in the allocation of recurrent and capital funds will be given to providing for the serious quantitative and qualitative deficiencies in Grades 1 - 7. As was seen in the previous chapter, developments in other areas must be foregone if the primary schools are to be expanded and improved to meet all the needs in a reasonable way. This does not mean that there will be no developments at the secondary or other levels, but compared with those at the primary level these will be modest. Those that occur will take place in the framework of well-regulated planned development. This is necessary for two reasons: firstly, to ensure that developments take full account of the availability of resources, whether for capital works or for ongoing recurring costs; and secondly, to ensure that the growing problem of educated unemployed is not made even worse by producing secondary school graduates more rapidly than higher level training institutions or the employment market can absorb them.

8.2 Higher level institutions that require some secondary education as an entry requirement are able to admit about 4,000 students annually. Almost all of these entrants will have completed the full secondary programme. With increasing frequency, even non-formal training programs are beginning to look for candidates with some secondary education, though they seldom require either complete secondary or a formal qualification. However, the absorptive capacity of these programs is small in relation to the number who leave secondary schools after Grades 9 and 12. Formal sector employment was stagnant at approximately 350,000 from 1982 to 1987, but increased thereafter until 1990. But this increase has never been more than 5,000, whereas the combined number of Grade 9 and Grade 12 school leavers, which stood at 43,500 in 1987, is increasing by about 4,500 annually. The total output of secondary school graduates will be about 50,000 at the Grade 9 level and 19,000 at the Grade 12 level in 1992. There is no way in which all of these will be able to find training or employment opportunities. The Labour Force Survey in 1986 showed that even then there were 43,000 junior secondary and 17,600 senior secondary school-leavers among the actively unemployed, almost all of them in urban areas. Immoderate expansion at the post-primary level would swell these numbers, constituting an inefficient use of scarce national resources and contributing to the growth of a potentially serious national problem. In the late 1960s, the rapid expansion of Grade 7 led to the growth of the primary school-leaver problem. That problem has not been solved yet (though some elements of a solution lie in the improvement of the quality of primary education). A more intractable problem is being created by increasing the number of secondary school graduates without taking account of the limited training and employment opportunities available for them. Apart altogether, therefore, from resource considerations there is need for considerable restraint in the development of post-primary education.

8.3 The resources that will be available for the development of post-Grade 7 education will not be sufficient to support major, rapid expansions. Such expansions would be inappropriate when post-school opportunities are so restricted and when the quality of educational provision at secondary level is still so unsatisfactory. Although substantial work has been accomplished with assistance from NORAD, a large number of secondary schools still stand in need of major rehabilitation, while there are ongoing problems in the refurbishment of laboratories and other facilities and in equipping schools with teaching materials and educational

supplies. There is also a great need to train secondary school heads and other senior personnel to enable them to provide their schools with the leadership and management they need. Account must also be taken of the grave difficulties being experienced in staffing existing secondary schools adequately in mathematics and science, difficulties that would be aggravated by too rapid an expansion at the secondary level.

8.4 In the light of these considerations, and of others developed in earlier parts of this report, the following strategies will be employed for Grade 8 and other secondary level developments:

- (a) Priority for resource allocation for post-primary school development will be given to:
 - (i) physical rehabilitation of classrooms, laboratories and specialist rooms;
 - (ii) provision of necessary books, including library books, and other teaching materials;
 - (iii) re-equipping science laboratories and providing consumables;
 - (iv) training heads and other senior school officials;
 - (v) promoting school inspections.
- (b) Cost-efficiency measures will be put in place to:
 - (i) rationalize the deployment and use of teaching staff, with 28 - 30 teaching periods per week being taken as the norm;
 - (ii) rationalize the deployment and use of non-teaching staff;
 - (iii) reduce the financial and administrative burden of boarding.
- (c) Cost-recovery measures will be instituted by:
 - (i) imposing tuition fees for all students;
 - (ii) charging economic boarding fees;
 - (iii) charging a book-fee to cover replacement of institutionally provided books.
- (d) A minimum of 400 junior secondary streams (16,000 Grade 8 places) will be established between now and 2000, at the rate of about 50 streams a year. Whether these developments take place at basic or regular secondary schools will depend on the outcomes of the survey of basic schools proposed in the final part of this chapter. Public funds for capital developments and subsequent recurring costs will extend to the development of these 400 streams, but no more, during the period up to the year 2000.
- (e) Existing boarding schools will phase out at least one stream of boarders and take day students instead. The boarding facilities thereby released will

be converted into teaching space for one or more additional senior secondary streams. This measure will make it possible to establish between 50 and 75 additional senior secondary streams in existing schools. This development will have positive social consequences in enhancing the relationship between the school and the community in which it is situated. But it can be implemented only when there are adequate resources for the necessary structural adjustments, for the furnishing of the additional classrooms, for their equipping with necessary materials, and for increasing and accommodating the teachers needed for the additional classes.

- (f) Because experience has shown that private schools have significant potential to meet the social demands for more secondary education, the establishment of these schools will be actively encouraged by streamlining the registration process, deregulating fees, and, where financial circumstances allow, providing limited financial support (such as capital grants towards the development of physical infrastructure or a subsidy towards the salaries for one or more teachers). Grade 8 classes that are started by communities outside the framework of the 400 new streams referred to in (d) above will be treated as private community schools that must charge sufficiently high fees to cover all their running costs. The provisions of this paragraph will apply to such schools also.

Basic Schools

8.5 Basic schools are presently the fastest growing sub-sector within education. These schools present a wide range of unique problems that deserve consideration at some length. It is necessary also to examine the policy background to such schools in today's economic and demographic circumstances, as well as practical issues regarding the continuation or expansion of such schools.

The Origin of Basic Schools

8.6 The 1977 Educational Reforms enshrined the policy that "the ultimate goal should be to provide nine years of universal basic education, whereby a child entering Grade 1 at the age of seven will remain at school for at least nine years until the end of Grade 9 at the age of sixteen" (p.7). During the first few years after the publication of the reforms document, the only steps taken to implement this policy were continuing efforts to expand secondary school enrollments so that an increasing number of Grade 7 students would be able to continue into Grades 8 and 9. But although the numbers entering the secondary system did increase, from 23,237 in 1978 to 35,098 in 1984, the proportion did not rise significantly because of the rapid increase in numbers completing Grade 7. In the early 1980s, however, some rural communities adapted for classroom purposes dormitories that were no longer in use in primary schools and these classrooms were used for the commencement of Grade 8 and 9 classes. From that time the movement towards the establishment of basic schools, that is, those that enrol students from Grade 1 to Grade 9, gathered momentum. There were only seven basic schools in 1982; by 1989 their number had grown to 290. In January 1991 it was estimated that there were 381 such schools, but by June 1991 there were approximately 600 basic schools with Grade 8 and 9

enrollments of over 50,000 (Appendix 4).

Problems Posed by Basic Schools

8.7 The rapid proliferation of basic schools has brought its own problems. In the majority of cases the provision that has been made is basic in the most literal sense of the word: one or more classrooms, often of inferior standard, but little else. There are no furnishings. There is no equipment. There are no teaching materials. There is no provision for the teaching of science or other subjects requiring specialist facilities. Sanitary accommodation at what was originally a primary school has not been expanded in keeping with the needs of a larger number of physically more mature students. A recent observer noted that the extent of dilapidation and resource deficiencies at basic schools has turned them into an "educational nightmare," while the living standards of students at such schools is "nothing short of an educational and public health scandal" (Kalumba, K: "Community Involvement in Basic Education." Paper presented at National Conference on Education For All, Lusaka, March, 1991).

8.8 Several of the basic Grade 8 and 9 classes are staffed by transferring the best teachers from the school's primary section into the Grade 8 and 9 section. This has two serious drawbacks. One is the adverse effect on Grades 1-7 which need to be taught by the best primary teachers and not by the untrained teachers who must often be recruited to replace those redeployed into Grades 8 and 9. The other is that primary teachers, many of whom have not successfully completed a full secondary programme, are not equipped or trained to teach Grades 8 and 9 which are secondary level classes. Students, therefore, in basic schools are not taught in a way comparable to the way they would be in conventional secondary schools. The handicaps experienced by these students, of virtually no resources and unqualified teachers, are further aggravated by the fact that many of them are of lower academic potential than those in conventional secondary schools, since those who enrol in basic Grade 8 and 9 classes are, for the greater part, those who have not succeeded in being admitted to the better-established schools. Notwithstanding some praiseworthy exceptions, the combination of these three factors results in the majority of students who complete Grade 9 in basic schools lacking the knowledge, understanding and skills that should characterize a Grade 9 school-leaver.

8.9 What this means in effect is that as institutions of learning basic schools are offering an education that is of inferior quality. Some educationists are even of the view that Grades 8 and 9 in basic schools constitute no more than a holding operation, a period when students can adjust their aspirations to the imminent termination of their prospects for further schooling but during which the only outcome of educational value may be the consolidation of the ability to read and write. The rapid and virtually uncontrolled growth of these schools has resulted in the establishment of a dual system for secondary provision: ordinary secondary schools in which, despite the formidable problems to which the economic circumstances have given rise, the environment, staffing and potential of the students are all conducive to learning; and basic schools which are totally deficient in educational resources, staffing and, for a large part, student potential. An education system should promote equity within a country, but the Zambian system is doing quite the opposite by consolidating a two-tier system of relatively well-appointed secondary schools and inferior basic schools. This development is all the more undesirable in that the majority of basic schools are in rural areas, so that it is mostly the rural populace that must make do with the poor type of education which is all that basic schools can provide.

8.10 The development of basic schools has had the further undesirable effect of diverting the attention of communities away from needs at the Grades 1-7 level. Communities are providing classrooms for Grades 8 and 9 while the needs for Grades 1-7 remain unmet. There are instances, in fact, where PTAs have had the number of primary streams reduced (by accommodating the students in larger classes) so that facilities might be released for the commencement of Grade 8 and 9 classes. Relatively few community resources are being used for the improvement of primary facilities themselves or for the rehabilitation of classrooms, but almost all are directed towards Grades 8 and 9. In addition, the opening throughout the year of new basic schools is fuelling demand for similar facilities among communities who do not yet enjoy the doubtful privilege of having their own basic school.

8.11 The overall resource situation, particularly in the current economic and demographic circumstances, must also be considered. The provision of classrooms does not constitute a school. Other capital investments are needed - science or practical rooms, equipment, an initial stock of teaching materials, furnishings, teachers' accommodation, infrastructure (sanitation, sports facilities, etc). These all imply a considerable burden of capital costs. But such costs arise only once. Clearly, the facilities have to be maintained, but once they are in place the major investment has been made. It is quite different with running costs for teachers' salaries, textbooks and general running expenses. These require funding year by year. For basic schools many of the additional capital costs and almost all of the running costs have been thrown back on Government. Communities provide very little capital investment beyond classrooms and, possibly, teachers' houses, and even for these some contribution may be required from Government. But once they are established, all of the running costs of basic schools must be borne by Government. This is not sustainable. As has been seen in the section on the financial needs for primary education during the coming decade, national resources will be hard pressed to meet all the demands of the primary sub-sector alone. There is no possibility that they could extend to providing every child with seven years of good education if at the same time a proportion of the resources must be diverted away to meet the needs of basic schools. To provide for and sustain the primary sub-sector is a task of immense magnitude and complexity. It is a task that will require the sacrifice of other legitimate objectives. Desirable developments in other sectors of the economy, and within the education sector itself, will have to be foregone for the sake of ensuring that every child has access to seven years of good quality education. Since resources are totally inadequate to allow for the growth of a system of universal primary education alongside of developments towards the goal of nine years of universal basic education, the development of basic schools must give way to the needs of the primary sub-sector.

The Policy of Nine Years Universal Education and Basic Schools

8.12 The 1977 Educational Reforms, in advocating nine years of universal basic education, did not hesitate to depart from the policy proposed before and after independence that the compulsory basic education cycle should last for ten years. In the light of the continuing difficult economic situation and the great pressure being exerted on educational provision by the rapidly growing child population, there is need once more to reconsider the policy on the duration of the first universal cycle of education. A new policy is needed which states clearly and unambiguously that the first priority is to provide universal education, whereby every child entering Grade 1 at the age of seven will receive seven years of good quality schooling until he leaves Grade 7 at the age of fourteen. This focus on universal primary education is necessitated by the current demographic and economic circumstances.

8.13 The implications of the rapid growth of the child population for the provision of social services are seen more clearly today than ever before in the past. The data from the 1980 and 1990 censuses provide accurate information on the size of the population of primary school age and on its growth rate (Appendix 2). Seven-year-old children constitute the critical age group, since, once admitted to Grade 1, they must be enabled to continue until the end of the essential basic cycle. They numbered 191,000 in 1980 and 266,000 in 1990, an increase of 75,000. If this rate of growth is maintained, they will number 375,000 in the year 2000, an increase of 109,000 and almost double the 1980 figure. If all of these children are to be admitted to Grade 1 and are to be given seven years of primary education, the primary school enrollments must increase by about 900,000 in the period 1992-2000. A simple comparison brings out in striking fashion the magnitude of the task that this implies. During the twenty-year period 1964-1984 Zambia created an additional 880,000 primary school places. The task that must now be faced is to create a further 900,000 places in less than half this time and when the economy is not in the healthy state that it enjoyed during at least half the earlier period.

8.14 Clearly this is a formidable task. If the further target of nine years universal education were to be achieved within this century there would be need for an additional 400,000 places in Grades 8 and 9. Population growth is such, therefore, that alongside the 1.6 million Grade 1-9 places that already exist, an additional 1.3 million places would have to be established, staffed and maintained if the target of nine years education for all were to be achieved this century.

8.15 Apart from the enormous logistical problems that growth of this nature would entail, the stubborn persistence of Zambia's grave economic difficulties offers little hope that the necessary resources will be forthcoming. The schools are already losing ground in their efforts to accommodate all children, while the quality of what the schools can accomplish is cause for the gravest concern. Educational expenditures, which continue to fall in real terms, can barely sustain moderate expansions and modest quality improvements. As was seen in the previous chapter, the volume of public resources that will be needed to run somewhat improved Grade 1-7 classes that have been expanded to accommodate all 7-13 year-old children will be dangerously large in relation to resources needed for other areas of education and of the economy in general. It is hardly conceivable that they could be enlarged by yet another 45%, which is what would be needed for meeting the target of universal education from Grade 1 to Grade 9.

8.16 These are the sobering facts. What they point to is the need to acknowledge that demographic and economic factors will make it very difficult to attain the target of seven years universal primary education during the coming decade. The same factors will make the objective of nine years universal education quite unattainable in the foreseeable future.

8.17 Educational policy, therefore, will look unambiguously to seven years of primary schooling as the essential immediate goal for educational development. The objective of nine years universal education will be retained, but as a long-term and not as an immediate objective. In practice, so large a proportion of resources will have to be dedicated to primary school developments and improvements that only modest expansions will be possible after Grade 7. Some indication of the extent of these has already been given in paragraph 8.4 above. These developments will be the first steps towards the ultimate goal of nine years universal education, but the journey towards that goal will be long and arduous. An outline map of the territory to be covered will be developed by undertaking an in-depth study of strategies for increasing access to

secondary education, within available resources. This study will examine the different ways in which secondary education can be provided (e.g., conventional schools, basic schools, open secondary schools, private schools, distance education) and will propose a broad time framework for the achievement through these modalities, and in the light of demographic and resource constraints, of nine years universal education.

8.18 A practical outcome of this realistic vision of the potential for educational growth is that because of scarcity of resources all future provision at the Grade 8 level should be carefully planned and centrally controlled. Any encouragement that may be given to communities to add classrooms to primary schools, so that the schools can be reclassified as basic schools, will be within the framework of such planned and controlled developments. To ensure that these developments take place in an orderly manner, MOE will formulate guidelines for communities, district councils, voluntary agencies, and other potential providers of education, indicating, among other things:

- the procedures to be followed when any developments or expansions are being planned;
- the facilities that must be provided for Grades 1-7, including teachers' accommodation, before any post-Grade 7 developments can be sanctioned;
- the facilities that must be provided for a viable basic school and the standards such facilities must reach;
- the running costs of proposed developments and how these are to be shared between the government and other partners in educational provision;
- the need for development of the post-primary system that will take account of post-school training and employment opportunities, evenness of provision across the country, the availability of teachers and teaching resources, and the constraints of national resources.

8.19 While these guidelines are being developed and disseminated, the development of basic schools will be frozen, for a minimum period of about two years. Hence, there will be no further openings, in primary schools, of Grade 8 classes that involve the commitment of public resources and funds until the public has been educated on the content and rationale for these guidelines.

The Practical Issue of Existing Basic Schools

8.20 It will also be necessary to take practical steps with regard to the large number of existing basic schools. These schools cannot continue in the way they are now established and functioning. The essential problems to which they give rise are:

- (a) their ambiguous status, since it is not clear whether their Grade 8 and 9 classes belong to the top of the primary level or the bottom of the secondary level;
- (b) the low quality of education they can provide in Grades 8 and 9 because of the lack of resources;
- (c) the drain they represent on resources that are needed more urgently at the

- Grade 1 - 7 level; and
(d) the investment the community has made in their establishment.

8.21 A further major problem is the lack of comprehensive information on the basic schools: their number, location, enrollments, staffing; the facilities in these schools for Grades 1 - 7 and how the addition of Grades 8 and 9 has affected teacher and resource utilization in individual schools; strategies these schools have developed in order to cope with their needs; the actual level of student achievement in these schools; how those established some years ago are now viewed by the communities; what potential exists for their future development; what steps should be taken in individual cases.

8.22 During the period when guidelines are being elaborated for the orderly development of new Grade 8 classes this information gap will be filled. A survey will be undertaken of all existing basic schools to ascertain how they can be sustained and integrated into the education system so that they can provide education of satisfactory quality to their students. The terms of reference for this survey will be wide, since it is possible that some basic schools could be incorporated into nearby secondary schools while others could be upgraded to regular secondary status. At the other end of the scale, some schools may be so deficient that they could no longer be supported and their Grade 8 and 9 classes would have to be phased out. It will be necessary also to examine the structure of the curriculum for basic schools and the training of teachers, the measures needed for the improvement of quality, the sustainable financing of basic schools from community, local authority and government resources, and the equity and selection issues to which the existing schools give rise (cf. Appendix 8).

8.23 From information currently available, it seems almost certain that the difficult decision will have to be made to terminate public support for Grade 8 and 9 classes in some of the basic schools, possibly in a sizeable number of them. One strategy that can be adopted to make this difficult decision acceptable to the local community is to accompany it with a generous investment programme for the rehabilitation and improvement of the primary sector in such a school. Communities will more readily accept decisions to withdraw public funds from Grade 8 and 9 classes if they see that compensation is being provided in the form of serious efforts to refurbish and improve their primary schools. Hence, as part of the wider strategy for primary school improvement, priority will be given to the needs of the primary sections in basic schools that are to lose their Grade 8 and 9 classes. If attention were focussed on ensuring that essential major repairs were carried out in these schools; that desks, teaching materials, textbooks and appropriate storage were provided; that frequent visits were undertaken by the inspectorate; that in-service training opportunities were provided for school heads and teachers; and that, where necessary, nutrition programs were established for children; then communities would have visible proof that the withdrawal of support from their Grades 8 and 9 was bringing real benefits to all their children. In such circumstances, they would find it easier to accept that if they wanted to continue with Grade 8 and 9 at their school they would themselves have to provide all the running costs.

Capital Requirements for Secondary Schools

8.24 The investment programme for the development of secondary schools will include the following components:

- (a) rehabilitation of schools. It is estimated that a rehabilitation programs similar to that conducted in recent years by NORAD needs to be undertaken at about 75 schools at a cost of K125 million (US\$1.0 million) per school;
- (b) structural adjustments in about 50 schools, converting what was boarding accommodation into classrooms and laboratories for senior secondary use. The capital works will include furnishings, initial sets of books, and teachers' accommodation (for the additional teachers necessitated by the increased enrollment). The cost is estimated at K62.5 million (US\$0.5 million) per school;
- (c) expansion of junior secondary provision. This expansion will be restricted to the opening of no more than 50 new streams a year (inclusive of those at basic schools, if the system of basic schools is retained), The cost is estimated at K625,000 (US\$50,000) per stream, for the provision of two classrooms and one laboratory;
- (d) construction of teachers' houses. Accommodation is still inadequate in many rural schools. The annual investment in increasing the housing stock will be K95 million (US\$0.75 million);
- (e) the supply of textbooks, science equipment and miscellaneous teaching aids. Improvement of quality in secondary schools, and improvements in student performance in science, depend heavily on there being sufficient textbooks, science equipment and teaching aids in the secondary schools, The investment is estimated on the basis of K1000 per student and will amount to K280 - 310 million (US\$2.25 - 2.5 million) annually.

The schedule of annual investments needed for this programme during the period 1992 - 2000 is set out in Annex 5.

CHAPTER 9

STUDENTS, TEACHERS, SCHOOL HEADS, AND INSPECTORS

The School as the Context for Educational Improvement

9.1 An over-riding aim of every educational improvement, innovation or reform is to bring about conditions that will promote student learning. Student learning does not occur in the offices of education ministries, in curriculum development centres, or in examinations councils. It occurs in classrooms in the context of direct interaction between students and their teachers. The acid test of the majority of innovations and reforms designed to improve education is whether they can be integrated by the teacher into his teaching and by the student into his learning. If the student cannot profit from the innovations or the teacher cannot accommodate them in his teaching, improvements will in most instances remain little more than lofty aspirations in a curriculum, a policy statement or an educational plan. But as far as the classroom situation goes they will have no impact. They will remain a dead letter.

9.2 But the classroom interaction between students and teachers does not occur in a vacuum. It occurs in a school that has its own ethos, organizational pattern and management structure. The one who above all others sets the tone for the school is the school head who is very influential in determining its character. It is the head who sets the priorities for the school, deciding explicitly or implicitly whether the focus is on student learning and cognitive achievement or on other goals, such as prowess in sport or success in production. The leadership, competence, management, and inspiration provided by the school head are all-important in facilitating and stimulating the teaching activities of teachers and the learning activities of students. They are also crucial in transforming planned innovations into practical measures and in fostering among teachers acceptance of and a desire to implement new ideas, improved methods and better teaching procedures and techniques.

9.3 Critical support for both teachers and school heads in their dual task of promoting learning and making the best use of proposed reforms is provided by school inspectors. With their professional knowledge of the curriculum, of developments in special subject areas, and of appropriate teaching materials and methods, the inspectors serve as guides on instructional issues for teachers and heads. With their broader view of the school as a unit within the wider education system and their greater proximity to decision-making centres they serve as guides on management and facility matters, mostly for school heads but at times for individual teachers as well. Further, as representing the education ministry on predominantly professional matters, inspectors monitor standards of performance in the school and in this way discharge quality control and accountability functions. This makes the group of inspectors highly important among those concerned with the quality of education.

9.4 It is necessary, therefore, to examine certain issues relating to students, teachers, school heads and inspectors when considering the delivery of education, and its qualitative improvement, at a time of great economic difficulty, and rapid population growth. It is not possible to go into these four large areas exhaustively, but there are certain matters of such importance in the Zambian situation that they cannot be overlooked.

Nutritional Status of Students

9.5 One of the most serious problems affecting students is the increase in malnutrition that has accompanied the deterioration of the economy and that has been aggravated by the large child population. The cost of providing an adequate nutritional diet increased by over 600% between 1986 and 1990, but incomes did not increase by the same amount. Many families have had to adjust to the rising costs by reducing the quantities of foodstuffs purchased. Because of the generally large size of the average household, many children now receive smaller quantities of nourishing food than was the case in the past. One result of this is an increase in the incidence of malnutrition among children. In 1987-89, between 10 and 25% of children in line-of-rail provinces exhibited the physical signs of inadequate nutrition, while for other provinces the proportion was typically in excess of 25% and occasionally as high as 40% (Social & Economic Bulletin, July 1991, p. 47). Observers from aid agencies who have visited schools in Zambia have commented on the very small size of many of the children in primary schools, especially those in the upper grades who should have demonstrated the growth spurt that comes with puberty. It seems likely that in many cases this stunting is due to chronic under-nutrition.

9.6 Malnutrition affects learning either through permanent impairment that results in slowness of learning or through its debilitating effects on students, reducing their energy and affecting their ability to concentrate. It also leaves students vulnerable to various maladies and illnesses which reduce the frequency of school attendance. It is a condition that is more likely to affect the urban poor, subsistence rural households and female-headed households, that is, the vulnerable groups in society who should be the principal beneficiaries of attempts to make primary education more accessible and to improve its quality. Quality-enhancing inputs into primary education will not bring the desired benefits to many children from disadvantaged homes if persistent malnutrition is the lot of these children out of school. No matter how well-designed and carefully elaborated a programme of educational improvement may be, many children may be too under-nourished to be able to benefit from the improvements. Their first need is for a sustaining and more adequate diet for their bodies. This need must be addressed if the resources devoted to classroom improvements are to be meaningful for them.

9.7 A comprehensive strategy for the delivery of primary education to all eligible children, in the current demographic and economic circumstances, must, therefore, include provision for enhancing the nutritional status of children who are at risk. The Ministry of Health and the Ministry of Community Development, Culture and Social Services will be invited to help in identifying areas or schools where nutritional interventions are most urgently needed. MOE will give high priority to such interventions in discussions with donor agencies and will take positive steps to encourage NGOs, charitable organizations and private benefactors to assist in funding and providing school meals for needy children. The possibility of mobilizing resources for school nutrition schemes through the involvement of more advantaged children, following the model of the Child-to-Child scheme, will be investigated. Although it would be difficult to find additional public resources for school nutrition schemes, a proportion of the amount saved by reducing on secondary boarding and other personal welfare costs will be devoted annually to such schemes. Moreover, schools that have access to land and water will be encouraged to produce foodstuffs for distribution to needy households with school-aged children. Whatever form nutrition interventions may take, parents should be involved from the outset and should normally be required to contribute to the cost of the scheme. The participation of parents, PTAs, local church bodies, and other local groupings will be necessary in identifying those most in need of

assistance and in ensuring that available foodstuffs are distributed equitably. The occasion of these interventions will be taken to educate parents on how to meet the nutritional requirements of their children. This extension activity will also serve to strengthen the bonds between the community and the school.

9.8 Reduction in boarding facilities and the imposition of economic boarding fees will mean that an increasing proportion of secondary school students will attend school on a day basis. Many of these will not be able to return home for a midday meal, and several may be unable to bring a packed lunch with them. To cater for their needs, the existing practice in some boarding schools of making a midday meal available at cost for day-students will be extended to all such schools.

Other Health-Related Concerns

9.9 The increasing incidence of AIDS, cholera and resistant forms of malaria has considerable implications for school-going children. These maladies exacerbate the poverty in several homes, since they necessitate a large increase in household health expenditures at the very time that affected parents have a reduced ability to work. The significant growth in the number of orphaned children is throwing a severe strain on the extended family system, which finds it increasingly difficult to cater for additional dependents. At school, children of AIDS-affected parents may be ostracized, while there is the possibility of an increased incidence of AIDS-related sickness and death among school-teachers. In cholera-affected areas, schools may be closed for lengthy periods, to the great educational loss of their students. Frequent bouts of malaria and other parasitic infections greatly weaken many children, reduce their ability to concentrate on school work, and entail frequent absences from school. In all cases, the consequences for student learning are negative.

9.10 The prevalence of these health-related problems underlines the need for all schools, but especially for primary schools, to pay close attention to the principles and practice of health education. The school itself should serve as a model to its students in matters of hygiene, mosquito control, and refuse disposal; and students should be encouraged to carry back to their homes the health messages learned thereby. School rehabilitation will pay special attention to sanitary facilities and to the provision of a clean and safe water supply. But the onus of ensuring that children use these facilities properly must rest with parents and teachers, while parents and the local community must ensure that the facilities are maintained in a functioning condition. The AIDS education programme in schools will be continued, but it must be noted that the success of an education programme that seeks to inculcate stronger personal habits of self-control will depend largely on the extent to which society as a whole adopts similar habits. The school is a cell within society. It will have difficulty in effecting the moral revolution that is needed for the control of AIDS if the habits of adult society remain unreformed.

The Education of Girls

9.11 Girls participate in satisfactory numbers at the lower primary level, their enrollment being almost equal to that of boys. But it is a cause for grave concern that thereafter the number and proportion of girls attending school and higher institutions falls off sharply. As the data in Appendix 5 show, there have been improvements, but these are occurring slowly and laboriously. Because of increasing enrollments, the absolute number of girls completing primary

education and entering secondary schools is increasing, but girls are still greatly outnumbered by boys -- by two to one in secondary schools and by four to one at university level. Linked to this under-representation of girls is their public examination performance, which tends to be poorer than that of boys, and their low level of participation in the science and technological areas.

9.12 This underprivileged situation of girls remains a very acute educational problem. Many of the girls who do not complete their primary education quickly lapse back into illiteracy, swelling the already unacceptably large number of female illiterates in the country. Those who proceed are destined to play an inferior role in the education system in terms of numbers, performance and subsequent education and training opportunities. In practice, this amounts to denying the equal right of girls and women to the levels and fields of education available to boys and men. It also slows down development in such crucial areas as population growth, child nutrition and health, the education of children, and agriculture, in all of which women's knowledge and skills play a key role. One of the greatest challenges facing Zambia today is to transform this situation by ensuring that educational opportunities and prospects for girls are equal to those enjoyed by boys.

9.13 It will not be easy to bring this about. The education sector alone will not be able to effect the necessary transformations, since socio-economic and cultural variables such as the economic levels and expectations of families are generally more powerful determinants of girls' educational participation and achievement than school-related factors. The stereotyped image of women as playing a subordinate and submissive role and of girls as not being a good educational and economic investment is so firmly embedded in society that the schools by themselves will not be able to change it. But certain interventions at the school level are likely to bring positive results. One is to provide incentives to encourage the participation of girls. The 1988 study on multi-grade schools found evidence that schools which offer material benefits, such as subsidized uniforms, maintained relatively high enrollments of boys and girls even in sparsely populated areas. Similar outcomes could be expected from such incentives to girls' participation as lower levels of PTA and other school-related payments, selective assistance towards the cost of uniforms, or the ear-marking of bursaries for girls at the primary and secondary levels. Such schemes would necessitate the establishment of a special fund for girls' education. While this would be an additional charge on the limited education budget, the returns in terms of an improvement in the educational status of women, and the long-term impact of this on social and economic development, would justify the extra expense. It seems likely that the general public, NGOs, donor agencies and philanthropic organizations would be willing to contribute to such a fund.

9.14 A second intervention would ensure that school textbooks are free from the sex-stereotyping that casts girls in a secondary, passive and submissive role. A study undertaken on behalf of UNESCO has shown that the textbooks used in Zambian primary and secondary schools are male dominant in their numerical over-representation of men to the detriment of women, in personality traits, and in the professions and functions assigned to each sex. The CDC will be given the task of identifying such sex-stereotyping in school-books with a view to its elimination. The Centre will also prepare guidelines that will help authors of school-books to provide fair, accurate and balanced treatment of both sexes.

9.15 Further interventions will include the establishment of more secondary school places reserved specifically for girls, an investigation of all that pertains to examinations to

establish whether they contain intrinsic or structural factors that favor performance by boys, and modifications of the school timetable so that it interferes less with the domestic tasks expected of girls. Pre-schools and day-care facilities would relieve many girls of responsibility for younger siblings and might thereby facilitate their participation in school. MOE will encourage the wider establishment of such facilities, but because of resource constraints it will not itself be able to fund them. These interventions will not eradicate the discriminations that exist against girls in the home, the school, the labor market, the institutions of society, and the general attitudes of the public. But they will initiate a process of public education that will lead to a clearer recognition of the importance attaching to the education of girls. This in turn should lead to more dynamic and successful participation by girls at every educational level.

Handicapped Students

9.16 Every child in Zambia has a right to education. This right is not limited by any disability, physical or mental, from which the child may suffer. Hence the school system must provide for the needs of those who are handicapped and who are able to benefit from education. Among the various types of handicapped students who may be encountered in schools will be those who

- have movement or limb problems;
- are slow learners;
- have speech or language deficits;
- have behavioral problems;
- have partial hearing;
- are deaf;
- are blind;
- have moderate or severe mental impairment or retardation;
- have various combinations of the foregoing.

9.17 While exact figures are not known for the incidence of the various kinds of handicap, a 1979 Unesco report stated that "the consensus of expert opinion and various research surveys is that 10 - 15% of children are identified as disabled and require active intervention and specialized services." If this estimate applies to Zambia's 7 - 13 year-old population, then the number of children in need of special educational consideration lies in the range 160,000 - 250,000. Many of these would suffer from relatively mild disabilities requiring no organized form of intervention other than the individualized care a class teacher can provide in responding to a special need (e.g. by having a partially sighted student sit in better light or closer to the chalkboard). But students suffering from severe impairments such as deafness, blindness or mental retardation, require special treatment.

9.18 A standing Inter-Ministerial Committee on Special Education already exists for organizing professional cooperation between concerned bodies and for advising MOE on the priorities for development in special education and on the effectiveness of its programmes. This Committee will be reactivated and will be given the immediate task of establishing systems whereby local authorities, clinics and voluntary agencies can provide regular and up-to-date information on children who may be in need of special educational care. The Committee will also evaluate the need for special education furniture and equipment and will examine strategies for the design and maintenance of special equipment and materials for the various disabilities.

9.19 The principle that has guided educational provision for handicapped students in Zambia has been that to a large extent they have been integrated into ordinary schools, although some special institutions have been established at the primary level to cater specifically for deaf, blind and physically handicapped children, while there is a hospital teaching unit to meet some of the needs of the mentally handicapped. There are also specialized units for the deaf, the blind, and the physically handicapped in a number of primary and secondary schools. The principle of incorporating handicapped children into normal schools and programmes will be maintained, but where necessary for their personal, physical or educational development, special schools and programmes will be established to cater for their needs.

9.20 The integration of severely handicapped students into ordinary classes has encountered certain problems in the circumstances of Zambia's primary schools. First, the large size of classes prevents teachers from giving handicapped students the attention their needs require. Second, although a specialist training programme is provided at the Lusaka College for Teachers of the Handicapped, the number of teachers who have undergone this training is quite small; the majority of teachers have received no training in teaching handicapped students, whether in normal or special classroom situations. Third, because of their impairments handicapped students may need more time than their peers to master syllabus topics, but the teacher cannot delay on these topics lest he jeopardize non-impaired students' chances of success in the secondary selection examination. Fourth, because of their problems, handicapped students experience more severely than other students the shortage of educational materials.

9.21 As a result of these problems, handicapped students do not always develop the social competence and personal adequacy that their school experience should foster. In many cases, instead of compensating handicapped students for feelings of frustration, failure and rejection that they experienced before entering school, the school may unwittingly reinforce such negative feelings.

9.22 MOE recognizes the very serious problems handicapped students face. It also recognizes its responsibility to enable such students to develop their talents to the full for their own well-being as well as for that of society. To enable it to discharge its responsibility better, the ministry will take the following steps:

- (a) pre-service and in-service training of teachers will take account of the fact that with the universalization of primary education school classes will be of more mixed composition and will almost certainly include one or more handicapped children; elements of the training will therefore be directed to enabling teachers to respond to the needs of various categories of students within a normal classroom situation;
- (b) since blind and deaf children need to have mastered certain handicap-specific communication skills, such as sign language, before they can profit from school education, assistance will be provided to preschool centres for the development of such skills;
- (c) posts will be established for psychologists responsible for providing guidance for slow learners, maladjusted children and other students who experience significant and continuing difficulties in learning and in

adjusting to the normal educational opportunities that are available to other students;

- (d) arrangements will be made so that handicapped students can move through the school system at a pace that matches their needs and progress;
- (e) an evaluation will be conducted of the accomplishments and problems in the field of special education since 1977 when Educational Reform spelled out its basic principles and guidelines. This evaluation will serve as the basis for assessing what more can be done, within the framework of Zambia's constrained financial and human resources, to provide for the educational needs of children who suffer from mental or physical disability.

Pre-Schools

9.23 The best environment for early learning is the home and surroundings that are in sympathy with the values of the child's family and culture. In the modern changing society, pre-school education, for children aged 3-7, can be a valuable adjunct to this home-based education and can foster the social, physical, mental, and psychological development of the child. The availability of pre-school education also frees mothers to play a more active economic role in society. Pre-school education will continue to be the responsibility of local authorities, communities and concerned parents, each of whom will make whatever arrangements seem suitable for the provision of education at this level. MOE will promote the development of pre-schools by training pre-school teachers and supervisors, facilitating the development of a pre-school curriculum and teaching materials, and providing professional guidance. Each local authority will be responsible for registering pre-schools in accordance with legislation, for the establishment of additional pre-schools in its area, and for their overall administration. Pre-school proprietors and communities that establish pre-schools will provide the necessary facilities and learning materials, recruit and pay the teachers, and determine the fees that are to be paid. Within the limit of resources, MOE will provide a partial subsidy for handicapped children who are enrolled in pre-schools.

Classroom Teachers

9.24 Teachers are key individuals in determining whether the school can bring its undertakings to fruition. It is they who shape children's intellectual formation and promote their desire and ability to learn. It is they who choose instructional methods appropriate and relevant to the child's emerging needs. The teacher's personal relationships with the child are of crucial importance during the formative years of the child's personality. There are many aspects to the teacher's role. There is the primary duty of guiding and instructing students in the learning that is prescribed for them. Teachers should be proficient, therefore, in the subjects they teach and be resourceful in translating their knowledge into effective learning experiences for their students. Although frequently regarded as imparters of knowledge, teachers must continue to be learners themselves, advancing in the knowledge of their subjects and improving their teaching skills. They are among society's principal agents in promoting socially responsible behavior in young people; in consequence, society establishes for teachers standards of conduct which it does not expect of other professionals. Teachers communicate lessons to students, especially the younger

ones, not only through the subjects they teach but often more significantly through being the kind of person they are. They are important members of the school community, promoting its success and development, standing by their teaching colleagues, helping and advising younger teachers, heeding the experiences of older ones, and supporting the general policies of the school. They are also significant community representatives, acting on its behalf in the development and formation of the next generation of adults, participating in and fostering its development, and placing their knowledge and skills at its disposal.

9.25 As one who can respond to these various expectations in the circumstances of Zambia at the end of the twentieth century, the teacher should be a person who

- strives to develop in him- or herself and to foster in others a critical, analytical, innovative, creative and thinking mind;
- places formal schooling in the wider context of the education that is received in the home and community;
- regards knowledge, understanding and appreciation as something to be developed in collaborative interaction with students;
- can organize learning opportunities for the individual student and for the class as a whole, guide the learning process, and evaluate the outcomes;
- adopts a set of values and an ethical framework for professional work;
- fosters respect for human life and well-being, a concern for others, and a desire to improve the lot of the less fortunate in society;
- endeavors to promote in students responsibility, initiative and cooperation;
- prepares students for active participation in the service of others in the local community;
- appreciates and promotes regard for the national cultural heritage;
- communicates to students respect for the dignity and many freedoms of the individual and tolerance for their opinions;
- appreciates and promotes the need to safeguard the ecological balance in one's immediate environment.

9.26 To discharge their teaching work effectively teachers need to have a suitable and properly resourced working environment. To commit themselves wholeheartedly to their teaching duties they need to be adequately compensated. And to promote a system that involves innovations and reforms they need to be adequately informed on and well-oriented to what is new, confident of their ability to deal with it and involved in decisions about its implementation. The section on Learning Materials examined the question of classroom resources and textbooks, while that on Primary School Rehabilitation looked at issues relating to school buildings, furnishings and maintenance. This section will confine itself, therefore, to teacher morale and the professional development of teachers.

Teacher Morale and Teacher Retention

9.27 The decline in teacher morale, alleged increases in teacher absenteeism and indiscipline, and the growth in premature wastage from the teaching profession, reflect some of the effects of the deteriorating economic climate on teachers' terms and conditions of service. The impact on salaries is seen clearly in Figure 2, which shows the development of the starting salary for a two-year trained primary teacher with full secondary education. Following a period

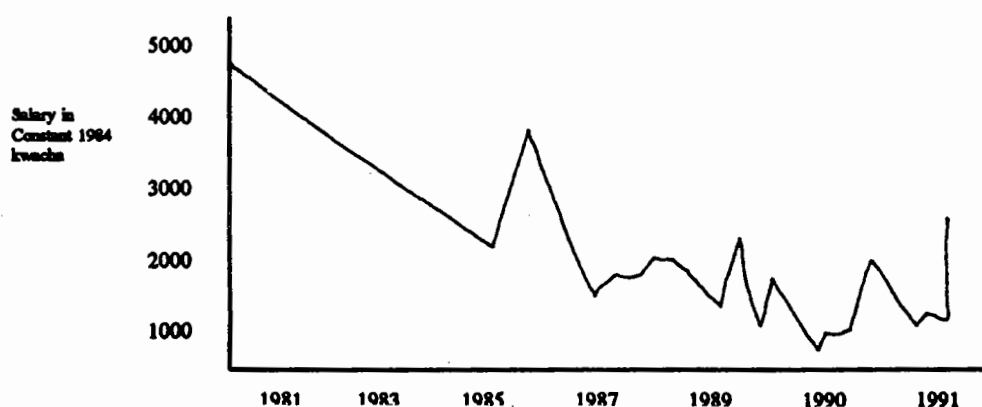
of decline in its purchasing power, the value of the salary is restored to some extent by a salary increase, but only in a few cases does this bring the value back to what it had been earlier. The salaries of teachers in this category lost 80% of their purchasing power between 1981 and 1991, and even the short period since 1989 saw a rapid deterioration, with the salary in July 1991 having only about 70% of the buying power it had in July 1989.

9.28 For other categories of teachers the picture is similar, though there are variations in the details. Overall, all personal emoluments for primary school teachers lost about 30% of their value between 1986 and mid-1991, notwithstanding the salary adjustments and housing allowance awards made at the beginning of 1991. The 100% salary increase that was awarded in August 1991 raised the total emoluments bill to a higher real level than that for 1986, but because there were 5,000 more teachers than in 1986 the personal emoluments for individual teachers remained less (by about 7.5%) than they had been in 1986.

9.29 Teachers are not alone in experiencing this kind of deterioration in the value of their pay. The answer to their genuine concerns lies, however, more in stabilizing the economy than in awarding massive salary increases, the value of which is quickly eroded by the inflation such increases fuel. MOE will press for meaningful improvements in income that will help to motivate and retain teachers, but it must be acknowledged that the resources for such improvements are almost non-existent and that the situation is further aggravated by the necessary increase in the number of teachers needed for the ever-expanding primary school enrollments. It needs to be said once more that the rapidly increasing personal emoluments bill for primary school teachers constrains all developments in the education sector. If resources do not exist to restore teachers' incomes to levels they enjoyed even five years ago, still less do they exist to take on further commitments, such as the expansion of secondary and basic schools which, whatever their importance, are not as crucial as expanding and improving primary education.

9.30 But if the real value of emoluments cannot be raised, their further deterioration can be arrested. As Figure 2 shows, salaries have been developing in a zig-zag pattern with a constant downward trend. The zig-zag effect is inevitable if after a fall in real value the salary level is abruptly raised through an increment. But the downward trend will not occur if each successive salary award brings buying power back to what it had been at the previous award (or even to a slightly higher level). This is what MOE will endeavor to accomplish for teachers in the years ahead so that the value of their incomes never falls permanently below what it is today. The projections which form the basis for the financial estimates in this Report are built on the assumption that the real value of teachers' emoluments will not decline any further during the 1990s.

Figure 2: Starting Salary for a Two-Year Trained Primary teacher with Full-Secondary Education in Constant 1986 Kwacha (1981-1991)



9.31 Increases awarded in 1990 and 1991 brought the real value of average teacher emoluments back to about their 1986 level. But this improvement has come about in large measure because of the housing allowance that some teachers receive. In 1991 expenditure on this allowance for primary teachers was just half the expenditure on salaries. However, the introduction of the housing allowance has severely disrupted the structure of teacher remuneration. For many teachers, the allowance is more than twice the basic pay. Several untrained teachers who are eligible for the allowance have a remuneration package that is well above that of senior trained teachers, who do not receive the allowance because they are provided with accommodation. In several cases non-teaching staff receive more than school heads in take-home pay. Such situations clearly demand a rationalization of the housing allowance and a re-organization of the whole structure of teacher remuneration. In the present circumstances, where teachers' conditions of service are linked to those in other areas of the public sector, the policy affecting the housing allowance and the conditions governing its receipt cannot be re-worked for teachers alone. New conditions of service for teachers, separate from those in the rest of the civil service, would provide more flexibility in dealing with the problems to which this allowance has given rise (cf. 7.25 above). But the development of such conditions will take time. Meanwhile, MOE in collaboration with ZANUT will examine systematically the anomalies in the existing system and will consider how the system can be rationalized so that it benefits teachers on a fairer and more professional basis.

9.32 Available information indicates that an increasing number of teachers are leaving the profession, either for employment elsewhere in Zambia or for employment in neighboring countries. This hemorrhage is occurring at all levels, but particularly severe is the loss of qualified university graduates, the category which is the most expensive to train (cf. 10.19 and 10.28ff below). How to stem this loss is a matter of grave national concern. It is not altogether a matter of improved salaries, important as these may be. Because of the relatively small number of promotion posts, teachers find that the present career structure is unattractive and lacks challenge. A more comprehensive career structure that was formulated in terms of salaries and not of promotion posts would stimulate many teachers to remain in the profession. A properly managed and meaningful scheme of fringe benefits and incentives would also enhance teacher morale and improve retention. It is important that these issues be addressed if the education system is to retain teachers trained at great public expense. Providing for such developments will require an increase in resources, but investments in motivating teachers will bring their own returns in the form of better educational services. The need for additional resources for these purposes underlines yet again the importance of cost-effectiveness in the deployment of teachers (cf. 7.24 above), of generating additional resources for education (cf. 7.28ff above), and of evaluating the recurrent cost implications of every proposed development (cf. 8.4 and 8.18 above).

9.33 Other factors of importance for the morale of teachers relate to the professional and administrative support with which they are provided and to their standing as professionals and community leaders. Issues of professional support which enhance the commitment of teachers are dealt with below. But teachers also stand in need of efficient and prompt administrative support. Although the procedures for postings and transfers and for dealing with requests and grievances are well established, the administrative machinery often fails to function smoothly and in consequence many teachers lack confidence in the administrative system that supports them.

9.34 Improvements will occur if the education ministries are reorganized along the departmental lines proposed in Chapter 11. Further improvements will require a strengthening of the personnel and finance sections and the development of a constantly updated and rapidly accessible records system.

"At present there is no single agency in the system that maintains accurate and easily accessible information on teachers. In addition to the waste of GRZ resources attributable to outdated or inaccurate records, the costs of this confusion include lost time and decreased morale among teachers seeking information regarding pay, promotions, and allowances" (Report to USAID/Zambia, June 1991, p.88).

9.35 In order to redress this situation steps will be taken to activate the teacher management information system developed in conjunction with the Commonwealth Secretariat.¹ The development and maintenance of this system will require adequately trained staff. Donor support will be sought for establishing the system and providing the basic staff training, but ongoing support for the system will come from Zambia's own resources. The costs of this additional commitment will be offset to some degree by the savings it should help to effect in eliminating payments to teachers no longer in service. Moreover, the adoption of the system should contribute to a more personally satisfying and effective use of teachers who are the most costly resource element in the education sector. In addition, as part of the reorganization process in MOE, clear guidelines will be developed regarding the level at which administrative decisions should be made, whether institutional, district, provincial or central. Responsibility for much procedural decision-making will be passed to subordinate officials who will be required to exercise the authority entrusted to them and to bear responsibility for the decisions they make. This reorganization-cum-decentralization should serve to reduce bureaucratic delays and to streamline administrative procedures.

9.36 In recent years there has been a growing awareness that in addition to being a professional educator the teacher is also a significant community leader. This new emphasis underlines in a fresh way that teaching is a profession requiring a high level of education, specialized training and a strong degree of personal commitment. This professional status of teachers would be considerably enhanced if they constituted a professional body with its own code of conduct. Such a body would enable teachers to provide better service to their students, would promote the professional development of its members, and would serve as a self-policing authority in many areas of conduct and discipline. Educational Reform stressed how desirable it was that teachers assume for themselves a code of ethics to regulate their personal conduct and behavior and establish a professional organization that would embrace all teacher associations. In order to stimulate progress in this direction, MOE in collaboration with ZANUT will examine the whole question of establishing a legalized professional body for teachers. This examination will take account, among other things, of the implications for training and certification, the requirements for registration, and the development of a code of conduct for teachers. The status of teachers should be enhanced and their morale promoted if they could feel that they constituted a professional group in much the same way as lawyers, doctors and engineers.

¹ *Teacher Management and Records in the National Education System* by I. Halliday. Commonwealth Secretariat, 1989.

Ongoing Professional Development of Classroom Teachers

9.37 Teachers are one of the chief determinants of educational achievement in the classroom. Their classroom effectiveness depends heavily on their knowledge of subject matter and on their pedagogical skills. The broad basis of subject matter knowledge was laid during their period of formal schooling, especially during their years at secondary school. During their two years in a training college that knowledge should have been deepened, competence in all areas of the primary school curriculum should have been promoted, and pedagogical skills and instructional techniques should have been developed. But what was fostered at the pre-service level is not sufficient to last a teacher through life. Teacher education is a continuing process that must be extended throughout the individual's years of actual teaching. This is important on professional grounds, so that the teacher remains up-to-date with his work, and on motivational grounds since career advancement is linked in many ways to opportunities for further training and professional development.

9.38 The conditions existing in Zambia's primary schools and developments that are likely in the coming decade indicate various areas where teachers would profit from in-service education (INSET). Before these are briefly outlined, two preliminary notes are in order. One is that the value of in-service training for classroom teachers lies in its success in making them more effective teachers, better able to promote student learning. The second is that programmes of in-service teacher education should be comprehensive and systematic, covering a specified topic or approach and in some way or other reaching all teachers in a certain area or district. In-service education should not be offered merely for its own sake. There is need therefore for comprehensive and detailed planning of INSET programmes and courses. It is not the number of such programmes that counts but their eventual impact in bringing about more effective student learning and understanding.

9.39 For many years to come, the main purpose of INSET will be to familiarize teachers with new curriculum content and materials, to upgrade their actual instructional skills and to promote their resourcefulness in using as teaching materials items that are locally available. As the supply of books to primary schools improves, INSET programmes will have to educate teachers on how to use these books to the best effect in their classes, since a large proportion of teachers will be experiencing for the first time the situation where there are sufficient books for student use, albeit on a shared basis. For many this will require a radical change of teaching style, with much less time being spent on blackboard work and more being devoted to active teacher-student interactions. But if the distribution of textbooks amounts to no more than a "materials drop" the expected beneficial classroom effects will be minimal. Where the books incorporate significantly new content or methods, as is the case with the new primary English course, teachers will need orientation at considerable depth and length to the new materials, together with ongoing assistance in the form of explanations and suggestions supplementary to the Teachers' Handbook. These book-related programmes must also look to the very basic requirement that teachers learn how to care and account for books.

9.40 INSET is also necessary in mathematics. The generally unsatisfactory performance in mathematics at all levels may be due in part to the weak background of a large number of primary teachers, few of whom have completed secondary level mathematics successfully. Regular and sometimes extended courses are needed in this area. Such courses should promote understanding of the basic concepts, familiarity and ease with the mathematics

syllabus up to about Grade 9, and perfect mastery of the essential skills and techniques. Student performance in mathematics at higher levels will remain problematical as long as primary teachers, who lay the foundations for students' mathematical development, are themselves weak, hesitant and generally lacking confidence in this area.

9.41 Zambia's Education For All Goals and Strategies for the 1990s proposed the introduction of continuous assessment techniques as a means of evaluating learning achievement. The World Bank Policy Paper on Primary Education has stressed that "a capacity for continual assessment of student achievement is essential to improving the quality of education" (1990, p. 31). But as noted in the section on examinations, a prerequisite for this is the training of teachers in methods of continuous assessment. Hence a further important area for INSET is in methods of continuous assessment and in maintaining comprehensive records on students.

9.42 The dearth of educational materials in schools will only be partially solved by increasing the supply of books. For many other needs, especially in science, mathematics and social studies, the teacher must know how to make use of whatever resources are available in the local environment. Apart from the question of resource constraints, there are sound pedagogical reasons for preferring locally available materials to many of those produced commercially. But the evidence is that this sense of resourcefulness is poorly developed in many teachers. Moreover, even training by resource centres in the production of resources has not always led to the appropriate use of resources in teaching. A well-designed INSET course, mounted in conjunction with SHAPE, could address itself very profitably to this area.

9.43 Finally, there are four areas of classroom management that, in Zambia's circumstances, should be incorporated into INSET programmes, though not always for the same clientele: the urban problem of how to teach unusually large classes; the rural challenge of how to teach in a multi-grade system; how to make the most effective use of the limited time afforded by double session teaching; and the problem that grows with the universalization of primary education, how to teach classes of mixed ability.

9.44 Because of the large number of teachers and the many areas needing attention, it will not be possible to address all the needs by residential programmes or programmes of extended duration. Some of the training may be undertaken at central locations, but most of it will have to be locally based, using the professional network of school inspectors and the organizational network of resource centres and resource teachers, within the framework, where suitable, of SHAPE. The broad training strategy that will be adopted will be to train higher level trainers, for the greater part through residential programmes of some weeks duration; these trainers will in turn train lower level trainers, if necessary through residential courses; the lower level trainers, with some supervision from the higher levels, will train others such as school heads and resource teachers, and these in turn will train classroom teachers (see Annex 6). It will not be necessary to have each training level in all instances, but the general principle will be that the better one is placed to pass training on to many others, the more intensive the training he will receive. Initially, the senior inspectors, curriculum developers and personnel from the training colleges will be brought together to determine the content of the training programme, work out its details and prepare the instructional materials. One could conceive of this group as being the master trainers who would train district inspectors in month-long sessions conducted at two or three of the training colleges; the district inspectors would then train heads and/or resource teachers through a combination of short residential courses, strategically located training

workshops, and workshops and seminars conducted in the resource schools.

9.45 Financial provision for these training activities has been included in the projected primary school costs. To facilitate provincial planning, the funds will be part of the primary school budget at the provincial level, but care will be taken to ensure that the allocated funds are available on a timely basis for use by regional inspectors and others responsible for mounting these programmes. But the in-service training needs are so extensive that local funds are likely to be quite inadequate. They can be supplemented, however, by donors, either through direct participation in the overall in-service programme or by supporting teacher orientation programmes arising out of the introduction of new materials or school organizational patterns (such as multi-grade teaching). Although Zambia has the expertise to devise and run the programmes considered, their organization, management and back-up would be a serious drain on the limited number of professionals in MOE. A collaborative arrangement will be needed between the education ministry, the SHAPE secretariat, and the UNZA School of Education (Department of Inservice Education and Advisory Services), with the possibility of technical assistance in the form of a curriculum specialist and a specialist in educational management (to service these programmes and others that will be outlined). Donor assistance will also be needed for reprographic facilities, instructional materials used in similar circumstances elsewhere, and supplies for the production of follow-on materials for course participants.

School Heads

9.46 "We know that well-managed, effective schools share several characteristics: they display an orderly environment, emphasize academic achievement, set high expectations for student achievement, and are run by teachers or principals who expend an enormous amount of effort to produce effective teaching and encourage pupils to learn, no matter what their family background or gender" (Education & Development: Evidence for New Priorities. World Bank Discussion Paper No 95, 1990, p.57).

More schools in Zambia would display these features if account were taken of the crucial role of the school head in promoting a school environment which stresses the importance of learning and which encourages trust, effort and mutual respect among students and teachers. For this reason, high priority will be given to the professional and administrative development of school heads.

9.47 School heads are expected to provide academic leadership in their roles as teachers and administrators. As teachers they provide a model for other teachers in the preparation of their work, the organization and management of their classes, their punctuality and orderliness, their instructional techniques, and their evaluation of students. As administrators they have many and diverse responsibilities: organizing the implementation of the curriculum in the school, supervising and evaluating teachers, procuring materials, keeping records, communicating with the ministry, maintaining facilities and equipment, dealing with parents and the community, serving on the PTA. Additionally, the good head-teacher stimulates improvements, fosters resourcefulness in the use of locally available materials, takes the initiative in promoting the well-being of the school within the community, and creates among staff and students a bond of identity with each other and with the school. In addition to all these responsibilities, new challenges are being posed today for school heads, who are now expected to promote the development of their schools as centres for the total learning needs of the community.

9.48 But for this wide variety of responsibilities heads receive little help. They are appointed largely on the basis of seniority and not of demonstrated suitability for the tasks they will undertake. Once they are appointed, they are "thrown in at the deep end" with no training. Their opportunities for subsequent task-related training are meager and, apart from the training course at Chalimbana for school heads (which reaches very few), most of the courses they may have attended will have been mounted not as part of a comprehensive training programme, but to meet some ad hoc need or to use funds that happened to be available. As with the teachers in the school, they experience shortages of teaching materials, but in addition they may also be short of record-keeping books, journals, stationery and other materials needed for effective administration. Although one of their tasks is to supervise and evaluate teachers, they have little effective authority over them and experience serious problems in trying to discipline teachers for absenteeism or neglect of their classes. Moreover, they lack the support that would be theirs if the school were visited frequently by inspectors and education officers.

9.49 Efforts will be made to change this situation by undertaking a systematic programme of in-service training for school heads, by improving the supply of educational materials, by strengthening resource centres so that they can service schools better, and by improving the supervision and support that the head can expect from the district education office.

9.50 In addition to the areas to be covered for classroom teachers, the programme of training for school heads will include the management and use of financial and other resources, school maintenance, and the basic elements of administering small institutions (see Annex 6). Because of the prominence that is being given to the leadership role of teachers in the community, and in recognition of the impetus towards more community involvement in schools, training for school heads will also address issues of relationships between the school and the community.

9.51 A variety of training models will be used. The ideal situation would be to provide month-long intensive training-courses each year at each of the ten training colleges. If each course had 100 participants, the primary school system would be covered in four years. The lower level trainers, who had previously undergone training in the programme, would serve as trainers for these courses and college staff would serve as animators. Such an ambitious undertaking could be undertaken only if there were adequate funds, careful delimitation of the training programme, prior training of trainers, and prior preparation of instructional materials. Local resources could not support all these activities. But because the improvement of school management is crucial to the success of efforts to provide quality education for all, donor agencies will be invited to give priority to meeting this need by providing technical assistance and support for the residential programmes.

9.52 There would also be other interventions consisting of follow-up instructional materials, participation in workshops and seminars conducted by the training team, training of groups of teachers by heads who had participated in the residential programme, and on-the-spot training provided by inspectors and education officers as part of school visits. An important aspect of the latter is the opportunity such visits, and others by members of the training team, would provide for evaluating the effectiveness of the training programme. What is important for school heads, as for all other categories of teachers, is the impact of the INSET courses on what is going on in the school and, in the longer term their impact on student achievement.

9.53 Adequate training for the job may significantly improve the ability of school heads to manage their schools, but it provides no guarantee that they will in fact do so in an effective and competent manner. Because they enjoy security of tenure they may not feel that there is any urgency about this. Unfortunately this has been the experience in a number of cases. Security of tenure as a school head, effectively for the remainder of one's teaching career, gives undue protection to inefficient and ineffective heads and undermines other attempts to raise the quality of education at school level. In view of this, the legislation and regulations will be re-examined so as to provide that appointment as school head, or to other senior posts in schools, should be for a specified number of years (with the possibility of re-appointment). Moreover, to promote a greater sense of accountability to the local community, a school's PTA will be involved in all that relates to the appointment of school heads and other senior school personnel.

School inspectors

9.54 Inspectors are responsible for the development and maintenance of professional and academic standards in schools. They may be regarded as constituting the most important agency for monitoring quality in education. The perspective from which inspectors monitor school quality is all-embracing, covering learning, teaching, institutional management, the performance of individual teachers, resources and institutional upkeep. This accountability function is discharged towards the ministry, keeping senior officers informed about the state of schools, their problems and their progress. But of even greater importance in enhancing educational quality is the inspector's advisory role within the school. The advice centres on teacher effectiveness, teaching strategies, curriculum materials, student evaluation, in-service training, and classroom management. From this perspective the principal aim is to improve teacher competence and the conditions in the learning environment. In addition to these two essential tasks, the inspector promotes school quality through involvement in curriculum development activities, participation at many levels of the examination process, the preparation of teaching guides, contribution to the work of professional subject-associations, and participation in project work such as SHAPE.

9.55 For the discharge of these various tasks the inspector has two essential needs: to be able to visit schools sufficiently often and, once there, to be able to proffer the advice and guidance needed by school heads and teachers. Ability to visit schools implies the availability of adequate transport and the funds needed for such visits; ability to visit schools often enough to make an impact implies that there should be enough inspectors to make this possible. Ability to give proper advice, particularly on curriculum, resource and pedagogical matters, implies that the inspectors must be suitably qualified for their tasks. Inspectors cannot be the itinerant teacher-educators Educational Reform speaks of unless they are mobile, competent and sufficient in number to reach all schools.

9.56 Zambia is experiencing difficulties in all these areas. There is insufficient transport and funding for a regular programme of school visits. Thus, for 1991 funds were so limited that inspectors from ministry headquarters were required to limit their tours visiting schools outside Lusaka to a mere 12 days. There was evidence that only about one-twelfth of the primary schools and 5% of the teachers were visited in 1985. Very likely the situation has deteriorated since then. The problem has been made worse by the fact that even if funds and transport were sufficient the inspectors are too few to be able to visit all schools or advise all teachers sufficiently often. The anomaly of this situation is that as the number of schools,

teachers and students increased, the number of inspectors decreased (Table 10). Depending on the size of the district, a primary school inspector may be responsible for between 10 and 80 schools, many of which are quite difficult to access. The average responsibility for a district inspector is for 65 schools staffed by more than 500 teachers. These large numbers make it impossible to visit schools and individual teachers frequently.

9.57 A further grave problem in the inspectorate is the low level of qualification of several of its members. While many of those at central levels, at headquarters or in the provinces, have had professional training to degree level, few of the primary school inspectors at district level have any qualification beyond O-levels and the primary teachers' certificate. Length of experience in actual teaching is their strength, but their weakness is the lack of the broad understanding of curriculum, pedagogical and school management matters that further training would provide.

TABLE 10: Size of the Inspectorate and School System 1975 and 1989		
	1975	1989
Number of Schools		
Primary	2,484	3,493
Secondary	120	343 (1988 data)
Number of Teachers		
Primary*	18,096	33,380
Secondary	3,202	5,176
Number of Students		
Primary	872,392	1,446,847
Secondary	73,049	168,536
Number of Inspectors		
Primary	110	72
Secondary	53	26
Other		711

9.58 Because of their inability to visit schools, many inspectors must devote most of their time to subsidiary professional tasks and to various administrative duties. As the inspectorate has become increasingly office-bound the burden of administrative tasks with little professional substance has become heavier. This closer identification with the administration has brought to the fore an issue that the inspectorate has been experiencing as a problem for some time: its role in maintaining quality in the education system globally and not just in schools, and hence the need for sufficient autonomy to enable it to evaluate the impact on quality of policy and administrative measures. This it cannot do when it is so closely involved with the administration that it is seen as contributing to such measures and is expected to ensure their implementation.

9.59 The needs of the inspectorate, therefore, are easily identified: a larger establishment, professional upgrading for many of its members, sufficient resources for a regular programme of frequent school visits, and an autonomous status. The FNDP proposed the establishment of a single inspectorate as an independent body. Such an inspectorate would operate independently of the education ministries, would be in control of its own resources, would have its own accommodation, and would be answerable only to the Minister for its operations. This would free it to appraise the education system critically and objectively, uninhibited by loyalties to administrators or participation in formulating and executing administrative decisions. The necessary legislation will be brought forward for the establishment of the inspectorate as such an autonomous body. Arising from this, responsibility will rest more clearly with the inspectorate itself to increase its establishment and to assure the resources needed for its programmes of school visits. But within the overall framework of the allocation of resources, whether these are local or come from donor agencies, more priority will be given to the inspectorate so that it becomes mobile and functional once more.

9.60 Enlarging the inspectorate and upgrading present under-qualified inspectors both face the problem of training, where and how this is to be provided and how it is to be financed. Present numbers are so small that the system could not sustain the absence of a large number of primary school inspectors on residential courses of long duration. But it should be possible to arrange block release for periods of 3 - 4 months each year to facilitate participation in a local training programme. The UNZA School of Education will be requested to provide such a programme and to arrange the modality of mounting it in a way that best suits the needs of the inspectorate. The current education degree programmes at UNZA are not suitable for this purpose as they are directed principally towards the training of secondary school teachers, have a strongly academic bias, and require at least two years of full-time attendance. The programme for inspectors should be tailored to their specific needs, focusing on curriculum at the primary level, instructional methods, and school management in the Zambian context (see Annex 6). A two-year diploma programme, offered partly by face-to-face teaching and partly by forms of distance education, would seem to be feasible and to be in accord with moves in the School of Education to diversify its offerings in response to the needs of the user ministries.

9.61 A somewhat similar programme would also be suitable for upgrading education officers, though in this case there would be less emphasis on pedagogics and more stress on management and practical educational planning. The need for upgrading education officers is addressed elsewhere in this report. Here it is being proposed that this need can be catered for by a programme that would run in step with and be of the same type as that for school inspectors.

9.62 If the School of Education is to participate in offering such programmes, it would need to see its staffing strengthened. Coordination of the programmes could be undertaken by the School's regular structures and departments, but professional help would very likely be needed in the field of primary level curriculum and pedagogics and of management and administration. Back-up services for the preparation and distribution of distance learning materials would also be needed. While the general level of training to be provided would be to university diploma level, the School of Education might also wish to consider what additional resources and provisions would be needed if, in cases of exceptional merit, trainees were to continue through to degree level. In years to come, the expansion of the inspectorate and the replacement of senior personnel will require that some proportion at least of newly appointed or upgraded officers be degree holders.

Transport

9.63 The mobilization of an adequate and reliable system of transport will be crucial to the success of measures designed to improve the management and supervision of schools. A large number of the problems with which the education system is now confronted arise from the fact that inspectors, education officers, building officers and other personnel are grounded. Because there is no system for bringing salaries to teachers they must abandon their classes for lengthy periods in order to get their pay and essential provisions. Schools are bereft of textbooks and educational materials, but these may be left lying at central distribution points because there is no transport for bringing them to the schools. Inspectors and education officers can visit schools only at rare intervals. Schools fall into disrepair because maintenance officers have no means of getting to them. In-service courses for teachers founder because the means of getting teachers to central locations for these courses are so limited.

9.64 Efforts to increase access to education, to rehabilitate schools, and to effect significant improvements in the quality of education, all require that the transport needs of the system be adequately addressed. MOE will take steps to ensure that suitable transport is provided at all levels for field officers and that adequate funds are provided to operate these vehicles. The needs of each sector requiring transport will be carefully assessed to ensure that the form of transport provided is adequate for the needs and the terrain and is economic to purchase and maintain. Heavy duty vehicles may be required for some purposes and in some areas, whereas light vehicles or motorcycles would suffice in others. Public resources will never be sufficient to provide transport for all institutions, but MOE will endeavor to allocate institutional transport to key institutions, such as teacher training colleges, resource centres, rural boarding schools, and schools for the handicapped. Other institutions will be encouraged to do what they can to meet institutional transport needs, through fund-raising drives, the involvement of past students, and voluntary contributions.

9.65 Vehicles are costly to purchase and maintain. They are also easily abused. They can be driven recklessly and without attention to necessary maintenance. More seriously, they can be appropriated for personal and other uses that make them unavailable for the educational purposes for which they were intended. To lessen the possibility of such abuses it will be necessary to strengthen the monitoring system on the use of all MOE vehicles. The cooperation of the police and local communities will be sought for this. The proposed decentralization of financial responsibility to district and, in certain circumstances, institutional levels will mean more local ownership of transport. This entails local responsibility for keeping vehicles on the road. This greater autonomy at sub-national levels should contribute to more effective and responsible management of transport. At the same time, the policy will be clearly formulated that additional central funds will not be allocated for the repair or replacement of vehicles that have been used wrongly or for personal purposes.

CHAPTER 10

THE TRAINING AND SUPPLY OF TEACHERS

10.1 The presupposition of this chapter is that teacher education is central to the effectiveness and efficiency of the total education system. The quality of Zambia's schools reflects the quality of the teachers manning these schools, while the quality of the teachers reflects the effectiveness of the institutions that trained them. The focus of concern in an effective teacher-education institution is on transforming its students into competent and committed teachers. To accomplish this the institution must have sufficient expertise and autonomy to direct its efforts to the production of high quality teachers. Thus efforts are needed to ensure that teacher training institutions become maximally accountable for the work they do and for the quality of the teacher they produce. This can be done, first, by providing them with sufficient resources, allowing them a large measure of autonomy and holding them accountable. Second, the programme for teacher education must be kept under constant review to ensure that it responds to the real needs of Zambia's schools. Third, the responsibility of staff in training institutions for the quality of teacher education must be strengthened through their involvement in the curriculum development process, the production of teaching materials, and institutional decision-making processes - all of which presuppose that the staff are themselves competent, experienced and suitably qualified. These principles underlie all that follows. Therefore, the development of teacher education in the future will be considerably more than an exercise in quantitative expansions, to keep abreast of the needs of an expanding school system. It will be a collaborative undertaking, requiring maximum participation by the institution's leadership and staff, aimed at ongoing improvement of the quality and relevance of the programme of training. Its focus will be on establishing an environment that will facilitate such learning, understanding and competence in its students that when they become teachers they will be able to promote these attributes at appropriate levels in the schools.

The Pre-Service Training of Primary Teachers

10.2 The essential purpose of the two-year college training programme is to transform Grade 12 school-leavers into professionals who are masters of the subject knowledge appropriate at the primary level, competent in teaching skills, and imbued with a sense of professional commitment to educating beginners and the young. If the colleges are to achieve this they must have an intake of adequate personal and academic quality; an appropriate curriculum; suitably qualified and experienced staff; and sufficient teaching resources. The calibre of the student intake has been improving steadily across the years with the raising of the admission requirement to successful completion of full secondary school, with passes in English, mathematics and/or a science subject. But this improvement has not been wholly matched by improvements in the quality of the curriculum or of the staff, while in common with all institutions of learning the teacher training colleges have suffered from a dearth of resources.

10.3 The curriculum followed by the teacher training colleges leaves much to be desired. It has not been revised since the late 1970s when the basic admission requirement was successful completion of the junior secondary cycle. Somewhat understandably, the curriculum at that time provided for a very full, carefully timetabled day during which the students were exposed to what was mainly prescriptive teaching and drilling in the contents and methodology of handbooks. Despite the appreciable improvement in the calibre of the student intake, this system has persisted. A typical college has forty-five 40-minute periods a week into which are crammed

six centrally-examined and nine locally-examined subjects. Increasing timetable pressures have been created by the introduction of areas such as political education, population education and environmental education, in addition to programmes like Child-to-Child and activities such as production units and campus cleaning. In some colleges the last two activities take up a disproportionate amount of students' time to the detriment of their academic and professional studies.

10.4 There is no doubt that students are over-burdened with content. There is little time for independent study and, as a consequence, only limited development of students' initiative and creative skills can occur. Instruction is based on a series of objectives developed at the Curriculum Development Centre and by the inspectorate, with only minimal input from college staff or primary school teachers. Because of the disproportionate emphasis upon rigid curriculum objectives and primary school content the development of problem-solving skills, essential to the student who is to cope with difficult and diverse classroom conditions, is neglected. A consequence is that trainees develop authoritarian, teacher-centered styles of teaching that place emphasis on factual knowledge and memorization. With this type of training there is little hope that they will be able to promote the flexibility, originality, and ability to think independently and creatively that are urgently needed in Zambia's schools.

10.5 The curriculum also suffers from not taking account of the real situation in Zambia's primary schools, and hence it does not prepare trainees adequately for their future roles. The areas identified in the previous chapter for inservice teacher education need also to be addressed in the preservice training of teachers: how to teach with and without books; managing and teaching very large classes; multigrade teaching; dealing with special students (the handicapped, the undernourished, the gifted, the slow learner); coping with the demands of teaching two sessions; keeping student records; techniques of continuous assessment; the way teaching adults differs from teaching children; the improvisation and use of resources. But the mistake must not be made of just adding these areas to an already overloaded curriculum and overcrowded timetable. Instead, they should be fully integrated into a dynamic and flexible curriculum. Some of them could be the subject of independent student investigation.

10.6 Manifestly there is great need for a major revision of the curriculum, teaching organization and examinations in the colleges. Steps are afoot to affiliate the colleges to the University of Zambia, so that the diploma awarded on completion of the programme would be underwritten by the University. This will necessitate a two-way process of curriculum development, involving the colleges themselves and the Department of Inservice Education and Advisory Services (and ultimately the Senate) in the University. This will be an opportune time for a radical overhaul of the entire college curriculum. The ministry attaches great importance to this exercise and will assist the University in obtaining locally or from donor agencies the resources it will need for its conduct: personnel, transport, expenses for meetings, back-up for the production of materials.

10.7 But while many of the problems with the curriculum for the training colleges are inherent in the programme itself, the rigidity of the system also stems from the low level of educational qualifications of a large proportion of college staff. This is a further area of concern. The proportion of graduates on the staff of the primary colleges has increased steadily, if slowly, over the years, but the majority of these graduates have been qualified by the University of Zambia as secondary school teachers and some lack all primary school experience. About two--

thirds of the college lecturers are below degree level, while a large proportion hold educational qualifications at the same level as or inferior to those of the students they are required to train. Almost all have the advantage of formal training as teachers, and a sizeable proportion have considerable experience in primary schools. But the academic preparation of many for their lecturing posts is defective. There is urgent need to remedy this situation. The UNZA School of Education is preparing a degree in primary education that would respond to the needs of college staff and other professionals in primary education. High priority will be given to supporting this programme and to enabling a large proportion of serving lecturers to participate in it. To this end a comprehensive staff development programme will be developed for the colleges and funds earmarked for its implementation. Candidates for appointment to lecturing posts in the colleges will in future be expected to have completed this or some comparable degree. Once the new degree programme is well under way, serving lecturers, who on grounds of age or basic qualifications would be barred from degree studies, will be encouraged to take early retirement and will be replaced by individuals with the necessary academic and professional qualifications.

10.8 For the effective discharge of their training role, the teachers' colleges need to be well equipped with books, teaching aids, pictorial materials, science apparatus and consumables, materials for home economics and materials for the production of teaching aids and for practical subjects. They need also to hold complete sets of the textbooks commonly used in primary schools. But although the allocation for student requisites for the colleges is generous by comparison with what obtains in the primary and secondary schools - approximately K1250 (US\$10) per student for 1991 - the revitalization of teacher education requires that the colleges be better resourced. Of particular concern are the library facilities, which stand in need of considerable investment. In some colleges there is need for a virtually complete restocking of the library. In the absence of good library resources and of other curriculum materials there is little hope that the quality of teacher education can be improved in breadth and depth. To respond to the library and resource needs of the colleges, the real value of the allocation for student requisites will be gradually increased, while a proportion of the yield from the education levy will be set aside each year for this purpose.

10.9 The ERIP Report noted in 1986 that recommendations from many Zambian educators and the inspectorate favored a training programme that would be longer than the current two years. This view still prevails in many quarters. There is a growing amount of evidence, however, that increasing the duration of preservice education for primary teachers beyond the minimum required for initial exposure to pedagogical theory is not cost-effective. The large investment in the capital and recurrent costs of a longer programme would yield better returns, in terms of the learning achievements of school students, if it were applied to learning materials, inservice teacher education, or better inspection and supervision systems. But even if the research findings had come out in favor of the cost-effectiveness of a longer training programme, resource constraints would prevent its introduction in the foreseeable future. Certainly for the remainder of this decade all available training resources will be preempted for improving and expanding primary teacher training. None will remain for lengthening the duration. Retaining the duration of preservice training as two years will also have a beneficial effect on the potential salary bill for primary teachers. Salaries are so closely tied to the duration of training that if the training programme were to last three years, the new crop of teachers would begin service at a higher salary than their two-year trained colleagues. This would lead to an appreciable increase in the commitment to teachers' salaries. The doubtful benefits arising from a longer programme (for primary teachers) would not justify this.

The Management of the Training Colleges

10.10 As with all other areas in education, improving the effectiveness of the training colleges necessitates strengthening their management. Essentially this means that the professionalism and effectiveness of college principals, and of their deputies, must be improved. These must take the lead in the development of a new teacher education curriculum, in drawing up plans for the professional development of lecturers, and in ensuring that necessary materials and equipment are available on a timely basis for staff and student use. The principal and deputy should also have a strong say in admissions to college programmes. The effective management of the colleges requires that the principals exercise real responsibility and a high degree of managerial autonomy. In particular they should have greater control of the resources allocated to a college, more responsibility for its staffing, more freedom to exercise initiative in all that concerns the training of students and the daily management of affairs, and greater overall decision-making authority. As stated elsewhere in this Report, it is intended that more responsibility and authority will in future be transferred away from the centre to field officers, college principals included. Their authority will be further enhanced by disbursing to them directly the funds that are allocated for the running of their institutions. By exercising direct and immediate control over institutional funds and other resources, the principal's role will be greatly strengthened. This devolution of responsibility should also make the training colleges more effective in that the management of their resources will lie with themselves and not with an outside body. They will also have access to resources when they are needed and hence will be able to plan their activities more systematically. The financial authority granted to principals will include the authority to generate and use local resources. This should serve as an incentive for college improvement. The successful implementation of this policy of decentralized management will require adequate inservice training for principals and other college officers, ranging from one-day sessions on limited topics to extended training in aspects of institutional management.

Producing Sufficient Primary School Teachers for the Year 2000

10.11 It is estimated that there are 32,320 trained teachers in Zambia's primary schools. The projected need for the year 2000 is 45,564, an increase of 13,244 over the number currently in post, or an average annual increase of 1,472 during the coming nine years. As the current annual output from the primary teacher training colleges is in the region of 1,850, it would seem at first sight that the existing colleges have surplus capacity in relation to needs. But when teacher loss or attrition is taken into account the outputs from the training colleges would enable the teaching force to increase by less than 1,000 a year, a figure that falls far short of requirements. There is need, therefore, for the output of trained teachers to be increased. Two major considerations in any such increase are

- (a) what teacher training model should be adopted for effecting this increase?
- (b) how should the increase be timed or phased in?

10.12 The conventional model in Zambia is to provide two years of college training, mostly on a residential basis. Other strategies for teacher preparation have been considered and one was adopted in the past. This was in 1966 - 1968 when a crash programme of one year's college training was introduced to meet a post-independence surge in primary school enrollments. Experience with the programme was not satisfactory. It depended for its success on extensive

field supervision during the teacher's first year in the schools and on short residential courses in the training colleges during the school vacations. Because of staffing, transport and logistical problems very little of either kind of follow-up was provided. It is believed that the quality of teaching in primary schools suffered badly from this arrangement and it has since been found necessary to provide extensive inservice training opportunities for teachers trained under this scheme. The experience with the crash programme indicates that it would not be a suitable model for Zambia to adopt in meeting the need for additional teachers during the coming years.

10.13 The Zambia National Conference on Education For All suggested the possibility of organizing distance education for untrained teachers. This appears to be an attractive proposition, but the appearance can be deceptive since the best available evidence suggests that there is need to maintain enrollments at about 5,000 and to keep cost recovery from trainees relatively high if the unit costs to Government are to be lower than those in conventional programmes. As it is unlikely that such large numbers would enroll in a Zambian programme, the unit costs of a distance education model could exceed those in the training colleges. There is also evidence that distance education, which is largely built upon self-instruction, is more successful in conveying knowledge and information than in developing skills. Hence it is not particularly effective for training in mathematics and sciences, two areas in which the Zambian primary teacher must become proficient if school students are to be properly grounded in these subjects. There is the final problem that the development costs of a distance education programme can be very high, while the conduct of the programme requires smoothly working organizational and communications networks. These latter Zambia does not have. The University of Zambia's problems in running a correspondence programme for 500 participants is clear evidence of this. Establishing a distance education programme that could qualify about 700 teachers annually would require an elaborate new structure and organization which would have considerable capital cost implications and that would make further inroads into the already limited managerial capacity of the education ministries.

10.14 Some form of distance education would be appropriate as part of a carefully elaborated programme of in-service teacher education. This form of training, using correspondence material supported by radio, is particularly useful for improving teacher subject-matter knowledge. Further study is required on the use of this method as a strategy for meeting Zambia's pre-service training needs. A possible model would be to have students undergo an intensive full-time programme, lasting for three or four months, directed particularly to developing specific instructional strategies and pedagogical skills. This would be followed by several terms of teaching, with extensive distance education in content and methods. Ideally this period of field experience would be punctuated by vacation courses and week-end seminars. The programme would be rounded off by full-time training for a further three to four months. MOE will examine the feasibility of this and other distance education models, bearing in mind the need for a scheme that will (a) produce the expected number of teachers equipped with the requisite skills, (b) work within the staffing constraints in the ministry, the teacher training institutions and the National Correspondence College, (c) take account of mechanisms for the production and distribution of materials and for ensuring student feedback, and (d) be cost-effective.

10.15 The ERIP report proposed a three-year sandwich type training programme in which the first and third years are spent in the colleges and the second year teaching in a school. Adoption of this scheme would give an almost immediate boost to the number undergoing training, but the effects of this would be short-lived. Implementation of the sandwich-type

programme would necessitate additional lecturers and field supervisors to monitor trainees during their year of field experience. Apart from the personnel costs, this has implications for transport and other running costs which could not be met under present resource constraints.

10.16 When all options have been considered, the current two-year college programme appears to offer the best immediate solution to Zambia's needs for an increased supply of teachers. The following strategies will be adopted to increase the teacher supply from this programme:

- (a) existing college facilities will be utilized to the full by increasing the intake of boarding and day students;
- (b) the student capacity at a number of existing colleges will be increased;
- (c) new teacher training colleges will be established in accordance with needs.

If the feasibility study spoken of in paragraph 10.14 above leads to a distance education programme for pre-service training, the need for new training colleges will be re-evaluated.

10.17 Enrollment data show that a number of the existing colleges are fairly consistently under-enrolled, while a few are regularly over-enrolled. Even without taking extraordinary measures there is capacity in the existing colleges for an additional 300 students. The first need is to ensure that this slack is taken up. Moreover, college capacity should not be determined solely by the number of boarding places. To promote the enrollment of more day students, college principals will be given authority to admit local applicants who meet the basic admission requirements but who have not passed through the centrally controlled selection systems. The expansion of college capacity had been envisaged by the FNDP which spoke of increasing the enrollments from 350 to 500 students. The Plan also proposed the establishment of an additional college, to be located in Lusaka, which is the only province that does not have its own preservice training college. It will be necessary during the coming years to put these plans into effect.

10.18 Because of uncertainties about the actual deployment of primary school teachers there is some uncertainty about how these increases should be timed or phased in. On the one hand, the extensive use of untrained teachers seems to indicate that there are not enough trained teachers to meet the needs of the schools, but on the other hand application of accepted staffing norms to data available from the planning unit suggests that there is a surplus. This ambiguous situation reinforces the need discussed earlier to conduct a comprehensive investigation into the actual deployment of teachers and the way schools are organized for single or multiple sessions and for multigrade teaching. As stated in 7.26 above, high priority will be given to gathering this information which is basic to systematic planning for the supply of teachers.

10.19 The information that is gathered should make it possible to specify more accurately the rate of loss from teaching. On the basis of planning unit data, the attrition rate during the period 1980 - 1989 averaged 2.8% a year, which is quite low. This attrition was due to natural loss (death, retirement, etc), graduation wastage (newly trained teachers not entering the teaching profession), and active wastage (serving teachers leaving for employment elsewhere). The erosion of teachers' incomes and the general demoralization among teachers are believed to have led in recent years to an increase in both graduation and active wastage. In view of this,

and of the actual rate of attrition during the 1980s, a very conservative estimate is that the potential stock of trained teachers (serving teachers plus newly qualified college graduates) is being depleted at the rate of 3% a year - with an estimated 32,320 serving teachers in 1991 this means a loss of 970 teachers during the course of the year. The projections which are given in Annex 7 for teacher supply are based on this rate. The projections show that in order to meet the needs of the expanding primary school system:

- (a) an expanded output will be needed from about half of the colleges by 1995 and from the remainder by 1996;
- (b) an output of 350 teachers from a new college will be needed in 1997;
- (c) an additional output of a further 350 teachers will be needed from a second new college in 1999; and
- (d) yet another additional output of 350 teachers will be needed from a third new college in 2001.

10.20 The projections have been based on the assumption that enrollments in each of the existing teacher training colleges will rise to a ceiling of five to six hundred by 1996. If the enrollments remain at that level, there will be need for the additional colleges noted in 10.19 (c) and (d). But before a final decision is made to develop new institutions, the trade-off between expanding some of the existing colleges to cater for up to 1,000 students and developing new colleges will be examined. Much larger colleges might achieve significant economies of scale. Clearly they would be more cost-effective to equip in terms of a library, laboratories and resource rooms. If properly managed, they should also have a more conducive and exciting academic environment than smaller colleges. But the situation at each college must first be examined with care to ensure that the necessary extensions can be accommodated within its present physical configuration and that it has an adequate source of water. A critical issue if facilities are to be expanded in rural colleges is the local availability of enough primary schools for the conduct of supervised practice teaching. In other words, physical developments must be guided by educational considerations.

10.21 Given that the colleges must be ready for the intake of students two years before there is an output of trained teachers, steps towards the expansion of the colleges must be taken almost at once. These steps will look not only to the mobilization of the necessary physical and financial resources but also to the preparation of the additional staff that the enlargement of the colleges and the increase in their number will entail.

10.22 It needs to be stressed here that the presumptions underlying the projections relating to teacher supply and demand is that all of these teachers are used in primary schools according to the principles enunciated in 7.24 above and in keeping with the norm of one teacher for every two lower primary or one upper primary class. If these norms and principles are not applied in a rigorous manner, the schedule for the production of teachers will result in a shortfall. It is also a basic presupposition that qualified primary teachers are not deployed to teach in the Grade 8 and 9 classes of basic schools. Unless this principle is adhered to, attempts to meet the demands for primary-teachers will fail, as will attempts to raise the quality of primary education.

Student Intake

10.23 The minimum entry requirement to teacher training institutions will continue to be a full School Certificate, with a credit (0-level pass) in mathematics and/or science. In the light of what was stated in paragraph 6.21 above, performance in other languages will be acceptable in place of English, provided overall language performance is satisfactory.

10.24 Decisions on student intake will rest almost entirely with colleges, the autonomy of which will thereby be enhanced. A selection board, normally chaired by the college principal, will be established at each college to make a preliminary selection on the basis of examination results, relevant teaching experience and, as may seem appropriate, interviews. A joint board will be established at the national level to monitor the selection procedures at the colleges, to sort out discrepancies, and to approve the list of successful candidates on the basis of the work of the local boards.

10.25 Untrained teachers who possess the minimum entry qualifications form a valuable source of supply for college entrants, since their teaching experience makes them very suitable subjects for training. There is also some likelihood that their aspirations to a teaching career are more realistic and committed than those of students fresh from secondary schools. For these reasons, college boards will give priority to admitting individuals who have had some teaching experience, even if their formal qualifications are a few points lower than those of school-leavers.

Untrained Teachers

10.26 Zambia's primary schools have always been required to depend heavily on untrained teachers. These constituted an average of 16% of those teaching in primary schools in the early 1980s, but in 1986 the proportion of such teachers was reduced sharply. But their numbers have increased steadily again, and in 1990, out of a total 33,721 teachers working in Grades 1-7, 5,241 or 15.5% had received no teacher training of any kind. The use of untrained teachers is increasing, partly because basic schools are removing trained teachers from the primary sector and partly because there is great unevenness in the distribution and use of trained teachers. This increase in the number and proportion of untrained teachers is not in accordance with policy. Although many of these teachers give evidence of great good will and industry, they have not been trained in the skills needed for teaching young children who are at a critical stage in their educational development. There is evidence that a higher proportion of untrained teachers teach in Grades 1-4 than in Grades 5-7, indicating that it is mostly the very young children who have to make do with the services of such teachers. Because young children are laying the essential basis for all future learning, it is they above all who need the most skilled and qualified teachers. Moreover, untrained teachers are not a cheap alternative source of labor for the schools. Because of the housing allowance to which they are entitled, the take-home pay of many of these teachers may actually be higher than that of their senior, trained colleagues. To stem any further growth in the number of untrained teachers, provincial education officers will approve of their appointment only in situations of clear and proven need and for very limited periods of time. The answer to the real needs of schools for sufficient teachers does not lie in the uncontrolled employment of untrained teachers, but in a more rational use of the trained teachers who are available.

The Supply and Training of Secondary School Teachers

10.27 Policy issues about the duration of the first universal cycle of education and about the location within the educational structure of Grades 8 and 9 need to be settled before any conclusive estimates can be made of the number of teachers that will be needed for secondary schools in the year 2000. These matters will be under review in the immediate future, but for the present it is taken that (a) regardless of the type of school in which they are found Grades 8 and 9 belong to the secondary cycle; and (b) teachers for Grades 8 and 9 will be drawn from those trained in the secondary teachers colleges and not from those trained in the primary teacher training colleges. In keeping with what was said in 8.4 above, it is further assumed that secondary level expansion up to the year 2000 will not exceed the establishment of about 400 new junior secondary and 75 senior secondary streams. This means that there will be a total of some 1850 junior secondary streams (3700 classes) and 550 senior secondary streams (1650 classes) in the year 2000. At the ratio of 1.5 teachers per class this will entail a total of 8,025 secondary teachers. Making additional allowance for specialist teachers and for school headships, the need in the year 2000 is likely to be for about 8,500 teachers. If it is assumed that diploma-holding teachers will teach in Grades 8 and 9, that university graduates will teach in Grades 10 to 12, and that the additional posts are shared equally between diploma-holders and graduates, there will be need in the year 2000 for approximately 5,700 diploma-holders and for 2,800 graduate secondary teachers.

10.28 The attrition rate of secondary school teachers is higher than that of primary school teachers, and the loss of graduate teachers is higher than the loss of non-graduates. The attrition rate of diploma-holders stood at about 5% in the early 1980s, but it has increased since then and now stands at about 7.5%. The loss of university graduates has also risen in recent years, rising from an annual average of about 10% in

the early 1980s to at least 12.5% by the end of the decade. The output from the training institutions is quite steady, being about 500 diploma-holders and 180 graduates annually. At these rates of attrition and supply, the number of teachers in the year 2000 is likely to be 5,780 diploma-holders and 1,370 university graduates (Table 11). It is clear that the current output of diploma-holders will be sufficient to meet the projected needs, though only just. If Grades 8 and 9 are expanded more rapidly than is envisaged here, or if the attrition rate for diploma-holders increases, or if the annual output of diploma-holders decreases, then there could be a shortfall of diploma-holding teachers by the end of the decade.

10.29 Of greater concern is the very large prospective shortfall in the number of graduate teachers. The principal factor contributing to this shortfall is the high rate of graduate loss. Graduate secondary school teachers, trained at great public expense at the University of Zambia, either do not all take up teaching upon completion of their studies or subsequently leave teaching in substantial numbers. In the more than twenty years of its existence the School of

TABLE 11: Supply and Demand for Secondary School Teachers in the Year 2000.

	No. in Post in 1988	Annual Rate of Attrition	Annual Output from Training Institutions	Projections for the Year 2000	
				Supply	Demand
Diploma-Holders	4,225	7.5%	500	5,780	5,700
University Graduates	1,053	12.5%	180	1,370	2,800

Education at UNZA has graduated almost 3,000 teachers, but only about 1,000 of these are actually serving in the secondary schools. Some others are, of course, serving in other areas of the education sector, as lecturers, professionals of various kinds, and administrators, but this does not change the fact that the proportion who continue to teach in the secondary schools remains low. The principal reasons for this loss of graduate teachers are the education scale salaries for graduates and the general conditions of service. A more generous remuneration scheme would make it more attractive for university graduates to remain in teaching; less marketability for education degrees might compel them to do so. A point that needs immediate attention is the strange anomaly that by transferring to another sector of government service, graduate teachers receive professional allowances that make their total emoluments larger than if they had remained in teaching. This entices graduates to leave teaching for other public sector areas of employment. They are also enticed to leave teaching by the better salaries and conditions of service they can obtain elsewhere in Zambia and in neighboring countries.

10.30 The result is that the considerable resources invested in the university training of graduate teachers are not having the desired effect of increasing the supply of such teachers in the schools, improving the quality of student learning, and reducing the dependency on expatriate teachers. These latter still constitute about one-third of the total number of graduates in secondary schools. This situation is likely to continue, or even to get worse, unless bold and imaginative steps are taken to make teaching in Zambian schools attractive for Zambian graduates. Although increases in the salaries of graduates would have long-term implications for the running costs of secondary schools, a considerable proportion of the increased costs would be offset by the reduced need for expatriate teachers. Bearing this in mind, MOE will initiate a full-scale review of the remuneration for graduate teachers with a view to:

- (a) removing the anomaly that allows teachers to be better paid if they transfer to another part of government service; and
- (b) improving the attractiveness of a teaching career in relation to other areas of employment in Zambia.

10.31 Even if these efforts to improve salaries and retain the services of graduate teachers prove successful, there will still be a considerable shortfall of such teachers in the year 2000. This becomes more apparent by considering what the situation would be in the unlikely event of the wastage rate falling as low as 5% a year: in that case the supply of graduates would be only 2,250 against a demand of 2,800, so that there would still be a shortage. This means that strategies directed at retaining a larger proportion of graduates must be accompanied by strategies directed at increasing the supply quite considerably above what the School of Education at UNZA is presently producing. It would be a mistake to ask UNZA to increase its output beyond the present level, partly because the university production of graduate teachers is very costly, partly because the School of Education must devote more of its resources to the other education and training needs of the education ministries, and partly because such a high degree of wastage has been experienced with UNZA graduates. But another way to increase the supply of graduates would be to develop, in association with UNZA, the existing teachers' colleges so that they can offer education degree programmes. This would be a major undertaking and would require extensive investment in the infrastructure of the colleges, in the improvement of their teaching facilities and libraries, and in the upgrading of their staff. Such a development would also have serious implications for the production of diploma-holding teachers since, if the training

at Nkrumah or Copperbelt Teachers' College were to be extended to three or four years for degree purposes, there would be a reduction in the output of diploma-holding teachers. But, as was seen above, any such reduction would lead to a shortfall of diploma teachers in the year 2000. It must be recognized, therefore, that developing one or more of the teachers' colleges into constituent colleges of UNZA, empowered to offer all or part of preservice degree programmes for secondary school teachers, would necessitate the development of additional facilities so that the supply of teachers from the two-year diploma programme was maintained. These facilities could be provided at the colleges themselves or at a new location. One possibility for the latter is the National Inservice Training College at Chalimbana, which could transfer its inservice functions to the teacher training colleges and be converted into a secondary teachers' college.

10.32 This discussion demonstrates that there is urgent need for a comprehensive review of all aspects of the training programmes for secondary school teachers. The three major issues such a review should address are:

- (a) what balance should be struck between graduate and non-graduate training and what school grades should each category be trained to teach? There would be greater flexibility in the deployment of teachers if both groups could teach across the board, from Grade 8 to Grade 12.
- (b) what should be the duration of pre-service training for a secondary school teacher? The current diploma programme lasts two years, the UNZA degree programme four years. Diploma holders who subsequently embark on a degree programme may spend a further three years obtaining an education degree, and thus they spend a total of five years being trained to graduate level. In general, the education grounds for extending preservice training to three years are better established for secondary teachers than for primary teachers.
- (c) what steps can be taken to increase the number of well-qualified mathematics and science teachers in schools? These have always been at a premium and it is proving difficult even to recruit expatriates in the numbers required. The retention of Zambian teachers of these subjects is one problem. Their production is another. The need for aspiring science teachers at UNZA to meet the requirements of the School of Natural Sciences has greatly reduced the potential of the University to produce graduate teachers of science and mathematics. There is even the situation where a diploma-holding mathematics or science teacher may not be eligible for studies leading to a science teacher's degree and hence may opt for re-training in arts subjects. There is need to examine whether the School of Education should be enabled to offer core mathematics and science courses for student teachers (with the implication this has for university staffing). An earlier proposal to develop a purpose-designed science teachers college close enough to UNZA to be able to use some of its facilities also merits further consideration. Related to this is the question of the future of the Copperbelt Secondary Teachers College. Because of the poor physical state of the College and the questionable

geological formation of the area where it is situated, there may be need for it to be re-located if it is to continue with its present science-based programmes for secondary teachers.

10.33 The success of this review will depend on the participation of all the involved parties: MOE, the teachers' colleges, the School of Education and other sectors of UNZA, the teachers' union, and practicing teachers. Because of the long lead time in developing facilities and preparing teachers, the commencement of this review is a matter of considerable urgency. Hence MOE will set it in motion at once. Until the review has been undertaken it will not be possible to indicate the nature of the assistance that may be required from the donor community. But in the interests of promoting the quality of secondary provision, of strengthening the teaching of mathematics and science, and of ensuring minimal secondary expansion, it is trusted that the donor community will provide generous support for whatever developments may be needed to improve the preparation of teachers for the secondary schools.

CHAPTER 11

THE ORGANIZATION AND MANAGEMENT OF THE EDUCATION SECTOR

11.1 The effective delivery of public educational services depends to a large degree on the suitability of the management structures for the education sector, the efficiency of the procedures employed, and the competence of the managerial staff. This dependence is accentuated when the sector suffers from the stress of financial constraints that impose on management the need to economize, improvise and adjust the level of educational services, but without detriment to their quality. It is further aggravated when the education system itself is not fully developed but must grow at a steady rate in response to population pressures. These two features are operative in Zambia where, despite the dedicated efforts of administrators, education sector management betrays a number of weaknesses that obstruct the effective delivery of educational services.

Structural Re-organization

11.2 One such weakness is the structure of the education ministries themselves. Notwithstanding the establishment in 1982 of a second education ministry, organizational development has followed a more or less linear pattern since 1964, with no comprehensive reorganizations taking place to enable the ministries to deal with their steadily increasing responsibilities. The extent of these responsibilities was one of the factors that prompted the establishment of a second ministry in 1982, but any benefits this development may have brought were offset by extending the responsibilities of the ministry for general education to other areas such as youth, child affairs and sport. The recent reorganization of responsibilities for primary and secondary schools, teacher training and university education into a single ministry should facilitate the more cohesive development of educational policies, promote better planning, and provide a more rational framework for budget preparation and for the translation of policy decisions into budgetary measures.

11.3 The World Bank Policy Study on Education in Sub-Saharan Africa observed that:

"administrative and logistical infrastructures originally created for systems of quite limited size cannot cope with the vastly expanded structures of today" (p. 81).

This is very true of Zambia. The need today is for an administrative structure that is more appropriate to managing the diverse sub-sectors in their present size and that will promote their rational development in accordance with nationally adopted objectives. This implies quite a fundamental reorganization of MOE into professional departments (e.g. for general, teacher, higher and non-formal education, and for planning, research, information and analysis), each headed by a Director fully answerable for his department and empowered to make decisions. In order to promote the decentralization of educational administration and to foster the development of policy initiatives at lower levels, the departments at the national level would in some cases have counterparts at the provincial and district levels. Care will be taken, however, to avoid creating a structure that is so large and complex that it would not function effectively and in a cost-efficient manner.

11.4 In the light of what has been said, an in-depth review will be undertaken with the help of management consultants, if need be, of the structure and organization of MOE, from

headquarters down to institutional level. The findings of this review will indicate the form the reorganization should take.

11.5 But structural re-adjustments of themselves will not answer all the problems of education sector management in Zambia. Measures must also be taken to loosen up the highly centralized, control-oriented authority structure and to strengthen managerial capacity, especially at the intermediate level. One of the features that characterizes the Zambian management system is the high degree of centralization it exhibits. This is not in keeping with stated government policy. It also has a number of inherent drawbacks: the inability of higher level administrators to deal in a timely fashion with the sheer volume of management issues directed to them from lower levels; administrators physically and psychologically more remote from those affected by their decisions, and hence less well informed on issues and less capable of appreciating the real situation; long delays in responding to problems because of poor and uncertain systems of communication; the marginalization of the community and other local participants in educational decision-making; administrative concern with control, stability and uniformity rather than with service or fostering innovations. The result may be either a virtual paralysis of the system, where those at lower levels will take no action until it has been approved from above, or a simple disregard of a requirement to refer a matter to a higher authority. The first approach has given rise to crises in schools when managers at the institutional or district level hesitated to take timely and decisive action on their own initiatives. The second approach has contributed, among other things, to much of the chaos attending the development of basic schools, with the ministry being presented in many instance with a *fait accompli*.

11.6 Many of these problems arise because, in addition to difficulties due to excessive centralization, middle-level managers have not had adequate training or experience. Neither are they always clear on the extent of their responsibilities. In this situation, they are reluctant to make decisions which lie within their competence and to take responsibility for these decisions. Their lack of training may show itself in an evaluation of an issue that is too superficial to serve as a basis for decision-making. At the same time it must be acknowledged that their decisions do not always receive the backing of their superiors, while some superior officers are reluctant to entrust much decision-making authority to their subordinates as this seems to lessen their control of certain ministry operations.

11.7 The result is that the higher levels of the administration are often clogged up with routine administrative matters that should have been dealt with lower down. Because they must attend to so much procedural and essentially petty decision-making, the Permanent Secretary and other senior officers are prevented from giving attention to their principal functions of broad policy planning, considering implementation strategies, monitoring the consequences of policy implementation, and adjusting policy in the light of its evaluated impact. The centralization of decision-making and the weakness of the intermediate managerial structure lead, therefore, not only to slow, cumbersome and sometimes insensitive processes, but also to radical inefficiencies in that major policy and strategic issues may be given no more than perfunctory consideration.

11.8 Two measures will be taken to remedy this situation. One is that more authority will be delegated to the intermediate and lower levels of the system. Responsibility and decision-making powers will be transferred in increasing measure to school heads, district education officers and provincial education officers. The extent of this delegation will be determined at the time of the review of the structure and organization of MOE. As officers in the field grow more accustomed to taking a large measure of responsibility for the financial, staffing and other affairs of their institutions

or areas, further responsibility will be delegated to them. As an illustration of the type of authority that would rest with lower level managers, issues like school and teacher discipline will henceforth be dealt with at the institutional or local level, being brought to the notice of the central administration in only the most exceptional circumstances.

11.9 The second measure is that in addition to the training for primary school heads already described, training schemes will be put in place for secondary school heads and their deputies and for district education officers. Because of the limitation of resources, the needs of secondary school personnel can be met only through short courses, seminars, workshops and instructional materials. The participation of the Heads of Secondary Schools Association will be invited in mounting these programmes and designing the materials. Donor support will also be sought for the support of workshops and the production of materials. The concentration will be on the heads of regular secondary schools, which are more complex to administer and represent a larger national investment than basic schools.

11.10 A more structured programme is needed for education officers, whose responsibility now encompasses the teachers' colleges and secondary schools, as well as the primary schools, in their districts. The University of Zambia School of Education will be requested to provide a special programme in educational administration for these officers. The programme would have certain areas in common with that proposed above for school inspectors, but whereas the focus would be on school and general administration and on curriculum issues, for this group more attention would be given to the former. It is hoped that this programme might dovetail with that for inspectors in such a way that education officers and inspectors could attend the university on a rotational basis for part of each academic year. It has already been observed that the School of Education may need technical assistance (specialists in educational management and curriculum) and logistical support if it is to mount these programmes.

Decentralized Control of Funds

11.11 The greater part of the funds approved for schools, colleges and educational purposes in a province are disbursed through the provincial accounting office which receives the allocations for all ministries in a province. It has been found that this system, which has been in operation for a few years, does not work well. Funds approved for a specific purpose, such as for examination expenses or for a SHAPE training programme, are not readily available at the time they are needed. Difficulties have even been experienced in obtaining the release from the provincial accounting office of donor funds earmarked for particular activities. Efforts to improve education, by designating funds for spending at the provincial level on educational materials, in-service training, and rehabilitation and maintenance, are not likely to be successful if the present arrangements continue. The educational sector must have quick and assured access to the funds approved for its varied activities. The whole arrangement whereby funds for spending at provincial levels are channelled through provincial accounting offices deserves to be reviewed. Meantime, all resources, local and foreign, for educational purposes will be channelled through ministry headquarters which will disburse them directly to provincial education officers, to principals of higher institutions, to secondary school heads in approved cases, and to district education officers on behalf of primary schools.

Educational Planning and Policy Analysis

11.12 MOE is also experiencing serious problems at the level of educational planning. Most of the planning being undertaken consists in simple linear forecasting of the facilities, resources and personnel needed for an expanding system, but little is done to analyze the sector as a whole. There is

a lack of comprehensive, reliable and up-to-date data and such data as are available remain unanalyzed (and often unutilized) except at the most elementary level. The ministry does not have the resources to conduct systematic research on many aspects of the education system that need investigation. At a broader level, analytic capacity within the ministry is meager. Structures are not in place to provide senior officers with information for formulating policies and strategies, identifying weaknesses in the education system and setting priorities among policy options for overcoming them. The most comprehensive knowledge of the situation, trends and strategies in the sector is often generated by donor agencies, but not by MOE itself. All too frequently, the identification of problems affecting the development of education and the raising of policy options that could make the delivery of education more effective and efficient also originates with donor agencies. Almost inevitably, this constrains the autonomy of MOE in establishing its own educational priorities, especially when it depends so heavily on the agencies for a large proportion of its operational expenditures. To remedy this unsatisfactory situation, measures will be taken to:

- (a) strengthen and review the information base needed for routine management of the system and for the development of education policies;
- (b) strengthen the policy-making process and facilitate the identification of priorities; and
- (c) improve planning capabilities at all levels.

11.13 Comprehensive information on a system is at the heart of good management. It is also a vital ingredient in establishing the context for the evaluation of alternative policies. The quantitative and qualitative data required both for sector management and for policy work must come from a wide variety of sources. Much, of a statistical nature, is gathered on a routine basis by the planning unit. But much must also be culled from other sources within the education sector - salary data, examination results, educational materials production, capital outlays, donor investments, etc. Further data relevant to good management and to policy formulation are found in documents from other sectors of government, in consultants' reports, research reports and the reports of aid agencies. The richer the data, the deeper the policy analysis is likely to be and the greater the likelihood that management decisions will be well founded. Maintaining a data bank that will provide a digest of this information, whether for policy or management purposes, should be a central task of a planning and research unit.

11.14 As was stated when dealing with teacher morale, it is intended to activate the teacher management information system developed in conjunction with the Commonwealth Secretariat. Assistance will also be sought to put in place within the planning unit a more comprehensive Education Management Information System (MIS), covering school facilities, enrollments, supplies, etc, that would improve the reliability of education information and the speed with which it becomes available. But a MIS is only as good as its underlying data. Hence attention will be given to the improvement of data collection and to its regular checking for reliability. This will necessitate the re-instatement of the post of planning officer at provincial level, discontinued since 1986. Without the assistance of this intermediate group, who will need training in gathering and aggregating data and familiarization with broader issues in educational development, the planning unit will not have the capacity to collect, process and disseminate data in a timely fashion. The abolition of these posts has seriously compromised the unit's work as evidenced by the fact that 1986 is the latest year for which educational statistics were published and that the 1990 enrollment data for secondary schools are not yet available. A commitment to staff the planning unit properly, at central and provincial levels, will require financial resources, but this expense will be justified by the promise of greater efficiency in a

system that is managed and developed on the basis of sound information.

11.15 Formulating policy and defining priorities are among the chief tasks of the senior education administrator. Clearly this work must be undertaken in the context of comprehensive and accurate knowledge of the present state of the education system and of the sub-sector that is of immediate interest. But that is not sufficient. Decision-makers need to be helped by having before them a menu of possible alternatives, each appraised with regard to social and financial costs and benefits. For this they need expert advice, both the advice that can be obtained from a group of colleagues established to consider a policy issue and that generated by an analytic study of the issue in question. Here also the planning unit lacks the capacity to meet the ministry's needs. So far there has been little success in building up a cadre of competent and experienced educational planners with the ability to conduct searching analyses of the education sector, to assess the implications of past and current developments, and to propose a range of well-documented policy options for the consideration of decision-makers. Although individuals have been trained at the IIEP and at the University of London School of Education, few have remained with the planning unit for sufficient time to build institutional capacity and traditions of sector analysis. While training will always remain of critical importance for this unit, it appears to be equally important (a) to place this training within the framework of a well-designed programme for career improvement; (b) to reverse the marginalization from which the planning unit has suffered in recent years and to incorporate it more systematically in the process of policy generation; and (c) to support the unit with the resources needed for its work. MOE will address itself to these issues and will also seek the expansion of the establishment of the unit to allow for the appointment of professionals in such areas as the economics of education. This would make it possible for the unit to undertake action-oriented research and to break away from its present preoccupation with quantitative developments. It would also make it possible for the unit to become a source of ideas about educational change and innovations. While local personnel are undergoing training in the economics of education and other planning-related areas, technical assistance will be needed so that the planning unit returns to centre stage within the ministry as quickly as possible.

11.16 A fruitful relationship of mutual cooperation has existed between MOE and the UNZA School of Education since the latter was established towards the end of 1965. There has been some movement of staff in both directions and MOE has supported higher level training of UNZA staff in educational planning. It should be possible to exploit this relationship even further, especially since the University has established a Department of Educational Administration and Policy Studies to respond to national needs in these areas. Possibilities include the participation of suitably qualified ministry staff as honorary or part-time tutors in appropriate university courses; involvement of ministry personnel in the design of programmes destined to meet ministry training needs; conduct of small-scale action research for the planning unit by postgraduate or senior students; joint participation in mounting seminars, workshops and training programmes (such as the one proposed below); free access to each other's data bank; common participation in workshops for the development of the MIS; commissioning of UNZA staff to conduct large-scale research or in-depth analyses. MOE will consider establishing a permanent mechanism, in conjunction with the School of Education, that will facilitate this closer cooperation between the two bodies. But care will be taken that this strengthening of relationships does not compromise the academic freedom of university staff nor detract from their right to adopt independent and possibly critical approaches to ministry policies and strategies.

11.17 From 1985 to 1988 SIDA support enabled the planning unit with UNZA and the University of Stockholm, to conduct university level planning courses for senior education officials. It would be desirable that similar courses be mounted on a regular basis in the period ahead, but with

the focus on broad issues affecting educational development. Much of the material presented at the March 1991 National Conference on Education For All is pertinent to the work of provincial education officers and regional inspectors, as also are the contents of the present Report. Time is needed for these materials to be assimilated and fully discussed. There is sufficient expertise within Zambia, in MOE and at UNZA, to mount seminars, workshops and training courses in these areas, but there would be need for donor involvement in providing logistical and financial support. The participation of high level education officials in studying the contents of this Report and other analyses of the education sector should contribute significantly to success in implementing the measures that are adopted.

11.18 The 1986 ERIP Report drew attention to the fact that despite the abundance of literature there is no single central source where one will find comprehensive information on education in Zambia and suggested the establishment of a central library that would be a depository for every consultancy report on education in Zambia and for relevant documentation from local and international agencies. The need for such a documentation centre persists. Numerous studies have been undertaken on education in Zambia, but they are not always readily accessible and there is no system for keeping the chief users of information on education up-to-date on recent work or for providing them with a digest of contents. The establishment of an educational documentation centre will be part of the programme to develop a more effective planning, research and information capacity within MOE. The participation of the Zambia Library Services, of the UNZA Library and of the Department of Library Studies in the School of Education will be sought in determining the most suitable location for this centre, how it should operate, and how best it could disseminate information about its holdings. Because of its specialist nature, resources for the running of this documentation centre should come in part from user charges.

CHAPTER 12

PARTICIPATION OF COMMUNITIES AND THE PRIVATE SECTOR

12.1 For various reasons governments have tended to dominate the provision of education. This has been particularly so in developing countries. In 1980, 84% of the primary school students in Sub-Saharan Africa and 80% of the secondary students were in state or public schools. This state dominance has also been reflected in the financing of education, with almost all of the direct costs in state schools being met from public funds.

12.2 In Zambia, the chief providers and managers of education in 1964 were voluntary agencies and local authorities. But after independence, the Government adopted a centralized system of control and management of schools and consequently it took over most of the institutions that had been run by non-governmental bodies. The main argument in favor of this removal of responsibility from the community was forcibly expressed in the 1976 Draft Statement on Educational Reform: "It is a fundamental principle of Humanist socialism that the State is responsible for the provision of education for its citizens" (p. 28). It was feared that allowing the private sector to play a role in the provision of this strategic social service would lead to the entrenchment of privileges for the wealthy and to the marginalization of the poor in terms of access to school facilities. The perceived weakness in the administrative structures of local authorities was a further reason for the reduction of their role as providers of education. By 1989, the concentration of responsibility for school education in the hands of the Government had reached the extent that out of 3,493 primary schools only 44 were privately owned (and a further 18 were grant-aided), while out of 430 secondary schools only 47 were privately owned (and a further 35 were grant aided).

Justification for Community Participation

12.3 There are several good reasons for establishing a hospitable environment for enhanced community participation in the provision and management of education. First, the ongoing difficulty of providing enough public funds for education has precipitated a serious crisis in the state-dominated education sector. As was seen in Chapter 2 above, resource allocations to education have been drastically reduced in recent years, with the gravest qualitative and quantitative consequences for primary and secondary schools. These constraints on public financing have necessitated increasing involvement of the community and users of educational services in funding the system.

12.4 But even if economic constraints were not an issue, experience world-wide has shown that there is much to commend the involvement of non-governmental agencies in the financing and management of education. Community participation is not just an emergency stop-gap measure in times of financial difficulty. It is a preferred alternative in its own right. This is because the first responsibility for the education of a child rests with the parents who conferred life on that child and, by extension, with the community of which the family is a part. Moreover, users and locally based agencies that work closely with communities are in many ways best placed to manage educational services. Users tend to respond promptly and positively to school problems if they perceive themselves as closely involved with the running of the school. On the other hand, a highly centralized system, that effectively marginalizes the community's involvement in school management, contributes in a country like Zambia to poor functioning and a low level of efficiency:

"...in countries with long distances between individual schools and the centre; great ethnic and linguistic diversity; and relatively poorly developed systems of transport and communication, rigid centralization blocks resource and information flows and leads to inefficient and ineffective operation of the system" (Improving Primary Education in Developing Countries. M.E. Lockheed & A.M. Verspoor. World Bank 1990, p.65).

These words could well have been written about Zambia.

Government Initiatives Towards Community Involvement

12.5 In recent years there has been a clearer recognition by the Government that other participants have a legitimate role in the provision of education. The clearest statements of this have appeared in the Interim National Development Plan (1987) where it is stated that PTAs should be transformed into cooperatives that

"will assume full responsibility for the school where they are located in recognition of their contribution to the cost of running the school".

Even stronger is the Plan's statement that

"the responsibility for the education of children rests primarily with the parents and it is they who must ultimately provide the necessary resources for educational services, through their involvement with district councils which will have responsibility for managing and financing primary schools and through their payment of special district council levies for educational purposes."

The proposal to establish these special educational levies has not yet come to anything, but for the first time there is unequivocal recognition of community and parental responsibility. What is evident from these statements, however, is that community involvement is perceived principally in the context of cost-sharing, with the community shouldering some of the expenses previously absorbed by the Government. There is as yet no recognition of the importance of participation at other levels. Consequently local communities are still marginalized at the level of policy-making, planning and curriculum development. As a result they generally look on schools as the property and responsibility of the Government, an attitude that has clear implications in terms of accountability for maintaining the schools property and assets in good condition.

Enhancing Community Involvement in Education

12.6 The World Declaration on Education For All spoke of the need for an expanded vision that surpasses present institutional structures and that encompasses, among other things, universalizing access and strengthening partnerships. It also stated that genuine partnerships, in particular between government and all other bodies, are at the heart of this expanded vision and renewed commitment to serving the basic learning needs of all. These aspirations of the Declaration draw attention to the two ways in which education is democratized: by giving more education to more people, and by involving more people in the development of educational policies and in the provision of education.

"Ensuring that people will be able fully to exercise their democratic rights in education also means guaranteeing their right to participate in the management of their educational establishment and in the definition of its policies" (Learning to Be, The Faure Report: UNESCO, 1972, p. 78).

12.7 Democratizing educational provision in Zambia necessitates that MOE interacts with communities before it sets the major developmental parameters of education so that from the outset those who are to benefit are involved in shaping the programme. This implies community participation in such areas as fixing educational policies and objectives, deciding about the location and type of school and how it is to be financed, determining the broad outline of the curriculum, assigning maintenance and upkeep responsibilities, and accommodating teachers. When new developments are in question, this process of ongoing dialogue should be put in place at a very early stage. Where the management of existing facilities is concerned, the representative School Management Board proposed below would provide a framework for active and purposeful community participation in education.

12.8 Whatever structures may be adopted the essential thing is to encourage communities to feel that the school belongs to them and that they have a right and duty to be involved in all that concerns it. The task of education belongs primarily to the parents and the community. What goes on in the school is being done on their behalf. Hence, they should be enabled and encouraged to learn as much as possible about school affairs, to be involved in the actual work of education, and to participate broadly in all that affects the school. MOE officials must constantly reaffirm that the school belongs to the community and not to the ministry. Teachers must learn to recognize that the school is not theirs but belongs to parents and the community, and hence they must welcome the interest and participation of community members in school affairs.

12.9 To promote this vision of its integration into the community, the school should draw on the skills and resources available in the community for its educational activities -- for instance, by calling on traditional story-tellers for classes in the local language, by using local skills in the teaching of crafts, or by having local experts treat of activities that are important for the economic life of the community:

"....there should be readiness to call upon qualified members of the community to provide instruction in their areas of expertise, such as in various crafts, in cultural expressions, and in the development of various practical skills, and to undertake supervisory duties that would free teachers to attend to other activities directed towards learning" (Zambia Declaration on Education For All, Art. III, 4).

Equally, since it is a community asset, the school should make its skills and resources available to the community through various services teachers and students can render, especially to illiterate, old or enfeebled individuals; through promoting sporting and other leisure activities for the well-being of the community; through making school facilities available for community activities. The school's greatest service could be to work with the community for the reduction of illiteracy and to help consolidate the reading, writing and numeracy skills of those who have only recently acquired them. Communities that benefit in these or other ways from the infrastructure and amenities of a school are likely to identify closely with the school, taking pride in its maintenance and willingly participating in its management.

12.10 At present communities and parents show great interest in school examinations, to the extent that the quality of the school and its teachers is often judged by student performance in selection examinations. There is need to extend the scope of this community interest in evaluating the professional work of the school. This could be done by giving the community access to the sections of inspectors' reports that deal with the general teaching quality, teaching resources and other academic issues in the school. These reports bring forward points that are of great moment to parents, since the school is acting on their behalf in educating their children. Inspectors' reports may also contain points that require parental action, such as ensuring that children are in attendance, that they avoid late-coming, or that they have had a sustaining meal before coming to school. But because of the secrecy with which such reports are treated, parents may not be informed about these matters. Parents who are given access to the contents of inspectors' reports could also monitor that the recommendations were being implemented. This sharing of professional knowledge might also stimulate more parents to show greater interest in the substance of the school's teaching work and in the progress being made by their own children. Where parental interest and encouragement extend beyond such external aspects as building new classrooms or promoting school attendance and touch the substance of what the child is learning, the child is likely to make better progress and the parent is likely to feel more involved with all that the school sets out to accomplish.

School Management Boards

12.11 The transformation of PTAs into cooperatives, referred to in the 1987 INDP, is intended to facilitate the transfer of school ownership to the community. The community would then assume responsibility for the management, staffing, assets and conduct of the school, but with inputs such as teachers, the general curriculum framework, some educational materials, and school supervision still coming from the ministry. This development will promote a sense of accountability within the community for the preservation and maintenance of the school. But even further development is needed. Ideally, each school should have its own School Management Board, answerable to its PTA, that would have power to engage staff and determine the budget for the school. The participation of the PTA in the appointment of the school head and other senior school personnel, proposed in Chapter 9 above, would be a first step in this direction. MOE will bring this process further by undertaking a comprehensive study of the legislative and administrative measures needed to bring a School Management Board system into operation and of the many far-reaching implications such a system would have for educational provision. It will examine experience elsewhere with such arrangements and will take steps to work closely with communities that appear willing and able to take over the running of what would in effect be community schools. While the community would provide and manage such a school, quality control, school supervision and school inspection would remain the responsibility of the ministry.

12.12 Arrangements along these lines would go a long way towards meeting the calls at the National Conference on Education For All for more effective community participation in the provision of education. Further, in response to the Zambia Declaration on Education For All, MOE will consider establishing a broadly based coordinating body that would determine how best to promote the alliance between the Government and the community in the provision of education.

Community Financing of Schools

12.13 The involvement of the community in the planning and management of its own school accentuates its participation in all the activities of the school. The area of school financing is no exception. Experience elsewhere demonstrates that there is a strong positive correlation between the direct involvement of parents in the activities of schools and their willingness to contribute financially to these schools. In Zambia, community willingness to provide the infrastructure for schools has been convincingly demonstrated by the rapid establishment of basic schools. While it is true that many of these developments have been poorly conceived and have been executed in an unplanned manner, the point at issue here is the readiness of the community to take action in what it perceives to be a crisis situation. This preparedness of communities, despite limited resources, to support school development needs to be more systematically tapped. Communities are not aware of "what it takes" to run schools; neither are they clear on the recurrent cost implications of any new developments. There is clear need for community education on its wider responsibilities for the maintenance of school facilities, for the provision of teaching materials, and even for the payment of teachers' salaries in the case of schools or developments that cannot be accommodated within public resources. MOE will formulate clear guidelines for communities on these matters. It will also take steps to educate communities on how to maintain their schools, through the production and dissemination of the maintenance manual spoken of in Chapter 4 above.

Private Schools

12.14 Up to quite recently the principle of private provision of education was accepted in Zambia only with reservations. In education, as in other areas of the economy, the role of the private sector was viewed with some misgivings, mainly on socialist grounds. Educational Reform grudgingly agreed to the continuation of private schools run as profit-making ventures, but noted that the ultimate goal was state provision of education for everyone when resources for this were adequate. The private sector was allowed to play a role in the provision of education because thereby it would relieve the Government of some of its financial and other responsibilities. This thinking is still reflected in recent policy statements. Thus the Policy Framework Paper (PFP, 1989) speaks of non-government schools as supplementing the public sector services by caring for individuals with paying capacity, thereby allowing the public sector to allocate more resources for the poorer sections of the population.

12.15 It was not until the National Conference on Education For All (March 1991) that private schools were seen as a form of community participation in the provision of education and hence as worthy of promotion on this basis, apart from any role they might have in resource mobilization. Further grounds for accentuating the importance of private schools is the recent evidence from a number of developing countries that students in private schools do better than those in state schools on achievement tests and that the unit costs in private schools are less than those in state schools. In other words, private schools have been found to promote student learning more efficiently than state schools. This may be because private schools are accountable to parents and must meet all their costs from the fees paid by parents. In consequence, they have strong incentives to adopt effective teaching practices and to use staff and materials economically.

12.16 While the principle of private provision of education, whether on a profit or non-profit making basis, is now accepted in Zambia, the private sector still does not make a large

contribution to the education system. At the primary level, strictly private schools (i.e. not including grant-aided schools) account for less than 1% of the enrollment. Their contribution at the secondary level is larger, accounting for about 7.5% of the total school enrollment. In 1989 there were 44 registered private primary schools and 47 secondary schools. To these must be added an undetermined number of unregistered schools that operate illegally, especially at the secondary level. It should be observed that the enrollments in private schools include all students, regardless of their nationality. Because the majority of expatriate children attend private schools, the number of Zambian children attending such schools is considerably smaller than the gross enrollments.

12.17 Although the number of private schools has increased during the past decade, an enabling environment for the sustained growth of private schools in educational provision has yet to be created. The FNDP stated that "the development of private schools will be encouraged", but there are several signs of clear constraints on such developments. These include (a) the very high standards that MOE demands of private schools, without corresponding standards being required in government schools; (b) the government control of fees charged in private schools; and (c) the absence of explicit government incentives for the development and running of private schools. Although the PFP stated that the Government would deregulate charges and fees in non-government schools (p.10), this policy has not yet been implemented. The PFP also spoke about reviewing current regulations and measures governing the establishment of private educational facilities (p.16), but this review has yet to be conducted.

12.18 Private schools have the potential to make a significant contribution towards improving access to education. Because of their greater accountability to parents, and hence their greater responsiveness to market forces, they have the inherent potential to provide quality education and to be efficient promoters of student learning. But because they tend to be concentrated in areas of high population density, where students can easily reach the school from their homes, they are more likely to develop in urban than in rural areas. Clearly, they can cater only for those who can afford the fees they must charge. Entry to private schools is more a function of ability to pay than of proven academic ability in entrance or selection examinations. In many instances, the private school provides a second chance for children from well-off families who have failed to be selected into the less costly government and aided schools. This highlights the third characteristic of private schools, that their potential for increasing access to education lies more at the secondary than at the primary level. The enrollment figures show this very clearly.

12.19 With a view to capitalizing on this potential, MOE will take the following measures:

- (a) in keeping with the policies enunciated in the PFP, charges and fees in private schools will be deregulated and measures governing the establishment of such schools will be reviewed with a view to streamlining the registration process and facilitating the involvement of the private sector in the provision of education;
- (b) a mechanism will be devised for providing limited financial support to private schools that conform to certain standards. The nature of this support will be flexible, but it could include a capital grant towards the

development of physical infrastructure, capital grants for educational materials, or a subsidy towards teachers' salaries;

- (c) local councils will support the development of private schools by providing land for their establishment in appropriate locations and by exempting registered schools from the payment of rates;
- (d) private schools will be enabled to benefit from measures directed at the enhancement of quality. For instance, they will be given the back-up of school inspections and when feedback information for schools becomes available from the reformed examination system, private schools will also have the benefit of this information. Where circumstances allow, their teaching staff will be allowed to participate in ministry-organized in-service training programmes;
- (e) private schools will be integrated more closely into the entire education system, in the same way as other community participants, through representation on appropriate planning, curriculum development, and other bodies.

CHAPTER 13

NONFORMAL EDUCATION

The Department of Continuing Education

13.1 An important feature of nonformal education lies in its potential to provide basic education to those who have been bypassed by the formal school system or have left it too early to have acquired the communication and life skills necessary for a satisfying and productive life. MOE provides these second-chance educational opportunities through the Department of Continuing Education. The Department offers four main programmes: distance education for directly enrolled students; open secondary schools for Grade 7 school-leavers; evening classes; and schools for continuing education. The first three of these programmes depend heavily on the National Correspondence College for the materials used in their work. The enrollment data in Table 12 show that although the numbers participating in three of the Department's programmes are sizeable, they remain small relative to the large numbers who would wish to avail of this second chance to enter the formal education system.

TABLE 12: Enrollments in Department of Continuing Education Programmes

<u>Programme</u>		<u>Enrollment</u>
Distance Education:	Junior Secondary	32,795 (1991)
	GCE O-level	21,202 (1991)
Open Secondary Schools:	Total Enrollment	16,520 (1991)
Evening Classes:	Total Enrollment	10,356 (1990)
Schools for Continuing Education:	Total Enrollment	1,174 (1990)

13.2 The schools for continuing education offer a wide range of skills training courses, such as carpentry and joinery, machine carpentry, food and fashion, tanning and leather work, and metal work. Commercial subjects are also offered at various schools. As can be seen from the enrollment data, the number of participants is small relative to the importance of the courses offered in these schools. All of the other programmes run by the Department are formal equivalency courses designed to give second-chance educational opportunities to those whose schooling ended early and, where appropriate, to allow them to re-enter the main stream of formal educational provision. Almost all of the provision is at the secondary level. There is some primary level teaching in evening classes, but for a very small proportion of the enrollment and mostly for prison inmates.

13.3 The problems attending nonformal education have been set out in the Report of the National Conference on Education For All as "poor coordination, under-funding, inadequate curriculum development, lack of suitable teaching materials, and lack of training among the nonformal education instructors" (p.14). To these must be added the poor state of information about the organizations that offer nonformal programmes, about the programmes themselves, the

clientele being reached and the funding involved. MOE has always acknowledged the importance of the nonformal approach, but given the diffuse and ill-defined nature of nonformal education, the limitless possibilities in this area, the lack of information on the effectiveness of programmes, and the universally acknowledged limitation on resources, the time does not seem ripe for extending further the activities of the Department of Continuing Education. Moreover, the ministry's competence lies in the field of general education. It does not have the structures, the manpower or the financial resources to enable it to turn its attention to skills training and similar forms of nonformal education programmes. MOE's capacity and resources will be stretched to their limit in universalizing primary education and improving educational quality in primary and secondary schools. It would jeopardize the attainment of these goals if at this stage it were to divert more of its attention and resources to nonformal programmes directed at skills training.

13.4 The decision to leave skills training and youth programmes in other hands will free MOE to promote more wholeheartedly the second chance equivalency programmes presently being offered by the Department of Continuing Education. The principal way in which this will be done will be by making more resources available for the development and running of open secondary schools. The freeze on the further opening of basic schools, spoken of in Chapter 8, means that there will be a larger clientele seeking admission to the open schools. Moreover, the review that is to be undertaken of basic schools may lead to a decision to convert some basic schools into open schools. The Department of Continuing Education will need the resources, therefore, to be able to cope with considerably expanded enrollments in this programme. For this purpose it will need additional funds for the production of materials at the National Correspondence College and for the payment of supervisors in open secondary schools. Before this is done, it will be necessary to evaluate the cost-effectiveness of the open secondary school system and to modify accounting procedures so that all costs attributable to this system are booked to it. In the light of this evaluation, consideration will be given to establishing a special section in the Department of Continuing Education to coordinate open secondary schools.

13.5 Strengthening the National Correspondence College so that it can deal better with the needs of open secondary schools should also enable it to provide more effectively for directly enrolled distance education students. The needs of these students are also being met by private correspondence colleges, some of which are able to make better provision for students than the National Correspondence College can offer. As with all private institutions, the development of these colleges will be encouraged so long as they conform to standards which are necessary for the protection of their clientele. To enhance the performance of private correspondence colleges, the Department of Continuing Education will play a supervisory role in their regard, similar to that played for primary and secondary schools by the inspectorate. By monitoring their performance at regular intervals, the Department will ensure that the programmes offered to the public provide a satisfactory service and maintain standards. The fees these colleges charge will remain, as at present, their own responsibility, but the registration of colleges will be facilitated and efforts will be made to involve their academic staff on issues pertaining to the curriculum and examinations and to assist them in matters pertaining to the quality of their materials.

13.6 Although MOE's involvement in nonformal education will be confined mostly to promoting "paraformal" programmes through correspondence courses, evening classes, and open secondary schools, it will serve as an animator for the improvement of coordination between the various providers of nonformal education. To this end, it will bring forward legislation to transform the present Adult Education Advisory Board into a Coordinating Council for

Nonformal Education, with membership representing the agencies engaged in providing nonformal education. The Coordinating Council will be given the immediate tasks of developing a comprehensive directory of nonformal education programmes, so that information can be had about their nature and coverage, and of investigating the need for a Directorate of Nonformal Education.

Out-of-School Children

13.7 MOE recognizes that its educational responsibilities extend to all children of school-going age, including those who, for whatever reason, are not attending school. The number of 7 - 13 year-old children who are not in school appears to be in the region of 190,000. If access to primary education is increased along the lines proposed earlier in this Report, this number should decrease across the years. But for several years to come there will still be a substantial number of children who may never have been to schools or whose school attendance may have been very interrupted and fragmentary or who may have been at school for no more than a few years. It will not be possible to reach all of these children, since a number of them may live in such remote and isolated areas that contact would have to be established on an individual basis, something that would be quite impossible on financial and logistical grounds. Those who can be reached more easily will not necessarily want to go (back) to school. Many of them may be working as "street children" in towns and will not wish to take part in education programmes that would interfere with their income-generating activities. Many will be at an age where they would be reluctant to acknowledge their lack of formal education; it is likely that they would resist being placed in groups with much younger children and that they would quickly lose motivation to learn if they found that the method of teaching was that suited to small children and that the content of what was taught was not relevant to their age and activities.

13.8 Despite these problems, these out-of-school children need to be helped so that they achieve competency in reading, writing and numeracy and acquire relevant life skills and knowledge. For this, it will be necessary to structure appropriate teaching possibilities for these children, arranged with as much flexibility as their condition requires; to devise a special curriculum, with support materials, to meet their special needs; and to prevail upon them to make use of whatever educational programmes will be provided. The Department of Continuing Education will be provided with responsibility for seeing how best these out-of-school children can be reached and taught and will be provided with resources to pay part-time teachers for this category. Some initial training will have to be provided for these teachers to prepare them to work with this special group of learners and with the materials that will be specially prepared for them. The development of a suitable curriculum and support materials will be entrusted to the Curriculum Development Centre, while funds for the production of learning materials and post-literacy materials (possibly by the National Correspondence College) will be made available to the Department of Continuing Education. The expansion of primary school facilities, spoken of in Chapter 4, should make it possible to end formal primary school teaching each day at 1600 hours. During the remaining hours of daylight and, where appropriate, in the evenings, the primary school facilities will be made available to the Department of Continuing Education for programmes for out-of-school children and others. The help of NGOs and community bodies in actually reaching and teaching out-of-school children will be sought at all times while donor funds will be solicited for the support of the whole programme on behalf of these children. At all stages of this undertaking, there will be full cooperation with the Department of Community Development in the Ministry of Community Development, Culture and Social Services.

Educational Broadcasting

13.9 The Educational Broadcasting Services (EBS) were established in the early 1960s to enrich and supplement classwork. Currently, they cater for primary schools, open secondary schools, directly enrolled students in distance education programmes, and teachers. In 19 hours of broadcasting per week, the EBS transmits a total of 80 programmes for 27 weeks (3 terms of 9 weeks each), as follows:

- morning programmes for primary schools;
- afternoon programmes for open secondary schools and for distance education students who are not working;
- evening programmes for teachers and for distance education students who are working.

13.10 There is doubt whether the programmes for primary schools are having their expected impact. This is because of the difficulties of reception in some areas; the absence of radios from the majority of schools; and the difficulty found by schools which do have radios in integrating the schools broadcasts into their timetables, especially when the school timetable is drawn up under the constraints of double or triple session teaching. In view of the limited resources available for educational broadcasting and of the needs of other target groups, it may be necessary to phase out the transmissions for primary schools. Before this is done a systematic evaluation of all aspects of the EBS will be undertaken, with particular reference to actual use by primary schools and the success of the broadcasts in supplementing classroom instruction.

13.11 The evaluation of the EBS will also seek to assess the extent to which open secondary schools, distance education students, and teachers make use of the educational broadcasts that are transmitted to them. Ministries such as Health and Agriculture that make use of radio for educational purposes, and the Department of Community Development that directs programmes at radio listening groups, will be invited to participate in this evaluation. In the light of the evaluation, decisions will be taken on whether to extend the range of programmes that EBS transmits to open secondary schools, distance education students and teachers. This evaluation will also provide basic information needed for decisions regarding the establishment of a special channel for nonformal and education extension programmes.

CHAPTER 14

DONOR SUPPORT FOR EDUCATION

The Policy Framework

14.1 Donor support to the education sector should be viewed in the context of the country's policies towards external assistance in general and towards education in particular. The FNDP established the objective that all external resource inflows should be to projects and programmes contained in the Plan. Further qualifications established by the PIP were that priority must be given to the Social Action Programme; to the completion of productive, ongoing projects; and to projects aimed at the maintenance and rehabilitation of infrastructure and public sector productive assets. Further, "external resources, including those from the donor community, are expected to be targeted on the priorities identified in the PIP" (p.6).

14.2 The broad policy framework for the education sector is outlined in the PFP as reversal of the deterioration of educational quality and improvement in access to educational facilities, with emphasis on the primary level. This is reformulated in the PIP in terms of Government setting as its principal goal to re-orient public expenditure toward primary education. "The specific objectives are to improve the quality of learning by rehabilitating existing schools and increasing the availability of textbooks and learning materials and to enhance the access to primary education by building additional classrooms" (p. 139).

14.3 Any commitment to aiding the education sector in Zambia during the 1990s must take these priorities into account.

Donor Policies and Type of Support

14.4 During the 1980s, technical assistance to the education sector had an annual average of about US\$14.5 million, which was the equivalent of some 13.7% of total public expenditure on the sector during the decade. Although the current government emphasis is placed on primary education, donor support at this level during the 1980s was considerably less than that provided to the universities. In 1987, for example, as much as 36.9% of aid to education went to the two universities, whereas only 16.8% was earmarked for primary schools.

14.5 This donor reluctance to support primary education was a universal phenomenon, with minor variations from region to region. The profile of international aid to education worldwide during the 1980s shows that the education sector received 9.2% of all bilateral and multilateral aid. Of this, more than 95% went to secondary and tertiary level institutions. The recent World Bank policy paper on primary education gives a clear picture of the situation:

"Between 1981 and 1986, all international aid disbursed to primary education amounted to \$181.3 million annually and represented only 4.3% of the annual total aid to all levels of education for the same time... Moreover, the majority of aid to primary education was not allocated to those inputs that have been found to be the most cost-effective. For all recipient countries, only 4.8% of total aid to primary education between 1981 and 1986 went to pedagogical inputs such as textbooks and instructional materials, while 30% supported infrastructure (buildings, furniture and equipment)" (World Bank Policy Paper: Primary Education, 1990 p.46).

14.6 This global picture is reflected in the pattern of donor assistance to education in Zambia during the early years of the 1980s. The total donor investment in primary education was relatively small and the major part of the aid was not directed to the inputs that have been found to be the most effective in promoting learning. Investment in equipment and teaching materials accounted for as little as 0.6% of total aid to the education sector in 1980. The share for this purpose rose to 9.5% in 1987 and to 27.0% in 1989. This remarkable improvement is attributable mainly to the emphasis that two donors, FINNIDA and SIDA, have placed on basic education in their education support programmes. But even with this change in patterns of aid, the tertiary level establishments, particularly the universities, still boast of the largest concentration of donor interest.

14.7 It is also worth noting that the largest proportion of aid to education in Zambia has gone towards personnel or technical cooperants costs (73.9% in 1980, 61.4% in 1987, 44.0% in 1989). The tendency at local level for personal emoluments to consume a disproportionately large share of national educational expenditures is reflected to some degree in the proportion of aid that is absorbed by personnel costs. The very large percentage of these costs that is retained in the donor country for the benefit of the technical cooperant gives point to the statement in the Zambia Declaration on Education For All that aid agencies should "ensure that more of their aid is spent within Zambia" (p. 19).

14.8 Donor support for non-formal education in 1989 was US\$2.7 million, or 8.2% of the total disbursement of US\$32.7 million for the Human Resource Development Sector. This was about the same amount as was allocated for technical education and was somewhat more than went to secondary schools.

Donor Agency Involvement in Primary and Secondary Schools

	<u>Primary Schools</u>	<u>Secondary Schools</u>
Construction	ADB	JICA
Rehabilitation	EC	NORAD
Maintenance	FINNIDA OPEC SIDA	
Textbooks	FINNIDA ODA SIDA	EC FINNIDA ODA SIDA
Other Learning Materials	SIDA UNESCO/UNDP	
Furniture	SIDA	
Teacher Training (preservice and inservice)	CIDA FINNIDA SIDA	UNESCO
Other	SIDA (Special Education) UNICEF (Basic Education)	ODA (Resource Teachers)

14.9 The principal ways in which the major donors are involved in primary and secondary education are summarized on the accompanying chart. The chart (p. 145) does not include training fellowships, which form a large part of the aid from the ODA, CIDA, the EC, SIDA and other donors. Neither does it include the ODA-supported expatriate staff in secondary schools.

Priorities for Donor Support

14.10 The agenda for the improvement and development of Zambia's schools is so large that even if times were prosperous it would exceed the country's resources. External aid played a significant role in fostering educational development in Zambia in the 1960s when the economy was booming. It has an even more salient role to play today when national resources are so limited, when the numbers to be served have grown so large and continue their inexorable growth, and when years of under-investment have undermined the quality of education provided by the schools. Zambia faces a formidable challenge in its efforts to restore quality to its education system and achieve the objective of enabling every 7 - 13 year old child have access to seven years of schooling. It is not able to meet this challenge alone but must turn to the international community for continued and increased assistance to enable it to achieve its educational goals.

14.11 The priorities for donor assistance do not differ from the priorities for the education sector. They are to improve the quality of learning in all institutions and to increase access to primary education. Throughout this Report, a number of strategies have been developed for the attainment of those objectives. In the majority of cases, these strategies can be activated at once, but in certain cases, before remedial or other action can be taken there is need for further information and preliminary investigations.

14.12 In view of this, the most general priorities for interventions in the school system in Zambia are:

- (a) take measures to improve the quality of education in primary and secondary schools;
- (b) facilitate the expansion of primary schools (and if need be, of teacher training colleges) to cater for the growing 7 - 13 year old population;
- (c) conduct preliminary studies and investigations needed for either of the foregoing.

14.13 For ease of reference, the priorities and strategies discussed earlier in this document are set out in schematic form on the accompanying pages (pp. 147-8). This is not an uncoordinated shopping list for the attention of donors. It is a summary of the strategies considered necessary to meet the objectives of improving quality and universalizing access. If it is to attain these objectives, Zambia must adopt these strategies. It invites donor support in enabling it to do so.

14.14 Whatever the area to which aid may be addressed, the over-riding concern should be with the improvement of student learning. The yardstick against which all possible interventions should be measured is their potential for direct or indirect impact on promoting learning achievement. This is also the standard for evaluating the success of projects. The essential concern of a school system is appropriate student learning. This should also be the essential concern of donor assistance to education in Zambia.

**Strategic Interventions Needed for Improving School
Quality and Universalizing Primary Education**

Improvement of Quality

Learning Materials

- reprint textbooks
- develop new primary textbooks in mathematics, science, social studies, home economics
- equip all primary schools with a set of basic teaching materials
- develop local production of non-book teaching materials
- provide disadvantaged schools with primary level library materials
- provide basic science apparatus to primary schools
- re-equip secondary school laboratories
- strengthen local capabilities for technical production of books
- subsidize purchase of writing materials by poor students
- support the Educational Materials Trust Fund

Curriculum

- identify essential communication and life skills for basic cycle
- review primary curriculum to include such skills

Examinations

- reform Grade 7 terminal examination (type of question, test writing skills)
- develop examination feedback system to schools
- train staff (educational measurement, examinations, computer use, ...)
- develop and apply competency tests

Teacher Education

- upgrade college lecturers
- review curriculum of training colleges and produce materials
- develop comprehensive programme of inservice education designed to make classroom teacher more effective (teaching with books; new curriculum materials; mathematics; improvisation; continuous assessment; how to teach large classes; etc).

School Management

- train all primary school heads (curriculum and management areas)
- train all secondary school heads and deputies (management areas)

School Supervision

- upgrade primary school inspectors
- enable inspectors to visit schools frequently

Management and Organization of the Education System

- train education officers in educational administration
- develop management information system for human resources (teachers)
- develop management information system for material resources (facilities)
- strengthen planning unit with specialist posts and train local personnel
- mount higher level education planning courses and seminars on policy issues
- establish education documentation centre
- establish structures to promote donor coordination and strengthen existing capabilities

Rehabilitation

- rehabilitate primary schools (replace unsafe structures; repair salvageable structures; attend to wells and latrines; provide furniture)
- establish ongoing system for maintenance and repairs
- prepare and disseminate training manual in school maintenance
- rehabilitate secondary schools as needed (with special attention to laboratories)

Improving Access to Primary Education

Infrastructure

- build new classrooms, storage rooms, teachers' offices, teachers' houses at existing schools
- build new primary schools in high density peri-urban areas and other places that do not have enough schools
- provide what is necessary to convert small rural schools into multi-grades
- expand existing teacher training colleges
- build one or more new teacher training colleges, as needs dictate

Demand for Primary Education

- attend to student nutrition problems in severely disadvantaged schools
- assist preschools to develop communication skills for handicapped children
- establish posts for psychologists to provide guidance to students with special learning problems
- improve relevance of curriculum (also appears under Quality Improvement)

Nonformal Education

Out-of-School Children

- develop special programme for out-of-school children; produce materials; train instructors; mount special teaching programme

Department of Continuing Education

- support production of materials by National Correspondence College
- expand capacity for enlarging outreach of open secondary schools

Studies and Investigations that need to be Undertaken

- teacher deployment and utilization
- deployment and utilization of non-teaching staff in secondary schools
- physical state of primary schools and need for major repairs or developments
- organizational structure of the Ministry of Education
- survey of academic and physical conditions of basic schools
- strategies for increasing access to secondary education
- the financing of community schools in neighboring countries
- evaluation of the cost-effectiveness of open secondary schools
- evaluation of the impact of educational broadcasts on target groups.
- participation of girls in education

Local Involvement in Donor-Assisted Projects

14.15 The increasing involvement of donors in education has brought to the fore some issues relating to local participation in donor-aided projects. One is the availability of local counterpart funds. Several projects run almost exclusively on donor funds, the Zambian contribution being personnel, office facilities and (sometimes) accommodation. In addition, local funds may be pledged though these have not always been forthcoming. This does not augur well for the sustainability of project activities when donor assistance ends. Financial constraints contribute to this non-availability of local counterpart funds. A further reason has been the lack of clear definition in their regard. An improvement is signaled in the 1992 Estimates, which for the first time indicate the scale of local funding for a number of aided activities. Determination in ensuring that these commitments are honored will enhance the local sense of ownership and responsibility for projects and for their continuation when donor assistance is reduced or ended.

14.16 A second issue is the counterpart arrangement that is found in so many educational projects. The foreign expert-local counterpart system is regarded as a viable method for the transfer of know-how and technology; but in effect many visiting experts do not have the skills needed for training their counterparts, while from their side counterparts do not always have the background that will enable them to assimilate such training. This can lead to the unfortunate situation where the Zambian counterpart becomes a junior partner in project management and activities. Action to prevent this is needed by both sides to the aid arrangement. Zambia must endeavor to appoint as counterparts individuals with sufficient seniority, experience and expertise in the field in question. Once appointed, the counterpart should remain in post for the duration of the project and, preferably, long after its aided status ends. Only in the most exceptional circumstances should there be a transfer to another sphere. This implies that project involvement should be adequately remunerated and should respond to the individual's career aspirations. To foster the development of counterparts, both MOE and the donor agency should involve them in consultations and should regard them as sharing responsibility for project activities and as having full responsibility when the technical experts are absent. This has not always happened in the past. Cases are known where project activities come to a virtual standstill when the expert is on leave, even though a counterpart is in post. Both partners should also ensure that the counterpart has a real say in the control of resources and in actual project management. The evaluations that are a feature of most projects should pay attention to the success in transferring skills to counterparts and in preparing them to take over full responsibility for project management. Measures such as these are needed if project activities are to become more thoroughly localized and are to be viable when the foreign expertise is no longer available.

Donor Coordination

14.17 The chart indicating donor agency involvement (p. 127) shows quite clearly that several donors may be working in the same area. Five donors are already involved in the rehabilitation and construction of primary schools and it seems likely that their number will increase. Several donors are supporting the provision or development of textbooks and a number are involved in the preservice or inservice training of teachers. The strategic development of primary and secondary schools set forth in this Report requires the assistance of even more donors and their participation in undertakings that may be quite new to them.

14.18 All of this points to the need for coordination, but effective coordination of donor activities has remained over the years a problem area in the management of aid. Clearly, external resources should be effectively coordinated in a way that facilitates the realization of anticipated benefits and that demonstrates the Government's seriousness of purpose. This is a prerequisite for enhanced and continued donor support. It is also an aspect of Zambia's accountability to the public in the donor countries since, in the final analysis, it is their taxes that make the aid flow possible. The absence of coordination has led in some instances to a duplication of donor activity. Without an effective coordinating mechanism different donors may set different standards and follow different implementation procedures. This puts a strain on Zambia's absorptive capacity which is acknowledged to be quite limited. It may also lead to difficulty in sustaining an activity or maintaining a facility when donor assistance comes to an end. Where the standards or procedures of donors who are working with the same community or executing agency differ there is also some risk that conflicts may develop.

14.19 At an even more fundamental level there is the danger that in the absence of a strong and effective coordinating mechanism, operative at all stages of the aid process, donor-driven initiatives will supplant the local vision of educational development. The priorities as perceived by the aid agency can all too easily become the priorities of the recipient country. One safeguard against this is a definition by Zambia of a well conceived notion of how its education system should develop. This is what the present Report is attempting to provide for primary and secondary schools. The acceptance by the Government of this Report as a blueprint for the strategic development of primary and secondary education will itself lay the groundwork for more effective coordination of donors to education. Within the wider context of the priorities and strategies proposed here, education officials can conduct a careful analysis with donor agencies of the objectives of a programme or project. If they are to be able to do this, these officials will need to be thoroughly acquainted with what is proposed here and to appreciate the rationale behind the priorities that are established and what they imply. This points to the importance of the high-level seminars and training sessions in educational planning, spoken of in Chapter 11, to build consensus on the contents of this document and of others, such as the Report on the National Conference on Education For All.

Initiatives Towards Donor Coordination

14.20 Up to the present it has been difficult to create a framework within which aid agencies' activities could be effectively coordinated. Such coordination as there is performed by different, functionally disjoint and spatially separate government units. In some instances one unit may be ignorant of the activities of the others. Until recently, the Department of Economic and Technical Assistance in NCDP and the Loans and Investments Division in the Ministry of Finance took charge of external loans and credits. The Bursaries Committee administered training scholarships abroad, while the Personnel Division in the Cabinet Office was concerned with supplemented technical posts. There has not been sufficient interaction between these various bodies to ensure effective management and utilization of aid.

14.21 In recognition of these weaknesses a number of sectoral committees, with membership drawn from relevant government departments and donor agencies, have been established to serve as forums for the exchange of views. In the education sector, some coordinating functions are conducted by the following bodies on which donors are represented:

- (a) the National Task Force on Education For All;
- (b) the Zambia Educational Materials Coordinating Committee (ZEMCC);
- (c) the Working Groups of the Social Action Programme.

14.22 At a broader level, the Government conducts a joint review with donors of resource inflows, while the monitoring and periodic review of externally funded projects has been a feature from the outset of the Social Action Programme.

14.23 What these initiatives indicate is the way lower-level coordinating mechanisms can proliferate while strong linkages between the Government and donors can be absent. Ideally, coordination should take place at three levels, national, sectoral, and project. At the national level, the broad policy framework and general priorities which take account of the competing needs of the various sectors would be agreed upon. Clearly this is the responsibility of NCDP, but with the active involvement of individual ministries. At ministry level, more specific sectoral policies and priorities would be established. These would serve as a frame of reference for coordinating bodies, such as ZEMCC, which would deal with policies and priorities in a specific sub-sectoral field. Finally, at the project level a technical committee involving project-related personnel would deal with implementation mechanisms and issues. At all levels there would be government and donor agency representation. At each level the government or MOE representative should be an individual who is knowledgeable on the issues in question and has appropriate decision-making authority. MOE's seriousness about the programmes or projects under discussion will be demonstrated by regular and full participation in the meetings necessitated by the work with donors. Because of the large number of donors involved in the education sector, this will put a strain on MOE's limited human resources, especially during periods of heightened activity in the project planning and implementation cycle. The coordination among agencies, spoken of in paragraph 14.25 below, could go some way towards lightening this burden by reducing the frequency with which senior personnel are expected to attend meetings.

14.24 The attempts at aid coordination also draw attention to the need for a strong technical aid division within the receiving ministry. The technical aid office within the education sector needs to be much more highly developed so that it can negotiate competently with donors on projects and programmes, within the overall framework of agreed priorities; respond to the needs of donors for comprehensive information on the education system; monitor and evaluate the foreign aid inflows and the impact of that aid on the planned development of education; and advise more senior officers and other partners in education on all matters pertaining to aid.

Coordination Among Aid Agencies

14.25 Because the policies of donors are different, direct official coordination with other donor agencies may be difficult to bring about. Yet effective in-country coordination of aid is sometimes made difficult by the multiplicity of procedures and conditionality requirements peculiar to each agency. Unwittingly, donors may impose very heavy burdens on hard-pressed education officials by their requests for information in specified formats or with certain emphases. There is a strong case for proposing, as did the 1984 Windsor Conference on Education Priorities and Aid Responses in Sub-Saharan Africa, that:

- (a) "...donors working in the same sector in the same country should do all they can to harmonize their data requirements, show willingness to use sector reviews prepared for or by other donors, or preferably collaborate with each other and the government in deciding the coverage and frequency of such reviews
- (b) donors should as far as possible standardize formal project documentation and reporting procedures and
- (c) donors should seek the recipient government's approval, which should not unreasonably be withheld, to publish and widely disseminate all useful reports which they had commissioned on aspects of the recipient's of education system" (p.61).

14.26 The sharing of information on agency resources and intentions, promoted by World Bank missions, has shown the benefits of greater interaction between donors themselves. The institutionalization of these moves towards greater inter-donor coordination should serve to promote the information flow between donors and to facilitate more effective coordination of aid to the education sector. The establishment of the education documentation centre, spoken of in Chapter 11, should also go some way towards responding to donor needs for information about the education sector.

Towards Improved Donor Coordination in Education

14.27 MOE will address itself to improving aid management arrangements by fostering a climate of dialogue in the context of a clear determination of priorities. It will also seek to strengthen existing mechanisms for aid coordination and, if need be, will extend these.

14.28 The three major areas to which educational aid is directed are learning materials, development of the infrastructure, and personnel development. A coordinating committee already exists for learning materials (ZEMCC). Responsibility will be entrusted to ZEPIU for coordinating all donor involvement in the construction, rehabilitation and furnishing of schools and teacher training colleges. It may be necessary to establish another body, with a supporting office, to coordinate all donor activities relating to preservice and inservice teacher education, the upgrading of college lecturers, inspectors and education officers, and any other form of training or personnel development.

14.29 As noted in Chapter 5, it will be necessary to strengthen the Educational Materials Unit (EMU), which is the secretariat for ZEMCC, so that it may discharge its coordination and management functions effectively. This strengthening will involve technical assistance for the office while it is in the process of development. To facilitate its activities, the EMU will be transferred to become a division for educational materials within ZEPIU.

14.30 Several activities relating to school construction and rehabilitation and to community participation are already being coordinated and managed by ZEPIU. Under the new arrangements this role of ZEPIU will be formalized to include all activities relating to the physical development or improvement of schools and colleges.

14.31 The organizational framework for a coordinating body in areas of personnel development will be determined at the time that the reorganization of the ministries is being examined (Chapter 11 above). In the meantime, responsibility in this area will be entrusted to the Human Resource Development Office in MOE, in liaison with the inspectorate.

14.32 The articulation of these three areas, the broad review of aid programmes to ensure that they are in keeping with set objectives, the monitoring of resource flows, and other more general aspects will be the responsibility of the technical aid division within MOE. As has been noted, this office will also need strengthening and some technical back-up.

14.33 The essential benefit these arrangements would bring is that they would provide regular, institutionalized forums for periodic discussions and decision-making. The process would be initiated and managed by Zambia which would bring to all meetings a clear sense of where the school system is heading and what is needed for it to arrive there. The dialogue would be guided by priorities clearly articulated by Zambia and by a systematic set of criteria for utilizing aid in the realization of such priorities. The arrangements would also ensure more transparency in the utilization and management of aid.

Review of Investment Strategy in Education

Objective: to develop a detailed and prioritized strategy for delivering education under current economic constraints.

Terms of

Reference:

- (1) Indicate shifts in policies and strategies that may have taken place in the recent past;
- (2) Identify new areas of emphasis;
- (3) Indicate current trends and emerging patterns in educational provision;
- (4) Make the data base current;
- (5) Discuss ongoing donor activity in the sector;
- (6) Identify priority investment needs and indicative costing;
- (7) Produce a Report for Government.

Membership of the Review Team:

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The Development of Primary Schools, 1992 - 2002

Methodology

A straightforward methodology is used to estimate the projected expansion needs of the primary schools. The essential information is the number and Growth rate of 7 year-old children. This information is available, on a national and provincial basis, from the 1980 and 1990 censuses (Appendix 2). On the basis of the 1990 census data and the 1980 - 1990 growth rates, projections are made for the number of 7 year-olds in each province, year by year, up to 2002. These projections are used for estimating the total number of Grade 1 classes needed to accommodate all 7 year-old children. Shortfalls, or over-provision, can be seen by comparing projected needs with actual class patterns for 1989/1990. Shortfalls are made good by increasing the number of Grade 1 classes, year by year, until they equal the projected need. Where provision already appears to be adequate, as in the Western and North-Western provinces, the number of Grade 1 classes is held constant. Any increase in Grade 1 Classes works its way through the system in subsequent years; for example, the number of Grade 2 classes any year will be the same as the number of Grade 1 classes the previous year; it will also be the same as the number of Grade 3 classes the following year. The shortfalls experienced in some provinces in provision for Grades 5 to 7 are dealt with by assuming that every Grade 4 class proceeds intact into Grade 5 and hence that the necessary provision will be made to "complete" the school, either through the addition of facilities or through multigrade teaching.

Once the number of classes has been established the number of classrooms, desks, teachers and textbooks required follows automatically by applying the norms given below.

Norms

The average class size at national and provincial levels is taken to be 40. In 1989, the national average was 39.8, while the provincial averages ranged from a high of 49.2 in Lusaka to a low of 32.7 in the North-Western province.

No account is taken of drop-outs because historically the rate of drop-out has been very low (at less than 1% after each of Grades 1, 2, 3 and 5). The repetition rate is negligible in Grades 1, 2, 3 and 5; in Grade 4 it is about 2%, in Grade 6 about 1% and in Grade 7 between 7 and 10% of class size. No provision is made for repeaters, however, since apart from exceptional circumstances scarce resources cannot be allocated to or grade repetition.

It is assumed that all classrooms for Grades 1 - 4 will be used for two sessions a day and that classrooms for Grades 5 - 7 will be used for only one session a day. Because of the need to do away with triple sessions, classrooms will not be used for more than two sessions of normal school teaching, though they may be used in the later afternoons, in the evenings or at weekends for programmes directed towards out-of-school children. The number of new classrooms needed in a given year equals half the number of new Grade 1 - 4 classes for that year plus the number of new Grade 5 - 7 classes.

Each teacher in Grades 1 - 4 will teach two sessions a day, but those teaching in Grades 5 - 7 will teach only one session a day. To allow for the impossibility of distributing teachers mathematically across schools according to these norms, and to make some provision for specialist teachers and for the replacement of those on leave of one kind or another the formal requirement is increased by a further 12 1/2 %. The outcome gives an estimate of the total number of teachers required in a given year. Providing in this way has the same effect as establishing an overall student-teacher ratio of 50 to 1. No account is taken of untrained teachers.

The number of two-seater desks required in a given year is one quarter of the Grade 1 - 4 enrollment (because of double sessions) plus one-half of the Grade 5 - 7 enrollment.

For textbooks, the student-to-book ratio is 2 to 1. It is also assumed that the effective life of textbooks is 3 years (even when the books are being used in double sessions). Allowance is made for additional copies to meet enrollment growth and for 15% annual replacement for books lost or damaged. The distribution of course books by grade level is taken to be:

- Grade 1: 2 English books
- Grade 2: 3 English books; 1 local language book
- Grades 3-7: 3 English, 1 local languages, 1 mathematics, 1 social studies, 1 sciences, 1 other subject book - all for each Grade (8 books for each Grade).

**Projected Primary School Enrollment
1991 - 2002**

	Gr 1	Gr 2	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7
1992	251,200	243,560	236,120	229,040	225,520	216,400	213,720
1993	265,640	251,200	243,560	236,120	229,040	225,520	216,400
1994	282,600	265,640	251,200	243,560	236,120	229,040	225,520
1995	300,400	282,600	265,640	251,200	243,560	236,120	229,040
1996	318,240	300,400	282,600	265,640	251,200	243,560	236,120
1997	336,920	318,240	300,400	282,600	265,640	251,200	243,560
1998	353,440	336,920	318,240	300,400	282,600	265,640	251,200
1999	367,360	353,440	336,920	318,240	300,400	282,600	265,640
2000	379,880	367,360	353,440	336,920	318,240	300,400	282,600
2001	392,640	379,880	367,360	353,440	336,920	318,240	300,400
2002	405,480	392,640	379,880	367,360	353,440	336,920	318,260

	<u>Gr 1 - 4</u>	<u>Gr 5 - 7</u>	<u>Gr 1 - 7</u>
1992	959,920	655,640	1,615,560
1993	996,520	670,960	1,667,480
1994	1,043,000	690,680	1,733,680
1995	1,099,840	708,720	1,808,560
1996	1,166,880	730,880	1,897,760
1997	1,238,160	760,400	1,998,560
1998	1,309,000	799,440	2,108,440
1999	1,375,960	848,640	2,224,600
2000	1,437,600	901,240	2,338,840
2001	1,493,320	955,560	2,448,880
2002	1,545,360	1,008,600	2,553,960

Projected Primary School Classes
1992 - 2002

	<u>Gr 1</u>	<u>Gr 2</u>	<u>Gr 3</u>	<u>Gr 4</u>	<u>Gr 5</u>	<u>Gr 6</u>	<u>Gr 7</u>
1992	6,280	6,089	5,903	5,726	5,638	5,410	5,343
1993	6,641	6,280	6,089	5,903	5,726	5,638	5,410
1994	7,065	6,641	6,280	6,089	5,903	5,726	5,638
1995	7,510	7,065	6,641	6,280	6,089	5,903	5,726
1996	7,956	7,510	7,065	6,641	6,280	6,089	5,903
1997	8,423	7,956	7,510	7,065	6,641	6,280	6,089
1998	8,836	8,423	7,956	7,510	7,065	6,641	6,280
1999	9,184	8,836	8,423	7,956	7,510	7,065	6,641
2000	9,497	9,184	8,836	8,423	7,956	7,510	7,065
2001	9,816	9,497	9,184	8,836	8,423	7,956	7,510
2002	10,137	9,816	9,497	9,184	8,836	8,423	7,956

Projected Number of New Classes
and Additional Classrooms Needed
1992 - 2002

NEW CLASSES

	<u>Gr 1</u>	<u>Gr 2</u>	<u>Gr 3</u>	<u>Gr 4</u>	<u>Gr 5</u>	<u>Gr 6</u>	<u>Gr 7</u>
1992	191	186	177	88	228	67	13
1993	361	191	186	177	88	228	67
1994	424	361	191	186	177	88	228
1995	445	424	361	191	186	177	88
1996	446	445	424	361	191	186	177
1997	467	446	445	424	361	191	186
1998	413	467	446	445	424	361	191
1999	348	413	467	446	445	424	361
2000	313	348	413	467	446	445	424
2001	319	313	348	413	467	446	445
2002	321	319	313	348	413	467	446

NEW CLASSES

**Additional Classrooms
Needed**

	<u>Gr. 1-4</u> (a)	<u>Gr. 5-7</u> (b)	$= \frac{a + b}{2}$
1992	642	508	829
1993	915	383	841
1994	1,162	493	1,074
1995	1,421	451	1,162
1996	1,676	554	1,392
1997	1,782	738	1,629
1998	1,771	976	1,862
1999	1,664	1,230	2,067
2000	1,541	1,315	2,086
2001	1,393	1,358	2,055
2002	1,301	1,326	1,977
1992-2002	15,278	9,332	16,971

**Projected Number of Lower and Upper Primary Classes
with Total Numbers of Classrooms and Teachers Needed
1992 - 2002**

	No. of Classes		No. of Classrooms	No. of Teachers
	<u>Gr 1-4</u>	<u>Gr 5-7</u>	<u>Needed</u>	<u>Needed</u>
1992	23,998	16,391	28,390	31,939
1993	24,913	16,774	29,201	32,851
1994	26,075	17,267	30,305	34,093
1995	27,496	17,718	31,466	35,400
1996	29,172	18,272	32,858	36,965
1997	30,954	19,010	34,487	38,798
1998	32,725	19,986	36,124	40,639
1999	34,399	21,216	38,416	43,217
2000	35,940	22,531	40,501	45,564
2001	37,333	23,889	42,556	47,875
2002	38,634	25,215	44,532	50,099

No. of Classrooms = $\frac{\text{No. of Gr 1-4 Classes} + \text{No. of Gr 5-7 Classes}}{2}$

No. of Teachers = $\frac{(\text{No. of Gr 1-4 Classes} + \text{No. of Gr 5-7 Classes})}{2} + 12.5\%$

Projected Number of Two-Seated Desks Needed
1992 - 2002

	<u>Enrollment</u>		<u>No. of Desks</u>	<u>Increase on</u>	<u>Total Cost</u>
	<u>Gr 1-4</u>	<u>Gr 5-7</u>	<u>to seat</u>	<u>Previous</u>	<u>US\$</u>
			<u>Every Child</u>	<u>Year</u>	<u>(Millions)</u>
1992	959,920	655,640	567,800	407,800*	12.23
1993	996,520	670,960	584,610	16,810	0.50
1994	1,043,000	690,680	606,090	21,480	0.64
1995	1,099,840	708,720	629,320	23,230	0.70
1996	1,166,880	730,880	657,160	27,840	0.84
1997	1,238,160	760,400	689,740	32,580	0.98
1998	1,309,000	799,440	726,970	37,230	1.12
1999	1,375,960	848,640	768,310	41,340	1.24
2000	1,437,600	901,240	810,020	41,710	1.25
2001	1,493,320	955,560	851,110	41,090	1.23
2002	1,545,360	1,008,600	890,640	39,530	1.19

$$\text{No. of Desks Needed} = \frac{\text{Gr 1-4 Enrollment}}{4} + \frac{\text{Gr 5-7 Enrollment}}{2}$$

Estimated Stock of Desks 1991: 160,000

Cost per Desk: US\$30 (K3,750)

*includes the backlog

Projected Number of Textbooks Required Per Title
1993 - 2002

	<u>Gr 1</u>	<u>Gr 2</u>	<u>Gr 3</u>	<u>Gr 4</u>	<u>Gr 5</u>	<u>Gr 6</u>	<u>Gr 7</u>
1993	132,820	125,600	121,780	118,060	114,520	112,760	108,200
1994	28,403	26,060	22,087	21,429	20,718	18,674	20,790
1995	28,823	27,320	25,487	21,529	20,898	20,454	17,990
1996	159,120	150,200	141,300	132,820	125,600	121,780	118,060
1997	33,208	31,450	30,095	28,403	26,060	22,087	21,429
1998	32,128	31,870	30,115	28,823	27,320	25,487	21,529
1999	183,680	176,720	168,460	159,120	150,200	141,300	138,820
2000	33,812	33,468	33,529	33,208	31,450	30,095	28,403
2001	33,932	32,768	32,229	32,128	31,870	30,115	28,823
2002	202,740	196,320	189,940	183,680	176,720	168,460	159,120

Assumptions: 1 book between 2 students
book life of 3 years
extra copies for enrollment growth
15% replacement for loss/damage each year

Projected Total Number of Textbooks Required
1993 - 2002

	<u>Gr 1</u>	<u>Gr 2</u>	<u>Gr 3</u>	<u>Gr 4</u>	<u>Gr 5</u>	<u>Gr 6</u>	<u>Gr 7</u>
No. of Titles	2	4	8	8	8	8	8
1993	265,640	502,400	974,240	944,480	916,160	902,080	865,600
1994	56,806	104,240	176,696	171,432	165,744	149,392	166,320
1995	57,646	109,280	203,896	172,232	167,184	163,632	143,920
1996	318,240	600,800	1,130,400	1,062,560	1,004,800	974,240	944,480
1997	66,416	125,800	240,760	227,224	208,480	176,696	171,432
1998	64,256	127,480	240,920	230,584	218,560	203,896	172,232
1999	367,360	706,880	1,347,680	1,272,960	1,201,600	1,130,400	1,110,560
2000	67,624	133,872	268,232	265,664	251,600	240,760	227,224
2001	67,864	131,072	257,832	257,024	254,960	240,920	230,584
2002	405,480	785,280	1,519,520	1,469,440	1,413,760	1,347,680	1,272,960

	<u>Total Textbook Requirement</u>	<u>Total Cost (US\$ 3 each)</u> <u>in Million \$</u>
1993	5,370,600	16.11
1994	990,630	2.97
1995	1,017,790	3.05
1996	6,035,520	18.11
1997	1,216,808	3.65
1998	1,257,928	3.77
1999	7,137,440	21.41
2000	1,454,976	4.36
2001	1,440,076	4.32
2002	8,214,120	24.64
1993-2002:	34,135,888	
	i.e. apprx. 3.5 million a year	

Books for a given year must be produced and distributed before the end of the preceding year.

Production of Primary School Books, 1988 - 1991

	<u>English</u>	<u>Maths</u>	<u>Science</u>	<u>Soc. Stud.</u>	<u>Zamb. Lang.</u>
<u>Grade 1</u> (240,400)	157,000 ZPC	-	-	-	-
	New Course, 2 x 157,000 (1991)				
<u>Grade 2</u> (231,100)	296,000 ZPC	-	-	-	-
<u>Grade 3</u> (221,600)	338,000 ZPC	37,300	-	-	-
<u>Grade 4</u> (205,800)	-	101,600	-	-	-
<u>Grade 5</u> (189,700)	195,000	81,600	-	131,000	-
<u>Grade 6</u> (186,200)	51,000	-	-	120,000	-
<u>Grade 7</u> (184,400)	85,000	-	-	114,000	-
Supplementary Readers for Grades 5 - 7	1.517m.	-	-	-	192,000

Note: In Grades 1, 2 and 3 the Zambia Primary Course (ZPC) has three books for each year, one book per term. The figures above arise from one book for Grade 1, and three each for Grades 2 and 3.

The new English Primary Course has two books for Grade 1 students' use.

Enrollments for 1990 are given in brackets.

Projected Running Costs of Primary Schools
1992 - 2002
(in millions of constant 1991 Kwacha)

	<u>Personal</u> <u>Emolumnts</u>	<u>Student</u> <u>Requisites</u>	<u>Repairs &</u> <u>Maint.</u>	<u>Inservice</u> <u>Training</u>	<u>Other</u> <u>RDCs</u>	<u>Total</u>
	a	b	c	d	e	K million
1992	3,320.0	194.3	83.0	83.0	113.8	3,794.1
1993	3,405.4	200.3	85.1	85.1	116.8	3,892.7
1994	3,488.2	207.9	87.2	87.2	119.7	3,990.2
1995	3,598.6	261.5	90.0	90.0	125.0	4,165.1
1996	3,735.6	273.8	93.4	93.4	129.8	4,326.0
1997	3,903.5	287.8	97.6	97.6	135.7	4,522.2
1998	4,066.4	356.2	101.7	101.7	143.1	4,769.1
1999	4,321.7	376.1	108.0	108.0	152.0	5,065.8
2000	4,556.4	395.9	113.9	113.9	160.2	5,340.3
2001	4,787.5	489.8	119.7	119.7	170.6	5,687.3
2002	5,009.9	510.8	125.2	125.2	178.5	5,949.6

a: K100,000 is taken as the fixed average per teacher.

b: based on projected enrollments and Table 4 in text (para 5.36)

c: taken as 2½ % of Personal Emoluments

d: taken as 2½ % of Personal Emoluments

e: taken as 3 % of Total

Projected Recurrent Unit Costs in Primary Schools
1992 - 2002

	<u>Enrollment</u>	<u>Total Recurrent</u> <u>Cost</u> K million	<u>Unit Cost</u> (in 1991 kwacha) K
1992	1,615,560	3,794.1	2,348.5
1993	1,667,480	3,892.7	2,334.5
1994	1,733,680	3,990.2	2,301.6
1995	1,808,560	4,165.1	2,303.0
1996	1,897,760	4,326.0	2,279.6
1997	1,998,560	4,522.2	2,262.7
1998	2,108,440	4,769.1	2,261.9
1999	2,224,600	5,065.8	2,277.2
2000	2,338,840	5,340.3	2,283.3
2001	2,448,880	5,687.3	2,322.4
2002	2,553,960	5,949.6	2,329.6

Unit Cost in 1991: K 1,284.7

Indicative Costs of Major Capital Developments
(in millions of 1991 US dollars; 1 US\$=K125)

	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Total</u>
PRIMARY SCHOOLS										
1. Rehabilitate 2000 Schools (250/year @ \$10,000 each)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	22.50
2. New Classrooms (\$11,000 each)	9.12	9.25	11.81	12.78	15.31	17.92	20.48	22.74	22.95	142.36
3. Desks (\$30 each)	12.23	0.50	0.65	0.70	0.84	0.98	1.12	1.24	1.25	19.51
4. Textbooks (\$3 each)	16.11	2.97	3.05	18.11	3.65	3.77	21.41	4.36	4.32	77.75
5. Educational Aids for 4000 schools (\$1000 each)	1.00	1.00	1.00	1.00	-	-	-	-	-	4.00
6. Teachers' Houses (\$22,500 each)	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	81.00
Sub-Total	49.96	25.22	28.01	44.09	31.30	34.17	54.51	39.84	40.02	347.12
SECONDARY SCHOOLS										
1. Rehabilitate 75 Schools (\$1 million each)	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	67.50
2. Conversions from boarding to classroom use at 50 schools (\$500,000 each)	1.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	25.00
3. New Grade 8 Streams	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	22.50
4. Textbooks, science equip- ment and teaching aids	2.25	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	22.25
5. Teachers' Houses	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	6.75
Sub-Total	14.00	16.25	16.25	16.25	16.25	16.25	16.25	16.25	16.25	144.00
TEACHER TRAINING COLLEGES										
1. Expand 9 colleges	3.00	7.50	3.00	-	-	-	-	-	-	13.50
2. Construct 3 new colleges	-	-	-	2.00	2.00	2.00	2.00	2.00	2.00	12.00
Sub-Total	3.00	7.50	3.00	2.00	2.00	2.00	2.00	2.00	2.00	25.50
TOTAL	66.96	48.97	47.26	62.34	49.55	52.42	72.76	58.09	58.27	516.62

Inservice and Other Training

Target Groups: Classroom teachers
School heads
Primary school inspectors
District education officers

Program Content:

For Teachers -

- (a) Teaching with books; management of books
- (b) New curriculum content and approaches in English
- (c) Mathematics
- (d) Improvisation and use of simple resources
- (e) Teaching in special circumstances (multi-grade, large classes, double sessions, mixed-ability groups, handicapped)
- (f) Techniques of continuous assessment and student record -keeping.

For School Heads *(same as for teachers, but in addition)*

- (g) Management and use of financial and material resources
- (h) School maintenance
- (i) Teacher management
- (j) Fundamentals of school administration
- (k) School-community relationships

For Inspectors

- (a) The primary school curriculum and related curriculum issues
- (b) Curriculum materials: improvised, commercial and resource-center produced
- (c) Instructional methods and techniques for primary schools
- (d) Teaching in special circumstances (multi-grade, large classes, double sessions, mixed-ability, handicapped)
- (e) Observing and supervising classroom teaching
- (f) School inspections
- (g) Methods of evaluating student work
- (h) Student record-keeping and report cards
- (i) Fundamentals of school administration
- (j) etc.

For Education Officers

- (a) School organization (multi-grade, etc.)
- (b) Timetabling
- (c) Production of curriculum materials
- (d) Visiting a school
- (e) Teacher management
- (f) Management of financial and material resources
- (g) Basic school-related statistics
- (h) Information flow
- (i) Essentials of school management
- (j) etc.

Organization of Training:
For Teachers and School Heads

- group of master trainers design program and materials
- master trainers train lower level trainers through residential programs in training colleges
- lower level trainers train headteachers, if possible over 4-year period of residential programs
AND/OR
- lower level trainers train resource teachers through similar programs
- school heads give classroom teachers school-based training, on-the-job and through workshops, meetings, etc.
- resource teachers give classroom teachers resource-school-based training through workshops and seminars.

For Inspectors and Education Officers:

- residential program at UNZA for 3 or 4 months
- distance education program at field stations for remainder of year
- program lasts two years
- inspectors and education officers attend UNZA in rotation
- during period when neither inspectors nor education officers are at UNZA, possibility of UNZA staff visiting districts to evaluate impact and help participants with distance education section of program
- possible need for both groups of one final month at UNZA, prior to completion of program, preparing for examinations, etc.

Projected Supply of Primary Teachers
1992-2002

	Trained Teachers in Post from Previous Year	Attention at 3 Percent	Number of Ongoing Teachers	Output from Training Colleges	Total No. of Trained Teachers	No. of Teachers Needed
1992	32,320	970	31,350	1850	33,200	31,939
1993	33,200	996	32,204	1850	34,054	32,851
1994	34,054	1022	33,032	1850	34,882	34,093
1995	34,882	1046	33,836	2150 ^a	35,986	35,400
1996	35,986	1080	34,906	2450 ^b	37,356	36,965
1997	37,356	1121	36,235	2800 ^c	39,035	38,798
1998	39,035	1171	37,864	2800	40,664	40,639
1999	40,664	1220	39,444	3150 ^d	42,594	43,217
2000	42,594	1278	41,316	3150	44,466	45,564
2001	44,466	1334	43,132	3500 ^e	46,632	47,875
2002	46,632	1399	45,233	3500	48,733	50,099

a: expanded output in 1995 from half the existing colleges

b: expanded output in 1996 from remaining colleges

c: output of 350 graduates from new college as from 1997

d: output of 350 graduates from second new college as from 1999

e: output of 350 graduates from third new college as from 2001

School Enrollment Data

**PRIMARY
SCHOOLS**

	<u>1980</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Grade 1	169,038	229,709	218,924	217,476	231,034	237,718	240,407
Grade 2	165,744	212,291	229,156	218,391	219,546	229,545	231,110
Grade 3	162,385	201,442	208,319	220,858	215,813	213,334	221,593
Grade 4	157,696	192,519	197,032	203,223	213,807	207,101	205,844
Grade 5	130,705	171,285	173,922	180,849	186,120	196,240	189,717
Grade 6	126,900	165,789	169,040	171,384	173,755	176,033	186,162
Grade 7	129,360	175,785	181,123	179,041	185,470	186,697	184,373
ESN	109	392	506	339	590	179	
Grds 1-4	654,863	836,591	853,431	859,948	880,200	887,698	898,954
Grds 5-7	386,965	512,859	524,085	531,274	545,345	5,970	560,262
Grds 1-7	1,041,937	1,349,212	1,378,022	1,391,561	1,426,135	1,446,847	1,459,216

**CONVENTIONAL
SECONDARY
SCHOOLS**

Grade 8	24,437	48,232	52,381	45,257	56,810	57,137	--
Grade 9	24,258	39,938	48,231	46,485	52,700	54,235	--
Grade 10	23,683	15,940	20,105	16,774	17,791	20,184	--
Grade 11	11,478	13,817	15,990	16,553	17,488	19,086	--
Grade 12	10,739	13,575	13,817	14,783	16,560	17,894	--
Grds 8-9	72,378*	88,170	100,612	91,742	109,510	111,372	--
Grds 10-12	22,217**	43,332	49,912	48,110	51,839	57,164	--
Grds 8-12	94,595	131,502	150,524	139,852	161,349	168,536	--

* Grades 8 -10

** Grades 11-12

Primary School Population by Province

7-YEAR-OLD POPULATION

	<u>Total</u>		<u>Growth Rate</u>	<u>Projections</u>	
	<u>1980</u>	<u>1990</u>	<u>1980-90</u>	<u>1995</u>	<u>2000</u>
Lusaka	24,249	42,279	5.72	55,836	73,729
Copperbelt	43,351	54,652	2.34	61,353	68,874
Central	17,433	26,471	4.27	32,626	40,213
Northern	22,652	29,071	2.53	32,939	37,322
Western	14,468	18,043	2.23	20,147	20,147
Eastern	21,940	32,818	4.11	40,140	49,095
Lusfula	14,054	17,592	2.27	19,681	22,019
North-West	9,766	12,337	2.36	13,863	15,578
Southern	23,259	32,744	3.48	38,852	46,099
 ZAMBIA	 191,172	 266,007	 3.36	 315,257	 375,434

7 - 13-YEAR-OLD POPULATION

	<u>Total</u>		<u>Growth Rate</u>	<u>Projections</u>	
	<u>1980</u>	<u>1990</u>	<u>1980-90</u>	<u>1995</u>	<u>2000</u>
Lusaka	136,574	235,924	5.62	310,080	407,546
Copperbelt	265,712	335,336	2.35	376,717	423,203
Central	106,871	153,308	3.67	183,619	219,922
Northern	151,745	194,817	2.53	220,741	250,115
Western	92,186	114,938	2.23	128,340	143,305
Eastern	139,147	208,202	4.11	254,677	311,527
Lusfula	93,323	116,771	2.27	130,620	146,110
North-West	61,949	78,726	2.43	88,735	100,017
Southern	146,376	205,831	3.47	244,079	289,435
 ZAMBIA	 1,193,883	 1,643,853	 3.25	 1,938,008	 2,291,180

Primary School Enrollments as Percentage of School-Aged Population

Grade 1 Enrollments as Percentage of 7-year-old Population

	<u>1980</u>	<u>1985</u>	<u>1990</u>
Lusaka	64.1	71.2	55.7
Copperbelt	78.3	108.8	79.9
Central	91.9	102.8	100.8
Northern	105.2	129.6	106.0
Western	96.4	105.1	113.7
Eastern	88.0	88.3	83.5
Luapula	96.1	83.4	107.7
Northwestern	97.4	106.7	122.3
Southern	101.2	102.6	97.2
ZAMBIA	88.4	105.3	89.7

Total Primary Enrollments as Percentage of 7-13 year-old Population

	<u>1980</u>	<u>1985</u>	<u>1990</u>
Lusaka	81.6	87.7	74.7
Copperbelt	86.3	103.5	93.0
Central	92.2	108.1	105.6
Northern	87.9	105.1	86.9
Western	92.6	96.0	94.4
Eastern	77.8	78.7	83.2
Luapula	84.9	94.1	87.1
Northwestern	83.6	111.7	104.1
Southern	99.0	100.5	96.0
ZAMBIA	87.3	96.3	88.4

BASIC SCHOOLS

(a) Enrollments

	<u>Grade 8</u>	<u>Grade 9</u>	<u>Total</u>
1990	24,578	20,475	45,053
1991*	29,540		
1992*	30,069		

* Grade 8 Selection

(b) Number of Classes

	<u>Grade 8</u>	<u>Grade 9</u>	<u>Total</u>
1990	577	454	1,031

(c) Number of Teachers

	<u>Trained to Teach Grades 8 and 9</u>	<u>Redeployed from Primary Sector</u>	<u>Total</u>
1990	963	607	1,570

GIRLS AS A PERCENTAGE OF SCHOOL ENROLLMENTS

	<u>1980</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
PRIMARY SCHOOL						
Grade 1	49.3	49.2	49.2	49.5	49.2	49.7
Grade 5	46.1	47.1	47.0	47.1	47.6	47.9
Grade 7	40.6	41.8	42.2	42.8	43.2	45.1
Grades 1-7	46.8	47.1	47.2	47.4	47.6	48.2
SECONDARY SCHOOL						
Grade 8	37.8	41.8	38.5	38.8	35.7	41.2
Grade 12	28.0	33.6	32.9	30.8	34.4	33.9
Grades 8-12	35.1	36.6	38.0	36.7	37.3	38.7

GROWTH RATES OF PRIMARY SCHOOL ENROLLMENTS

	<u>1980-1985</u>	<u>1985-1990</u>	<u>1980-1990</u>
Grade 1	6.33	0.91	3.58
Grade 5	5.56	2.07	3.80
Grades 1-4	5.00	1.44	3.22
Grades 5-7	5.80	1.78	3.77
Grades 1-7	5.30	1.58	3.43

PROGRESSION RATES AND SCHOOL LEAVERS

PROGRESSION RATES

	<u>Gr. 4 - Gr.5</u>	<u>Gr. 7 - Gr. 8</u>	<u>Gr. 9 - Gr. 10</u>
1985/86	90.3	29.8	50.3
1986/87	91.8	25.0	34.8
1987/88	91.6	31.7	38.3
1988/89	91.8	26.1	38.3
1989/90	91.1	27.0	
1990/91		31.0	
1991/92		26.2	

SCHOOL-LEAVERS

	<u>Numbers who left School on Completion of</u>				<u>Total No. of</u>
	<u>Grade 4</u>	<u>Grade 7</u>	<u>Grade 9</u>	<u>Grade 12</u>	<u>School Leavers</u>
1985	18,597	123,404	19,833	13,575	175,409
1986	16,183	135,866	31,457	13,817	197,323
1987	17,103	122,231	28,694	14,783	182,811
1988	17,567	136,907	32,516	16,560	203,550
1989	18,397	137,687	33,463*	17,894	207,441

*estimate

GRADE 7 - 8 PROGRESSION RATE BY PROVINCE

	<u>1989/90</u>	<u>1990/91</u>	<u>1991/92</u>
Lusaka	20.0	16.6	15.0
Copperbelt	22.0	25.8	26.6
Central	21.1	22.2	19.6
Northern	32.4	34.3	28.1
Western	26.0	32.2	25.8
Eastern	45.1	46.3	37.5
Luapula	38.0	44.3	31.9
North-Western	38.0	37.9	29.1
Southern	24.0	43.1	30.2
Zambia	27.0	31.0	26.2

GRADE 7 - 8 PROGRESSION BY TYPE OF SCHOOL

	<u>1990/91</u>		<u>1991/92</u>	
	Conventional Secondary School	Basic School	Conventional Secondary School	Basic School
Lusaka	15.5	1.1	13.8	1.2
Copperbelt	15.6	10.2	18.3	8.3
Central	11.5	10.7	11.0	8.6
Northern	12.5	21.8	9.1	19.0
Western	12.1	20.1	8.6	17.2
Eastern	14.9	31.4	11.8	25.7
Luapula	24.7	19.7	18.6	13.3
North-Western	14.4	22.3	10.7	18.4
Southern	14.6	28.5	6.0	24.1
Zambia	14.8	16.2	12.7	13.6

AVERAGE SIZE OF PRIMARY CLASSES AND STUDENT-TEACHER RATIOS, 1989

	<u>Average Class Size</u>	<u>Student-Teacher Ratios</u>	
		<u>Number of Students per Teacher</u>	<u>Trained Teacher</u>
Lusaka	49.2	49.5	51.0
Copperbelt	44.9	45.9	52.2
Central	40.1	42.5	50.8
Northern	37.3	45.5	51.0
Western	35.1	37.6	42.6
Eastern	35.8	39.8	43.4
Luapula	34.8	38.5	44.9
North-Western	32.7	40.2	50.5
Southern	40.6	44.9	47.8
ZAMBIA	39.8	43.5	46.0

Number of Primary Schools and Classes by Province, 1989

	Complete Schools (Grades 1-7)	Incomplete Schools (Grades 1-4)	Classes
Lusaka	147	8	3,643
Copperbelt	262	5	7,036
Central	297	59	3,795
Northern	543	77	4,799
Western	308	84	3,095
Eastern	420	77	3,999
Luapula	268	43	2,933
Northwestern	275	50	2,487
Southern	437	98	4,805
ZAMBIA	2957	501	36,542

Number of Teachers

PRIMARY SCHOOLS

	<u>Trained</u>	<u>Untrained</u>	<u>Total</u>	<u>Percentage Untrained</u>
1980	17,365	3,807	21,172	18.0
1981	18,288	3,600	21,888	16.4
1982	19,734	3,697	23,431	15.8
1983	20,770	4,319	25,089	17.2
1984	23,281	4,270	27,551	15.5
1985	23,389	3,913	27,302	14.3
1986	26,627	2,254	28,881	7.8
1987	27,838	2,696	30,534	8.8
1988	29,306	3,042	32,348	9.4
1989	29,683	3,697	33,380	11.1
1990	29,950	5,241	35,191	14.9

SECONDARY SCHOOLS

	<u>Zambian</u>		<u>Non-Zambian</u>		<u>Total</u>		<u>Grand</u>
	<u>Graduate</u>	<u>Non-Graduate</u>	<u>Graduate</u>	<u>Non-Graduate</u>	<u>Graduate</u>	<u>Non-Graduate</u>	<u>Total</u>
1980	334	2,162	1,462	246	1,796	2,508	4,304
1981	428	2,649	1,339	234	1,767	2,883	4,650
1982	504	2,776	1,101	220	1,605	2,997	4,602
1983	658	3,063	884	167	1,542	3,230	4,772
1984	826	3,329	737	151	1,563	3,480	5,043
1985	869	3,732	741	162	1,610	3,894	5,504
1986	924	3,785	668	122	1,592	3,907	5,499
1987	948	4,242	569	97	1,517	4,335	5,852
1988	153	4,225	417	91	1,470	4,316	5,786
1989	989	3,486	580	121	1,569	3,607	5,176

PRIVATE SCHOOLS

PRIMARY SCHOOLS

	No. of Private Schools	Enrollments in Grades 1-7	Priv. Sch. Enroll- ment as % of Total Primary Enrollment
1980	18	5,820	0.6
1981	23	7,132	0.7
1982	23	7,301	0.7
1983	27	8,329	0.7
1984	29	7,761	0.6
1985	37	8,157	0.6
1986	42	11,493	0.8
1987	38	9,356	0.7
1988	n.a.	11,679	0.8
1989	n.a.	13,400	0.9

SECONDARY SCHOOLS

	No. of Private Schools	Enrollments in Grades 8-12 Secondary Enrollment	Priv. Sch. Enroll- ment as % of Total
1980	13	2,968	3.1
1981	18	4,172	4.2
1982	27	6,542	6.2
1983	39	8,573	7.4
1984	36	9,288	7.4
1985	39	8,314	6.3
1986	n/a	n/a	n/a
1987	n/a	8,691	6.2
1988	47	8,197	5.1

Appendix 13: Public Expenditure on Education

	<u>Total Public Expenditure</u> (in millions of current Kwacha)	<u>Public Exp. on Education</u>	<u>Public Exp. on Education</u> (in millions of 1984 Kwacha)	<u>Public Exp. on Education as Percent of Total Publ. Exp.</u>	<u>Public Exp. on Education as Percent of GNP</u>
1981	1,386.7	150.1	212.3	10.8	4.4
1982	1,595.8	214.8	294.6	13.5	6.6
1983	1,476.4	224.9	265.2	15.2	5.7
1984	1,484.6	249.2	249.2	16.8	5.5
1985	2,184.3	293.3	204.8	13.4	4.6
1986	5,382.9	433.1	165.1	8.0	4.1
1987	5,867.8	602.8	150.1	10.3	3.4
1988	8,359.4	723.5	114.9	8.7	2.8
1989	12,376.5	1,302.4	97.7	10.57	2.1
1990	31,381.6	2,646.2	102.2	8.4	2.6
1991*	50,131.3y	6,497.0	139.0	13.0	3.6
1992**	90,212.3	12,952.1	---	14.4	---
1981-85			1,226.1	13.8	5.3
1987-91			590.0	9.8	2.9

* revised budget

** budget

Recurrent and Capital Expenditure on Education
and Total Expenditure per Member of the Population

	Recurrent Expenditure as Percent of Total Public Expenditure on Education	Capital Expenditure as Percent of Total Public Expenditure on Education	Total Educational Expenditure per Member of Population	
			in current Kwacha	in 1984 Kwacha
1981	96.0	4.0	25.8	36.5
1982	92.6	7.4	35.1	48.1
1983	92.7	7.3	36.2	42.7
1984	92.0	8.0	38.8	38.8
1985	92.9	7.1	43.6	30.4
1986	93.7	6.3	62.3	23.7
1987	87.3	12.7	78.6	19.6
1988	93.8	6.2	96.1	15.2
1989	92.1	7.9	167.0	12.6
1990	91.8	8.2	338.4	13.1
1991*	83.7	16.3	810.1	17.3

* revised budget

Expenditures by Level of Education: Percentage Distribution

RECURRENT EXPENDITURE

	<u>1970-74</u>	<u>1975-79</u>	<u>1980-84</u>	<u>1985-89</u>	<u>1990</u>
Primary Schools	44.5	46.6	45.0	39.0	30.6
Secondary Schools	23.3	22.3	20.7	20.4	23.1
Teacher Training	2.8	2.9	2.8	3.0	4.7
Technical Education	8.5	8.0	6.6	5.4	5.0
University Grants	8.1	9.2	12.3	13.1	8.9
All Bursaries	1.4	1.3	3.7	5.9	6.6
Other	11.4	9.7	8.8	13.3	21.1

CAPITAL EXPENDITURE

	<u>1970-74</u>	<u>1975-79</u>	<u>1980-84</u>	<u>1985-89</u>	<u>1990</u>
Primary Schools	16.3	18.4	16.2	4.0	11.3
Secondary Schools	34.0	28.7	35.5	38.2	13.9
Teacher Training	5.1	5.9	4.3	2.1	6.4
Technical Education	30.6	19.7	7.9	9.4	4.2
Universities	11.8	16.3	12.0	8.5	8.2
Centrally Administered *	2.3	11.0	24.2	33.7	56.0

* Much of the donor aid to education is administered centrally and is booked to capital expenditure.

Public Recurrent Expenditure per Primary Student

	<u>Expenditure in Current Kwacha GNP per capita</u>	<u>Expenditure in 1984 Kwacha</u>	<u>Expenditure as Percent of</u>
1975	39.2	116.6	12.7
1980	52.4	82.2	10.5
1981	58.7	83.0	10.2
1982	79.5	109.1	14.7
1983	81.5	96.1	12.9
1984	80.5	80.5	11.3
1985	88.6	61.9	9.4
1986	109.4	41.7	7.2
1987	135.7	33.8	5.6
1988	192.7	30.6	5.6
1989	279.1	20.9	4.1
1990	510.0	19.6	3.9
1991*	1,284.7	27.5	5.6

*revised budget

Total Public Expenditure per Student by Educational Level

(a) Expenditure per Student in Current Kwacha

	<u>1980</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
Primary	54.6	89.2	115.0	139.1	194.0	279.1
Secondary	295.1	478.8	620.4	846.5	963.7	2,020.9
University	4,070.3	11,677.4	18,389.5	23,195.4	13,621.9	43,119.3

(b) Expenditure per Student in Constant 1984 Kwacha

	<u>1980</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
Primary	85.7	61.9	43.8	34.6	30.8	21.0
Secondary	463.1	332.3	236.4	210.7	153.2	151.5
University	6,388.2	8,101.8	7,008.3	5,773.3	2,165.9	3,233.9

**(c) Expenditure per Secondary and University Student
as a Multiple of Expenditure per Primary Student**

	<u>1980</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
Secondary	5.4	5.4	5.4	6.1	5.0	7.2
University	117.0	90.9	159.9	166.7	70.2	154.5

SECONDARY SCHOOL BOARDING COSTS

	Total Expenditure on Boarding (K millions)	<u>Cost per Boarder (Kwacha)</u>			Official Boarding Fee (K)
		All Schools	Government Schools	Grant-aided Schools	
1987	33.70	529	724	156	300
1988	69.12	1,214	1,449	522	300
1989	208.67	3,664	4,637	1,006	300
1990	239.78	3,199	5,116	1,618	600

1990 Costs per Boarder in Government Schools

Province

Lusaka	K8,331
Copperbelt	K4,811
Central	K7,034
Northern	K2,078
Western	K6,661
Eastern	K2,815
Luapula	K3,608
North-Western	K8,188
Southern	K6,847
Zambia	K5,116

- Notes:
- (1) all figures are provisional
 - (2) costs for government schools refer only to costs for provisions; costs for grant-aided schools refer to all boarding costs other than salaries of cooks, etc.

Development of the Salary of a Primary Teacher

	<u>Annual Salary* in Current Kwacha</u>	<u>Annual Salary in 1984 Kwacha</u>	<u>Salary as Multiple of per Capita GNP</u>
1981	3,288	4,651	5.7
1985	4,992	3,486	5.3
1987, March	5,232	1,302	2.2
1987, May	6,390	1,590	2.7
1987, Oct.	6,402	1,593	2.7
1988	10,572	1,681	3.1
1989, July	15,864	1,190	2.2
1990, Jan.	18,864	728	1.6
1990, June	34,896	1,347	2.9
1991, Jan.	39,312	841	n.a
1991, Aug.	78,624	1,683	n.a

*The data give the starting salary of a two-year trained primary teacher with full secondary education.

