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ABSTRACT

This document describes a cooperative venture in which leading African educators from Sierra Leone, Nigeria, the Ivory Coast, Mali, the Congo, Uganda, Tanzania, and Kenya examined the significant problems affecting secondary teacher supply, and questions related to the qualitative improvement of the individual teacher. The situation in each country is examined in separate chapters, and certain common priorities and problems are discussed in the concluding section. The priorities which emerge are 1) the redefinition of the objectives of education relevant to the needs of Africa, with emphasis on African history and culture, the addition of manual and agricultural arts to the curriculum, and an improved relationship between the school and community; 2) the Africanization of secondary school administrators and teachers to replace expatriate personnel; 3) the preparation of secondary teachers; 4) the preparation of teachers capable of initiating curriculum change in the secondary school; 5) training for leadership, management, and planning; 6) greater coordination between universities and non-degree granting institutions in the preparation of teachers for lower secondary levels; 7) an integrated course of general and professional studies at university level for the upper secondary schools. (MBM)

PRIORITIES FOR THE PREPARATION OF SECONDARY SCHOOL TEACHERS IN MIDDLE AFRICA

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Editor

THE INTERNATIONAL COUNCIL ON EDUCATION FOR TEACHING
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PREFACE

INTERNATIONAL COUNCIL ON EDUCATION FOR TEACHING

The International Council on Education for Teaching is a worldwide, voluntary association of organizations, institutions and individuals dedicated to the improvement of teacher education. ICET serves as an independent professional organization linking the world's teacher education community in cooperative educational enterprises including research, communication, and other programs designed to create closer bonds, on a multinational basis, among teacher educators everywhere. The Council's concern for inservice teacher education is reflected in its membership in the World Confederation of Organizations of the Teaching Profession.

Since its formation in 1953, ICET members have conducted a variety of projects seeking to identify and respond to major social, political and developmental problems in order to affect continuing change and reorientation in the preparation of teachers. The Council regards institutions of teacher education and the teaching profession as a vital link between the intellectual activities of higher education and the vital problems affecting social mobility, economic viability, and human betterment--the quantum leap in aspirational goals of peoples in developing and developed nations.

The Council possesses a worldwide network of scholars and educators, coordinated by its secretariat, who can undertake projects of evaluation, curriculum consultation, surveys of educational needs and priorities and

conduct conferences and workshops to examine and disseminate innovative teacher education concepts and programs for pre-service and inservice professional needs.

This volume, Priorities for the Preparation of Secondary School Teachers in Middle Africa, is one such cooperative venture. Leading African educators and specialists in African education served as research consultants and authors to examine the significant problems affecting secondary teacher supply as well as questions related to the qualitative improvement of the individual teacher.

The major problems and future objectives and practices related to improvement in the quality and quantity of secondary teacher education in Africa were the focus of an ICET World Assembly conference held in Abidjan, The Republic of the Ivory Coast, in July and August, 1969. The participants' comments were subsequently incorporated in the revised country papers. ICET hopes that the substantive questions raised and solutions offered will serve to bridge the communications gap within Africa and inform international donor agencies of the contemporary teacher education issues facing practitioners and planners in Africa.

The Council expresses its appreciation to UNESCO for the financial support it has given, the authors and editor of the report, and Mrs. Claudia Nevins, special assistant to the editor and ICET administrative assistant.

David Johnston
University of London
President

FOREWORD

This volume attempts to document, in selected countries that gird sub-Saharan Africa, the major problems and prospects affecting the development of secondary education and the preparation of teachers for this level. A total of eight nations were selected for this study as representative and illustrative of conditions in western, central and eastern Africa and affected historically, by three major colonial powers whose medium of communication and instruction, French and English, have left indelible marks on the cultures of the eight countries. Furthermore, the authors selected to contribute to this analysis came from three different levels of the educational system--the university, the teachers college (Ecole Normale Superieure) and the teachers association--but all involved in some manner in teacher education and well acquainted, through research and experience, with the major educational problems of their country.

With the assistance of a UNESCO grant and coordinated by the International Council on Education for Teaching, authors were invited to participate in a cooperative endeavor to identify the major priorities for the preparation of secondary school teachers in their respective countries. Included in this study are Sierra Leone, Mali, Ivory Coast Republic, The Republic of the Congo, Nigeria, Uganda, Kenya and Tanzania.

In accepting the task to contribute to this volume, each author was requested to consider three major areas:

1. The current practices and future plans related to the preparation of secondary teachers.

2. The persistent and crucial problems that faced each nation as it sought to improve educational opportunities for secondary teacher education.

3. The priority areas for future action in teacher education with special reference to the preparation of secondary teachers.

After the completion of the studies, the findings were the subject of an ICET World Assembly held in Abidjan, the Ivory Coast, in July and August, 1969 which attracted representatives from other African countries including Liberia, Ghana, Dahomey, the Cameroons, Ethiopia and Senegal as well as from Asia, Europe and the Americas.

The country reports have been modified where necessary as a result of the ICET meeting and a prefatory and summary chapter included designed to provide a rationale and overview of the major findings.

While the report does not claim to be comprehensive, the ICET hopes that it will provide some insight into the major problems affecting major African regions and buttress the contention that teacher education must play a much more significant role if education is to serve as an agent of modernization.

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December, 1969

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Frank H. Klassen

Chapter I

TEACHER EDUCATION: A PRIORITY FOR HUMAN DEVELOPMENT IN AFRICA

Frank H. Klassen

Teacher Education and Human Development

As the termination of this first "Development Decade" draws near, men and nations are reminded of the magnitude of the task that has been undertaken to rid the world of the scourges of poverty, illness and illiteracy. While the effort to eradicate them continues unabated, the rapid pace of political, economic and scientific change during this decade has created new subsystems each with their own discrete as well as interrelated sets of problems--each calling for new accommodations and a redefinement of objectives within the overall strategy to combat humanity's persistent problems. For example, the achievement of independence, the population explosion, the depletion of natural resources, and the growing unrest of the world's youth have created additional challenges demanding new solutions. Faced with these challenges, intensive effort has been made to discover root causes, to identify causal relations, to encourage multinational cooperation and to create a technology capable of transforming man's helplessness into national and international control over human destiny.

But in the welter of technologies, techniques, processes and models that have emerged as men sought to resolve societal problems, one fact has become clear, the world's human resources and their development are of primary

significance and must serve as the major target on which future developmental efforts must focus. The adequacy of political arrangements, the viability of economic systems and the technology that supports them will be dependent on individuals and groups whose capacities and sympathies have undergone progressive change.

From whatever vantage point one views the concept of human resource development and its relation to political and economic progress, it is difficult to conceive of their interrelationship without the existence of an adequate educational system. For it is an unhappy fact that during the "Development Decade" the "have-not countries have been finding that even with foreign help and their own development programs, food, supplies, production of goods, housing, jobs have either barely kept up with their rising populations or have fallen behind. The gap has widened, not narrowed, and the basic problem grindingly returns to the lack of educated manpower to give leadership in planning and trained capacity in action."[1]

Therefore, those who would put a nation's natural and human resources to the best possible use are charged with the responsibility for developing an educational system capable of transforming human potential into human productivity--a productivity that supplies new momentum to a society's economic, political and humanitarian life.

The teacher in such an educational system performs a significant function since his role is to perpetuate society's heritage and simultaneously to energize human resources toward social progress. If it is accepted that the

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[1]Harold Taylor, The World and the American Teacher, Washington, D.C.: American Association of Colleges for Teacher Education, 1968, p. 18.

teacher is a central element in the formal education of a nation's human capital and that the level of education cannot rise far above the quality of the teacher in the classroom, then the selection and preparation of these teachers are of significant social concern. Concerted effort must be made, therefore, to produce the best teacher that a nation can afford.

Furthermore, teacher education provides a vital link between a nation's institutions of higher learning and the public they are designed to serve. Not all youth, even in the most affluent societies, can personally and directly be enrolled in a college or university, even though these institutions are usually supported by the public at large. The benefits of higher or tertiary education to the majority of the population are thus generally transmitted by the teacher who is a product of this higher education. The institutions that educate teachers, the teacher educators themselves, and the governmental departments concerned with teacher training are thus clearly a part of a nation's overall strategy in the development process.

This volume, which focuses attention on Middle Africa, is predicated on the assumption that all nations, and specifically those whose national survival depends on increasing the rate of change, must give high priority to the preparation and improvement of teachers. In so doing, several vital and sensitive areas of a nation's life are affected:

1. By affecting the quality of the teacher's performance, the nation reaches into the lives of people at a much deeper level than that achieved merely by an increase in the availability of material goods. The teaching process affects attitudes, emotional commitments, societal involvements, as well as the development of skills and vocational viability.

2. In undertaking assistance to an institution of tertiary or higher education for the preparation of teachers, the nation, theoretically at least, provides a link between the institution of higher education and the public at large. It thereby provokes in institutions of higher learning a concern for urgent societal needs to which its knowledge can be applied and directed. In such a situation the potential for collaboration between the traditional academic disciplines and the professions, such as teacher education, is expanded and the application of knowledge to socially relevant needs is accelerated.

3. In focusing on the teacher as a change agent, new relationships are established between the school and society. This is especially true in agricultural economies where self-subsistence modes of life must give way to more productive practices and the natural hazards and land deterioration brought under increasing control. Responsibility for creating such changes in the economy are not the sole province of elementary and secondary school teachers or their preparatory institutions, but their role is nevertheless a significant one when it is related to the educational implications of newly achieved independent statehood. With the achievement of independence, new vocational choices and new opportunities for responsible participation as a citizen in the life of the nation are created. These conditions demand an intelligent awareness of the country's contemporary problems and potential. A sensitivity to its indigenous past, a new identification with a nation freed from colonial rule and a commitment to its future development give fresh impetus to teacher education as a nation building agent. By examining their own culture, their own history, and themselves as the progenitors of future social achievements the teaching profession opens up vistas to students heretofore seen only through expatriate eyes.

The Selection of Priorities

The selection of certain objectives, certain priorities over others must be made in the context of the pressures and conditions that create the problems for a system as well as those aspirations and changes in human organization and advancement that open new opportunities for the products of a system. The final selection of priorities for the preparation of secondary teachers for Middle Africa is thus no easy task. Nation-building models solely confined to the production and retraining of manpower for an economic system lack both usefulness and credibility when, for example, political pressures and changes create new criteria for the selection of priorities, sometimes unrelated to manpower needs. Furthermore, the aspirational levels of peoples are not easily charted, nor is their direction or magnitude easily controlled.

The worldwide unrest of youth is a case in point. The impact that this condition has made and is continuing to make on the selection of educational priorities was, if not unforeseen, at least disregarded by the majority of educational planners at all levels of the formal educational system. Student militancy and its outcome, the students' desire to play an increasing role in the decision making process that affects their own education, finds certain general parallels in developing countries. The parallel is expressed in the idea that the release of energies, intellectual and political, created by the relaxation of oppressive bonds on previously subjugated strata in society is always potentially present, waiting to impose sudden and new priorities on an education system.

Priorities, including those suggested in this volume, are thus not static and must be continually revised to cope with the changing character of the human condition.

But while a certain transiency characterizes the determination of priorities over time, the educator and policy maker can and should be cognizant of insistant realities and future projections that guide his selection. A partial, but by no means exhaustive set of conditions that assist in the selection of priorities includes:

1. The availability of educational opportunities and the human flow through the system to meet the total social cultural, economic and political needs of a society. This includes both the expanding numbers at the input base of the system and their distribution throughout the various levels of the system.

2. The availability of trained, qualified personnel to teach at appropriate levels. Within the context of post independence Africa, the ethnic character of this personnel and as well as the specialized competencies required must be taken into consideration.

3. The present and future availability of capital resources to create the institutional structures within which education takes place and to provide the learning materials for students.

4. An examination of the diverse opportunities for career fulfillment and mobility and the societal ideals and aspirations on behalf of which the educational system must exert its efforts.

These conditions provide, in large measure, the data and general direction for the establishment of a teacher education system consonant with and potentially contributory to national advancement.

But given these conditions, choices still must be made. The multiplicity of needs in sub-Saharan Africa, each with their own warrant and legitimate claim for immediate attention, must be ordered in time and according to

available resources. In the field of teacher education it has been suggested that concensus regarding selected objectives and means to achieve them is a possible first step for determining which sector will receive the concentrated application of national resources.[2] But who should be a party to this consensus is not always clear, nor does it ensure that society will best be served by those, who for a variety of reasons, occupy a seat at the bargaining table.

This study of priorities for the preparation of secondary school teachers in Middle Africa has, nevertheless, utilized a similar strategy.The priorities examined in great detail in subsequent chapters highlight, when reviewed as a whole, the existence of certain common elements, certain common aspirations and similar inhibiting factors characteristic of all the nations studied. There is a consensus--and in arriving at it independently and from a variety of perspectives--the priorities assume considerable significance and merit serious consideration at national and regional levels.

It is difficult, in the light of the different developmental stages achieved by the nations under study and the varying historical precedents they have experienced, to assign a single hierarchical structure to the priorities as a whole. And no attempt has been made to do so other than to point to the major areas of agreement (Chapter X).

The same is true for the persistent and crucial problems that face each nation as it attempts to improve its educational opportunities for secondary teacher education. A brief review of these problems will provide the reader with some insight into the magnitude of the tasks that lie ahead.

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[2]Laurence D. Haskew, "Priorities for Teacher Education," in Reality and Relevance, The 1969 Yearbook, American Association of Colleges for Teacher Education, Washington, D. C. 1969, p. 134.

Secondary Teacher Education in Middle Africa - Problems and Prospects

The selection of priorities for secondary teacher preparation as the focus for this study was prompted by several factors. It was not meant to discredit the significance of elementary and fundamental education so necessary to provide rudimentary literacy, an expanded base for literate citzenship and the first rung to higher levels of education. Nor was it designed to create the impression that secondary education should necessarily be terminal in character and thus encourage the universities to maintain an elitist enrollment system unrelated to societal aspirations. Finally, it was not meant to indicate that the secondary school occupied either a unique or exclusive place in the educational ladder, whose priorities in any way superseded those of the rest of the system.

More positively, secondary education was selected because of its role as a gatekeeper to advanced professional and university studies and secondly because it represents that educational level which will, in the near future, experience the most acute pressure toward expansion and diversification as the broadening elementary school base seeks to provide an outlet for its students.

Furthermore, secondary education in most of the African countries provides the major input into the teacher education system and is, under present conditions, the prime supplier of teachers for primary education.

As indicated previously, the establishment of priorities for teacher education proceeds both from an analysis of the context within which education is carried on and the future opportunities that are made available to the products of the system. In addition, the national desire to create a new social, cultural, political and economic environment plays its role in the determination

of priorities. As an introduction to the more detailed analysis in subsequent chapters, a brief overview of the contextual and aspirational conditions and problems conclude this analysis of the role of teacher education in the development of human potential with specific reference to secondary education.

1. The last two decades have witnessed a tremendous expansion, proportionately and in aggregate, in the enrollment of elementary education in sub-Saharan Africa. In the Ivory Coast the numbers of children enrolled during this period has increased almost 1,000 percent, while the percentage of school age children has risen from four percent to thirty percent. This phenomenal growth is characteristic of other African countries. It has however, been impossible for secondary education to respond effectively to the corresponding pressures that elementary expansion has exerted on it. In Nigeria, for example, while three million children are enrolled in the elementary system, there are only 210,000 places available in the secondary schools and only 10,000 university places. The very dearth of space and teachers serves to make elementary education terminal for the majority and elitist for the minority because of the highly competitive nature of secondary entrance.

2. A major inhibitor of growth in the secondary system is the lack of adequately trained teachers in specialized subject matters and professional competencies. Lack of prestige, status and inadequate remuneration play a part, but so does the two and three tier system of teacher preparation for teachers at various educational levels, which restricts and inhibits the improvement of the unqualified or poorly qualified teacher.

Secondly, with the achievement of independence a natural desire to Africanize the secondary teaching force has become national policy in order to develop an educational content consistent and related to indigenous

developmental goals. At least ninety percent of the secondary teachers in the Ivory Coast are expatriates who, it is claimed, serve to perpetuate colonial models rather than draw the substance of the curriculum from the indigenous cultural roots and the contemporary realities of African society.

3. Financial support and the shortage of physical plants also serve to inhibit secondary school growth. But in relation to teacher education the lack of adequate coordination among the various institutions that prepare teachers and the lack of relationship between academic and professional training are far more serious obstacles to the development of a professional cadre of African secondary teachers capable of serving as instructors, leaders, and partners in the development of curricula that are relevant to the African context and of an academic quality that opens the door to advanced studies or other social service.

4. The shortage of African teachers in secondary schools is exacerbated by the alternative sources of employment in government and administrative posts in education.

These and other problems are inextricably interrelated, thus compounding an already serious problem related to the quantitative and qualitative preparation of Africa's secondary school teacher. The restraints on the system are clearly recognized and the following chapters document both the means that have been employed to counteract them and to reaffirm their basic belief that education is the key to individual development and national growth.

Chapter II

SIERRA LEONE

Victor E. King

SIERRA LEONE

I. The Changing Scene in Sub-Saharan Africa

Secondary education is going through a period of transition from the predominantly literary and academic curriculum to a diversified one which includes: (1) the humanities, (2) the sciences and (3) technology. This is in response to the demands of the modern, scientific and highly technological world. In the less developed countries of sub-Saharan Africa, these demands are even more pressing and urgent because with the phenomenal improvement in the various systems of communication, the world has shrunk so significantly that the interdependence of the developed and underdeveloped, of the manufacturer and the primary producer, is now more apparent than ever. Apart from this interdependence, society in the developing countries is undergoing profound changes which call for adjustment. This adjustment implies a review of needs, a rethinking of values and value systems, and the maintenance of social equilibrium. It also implies knowledge - scientific knowledge. The very art of living even at village level, now calls for a degree of sophistication because of the need, for example, to increase agricultural production and the need to combat effectively natural hazards such as soil erosion, drought, floods and pests. The preparation of teachers must therefore take into account society's pressing needs.

The major problems which confront us in the preparation of teachers can be summarized thus:

A. Recruitment: In this connection, the adequacy of the supply is a primary consideration.

B. Training: The eventual qualifications and skills of the future teacher and the educational aspiration of students must be taken into account.

C. Retention: Problems of status, prestige, employment incentives and alternative employment opportunities must be examined and resolved.

II. The Training and Qualifications of Teachers

In what respects should secondary teachers be competent? First, and as a matter of course they should be competent in the academic disciplines which they will be called upon to teach. Secondly, they should be competent in the techniques of measurement and evaluation. I am not suggesting that they should be experts; they cannot be experts in the short period of training. But inasmuch as they have to test their own work, inasmuch as they have to determine the promotion of pupils, the progressive advance of pupils within the school, inasmuch as many of them are now called upon to participate in the external examinations which exert such great influence in our schools, it is imperative that these teachers achieve some competence in evaluating techniques. The high failure rate which has become a characteristic feature of many secondary schools, particularly in Sierra Leone, is due in large measure to bad testing, bad evaluation, and faulty examinations. Thirdly, secondary teachers should be competent in pedagogy. One aspect of pedagogy, which should be emphasized is the proper understanding of the significance of individual differences. The force of the impact of western civilization on sub-Saharan Africa has been varied. In some areas, the impact has been greater than in others. As a result, there has been uneven development. Children from different areas, even in the same country, enter secondary school unequally prepared for secondary education.

This means that, despite the entrance examination which we set, they differ in scholastic achievement as well as in mental maturity. They also enter at different ages which results in a wide chronological age range. The net result of this combination of inequalities and discrepancies is a high incidence of backwardness in specific subjects, as well as of general retardation.

In 1956, I made a detailed study of a random sample of 120 primary school children just before they were due to transfer to their secondary schools. I made use of attainment tests, intelligence tests, (individual and group, home-made and standardized,) reading ability tests, interviews, socioeconomic background information. The majority of pupils were two to three years retarded, generally, in addition to specific backwardness in either reading ability or number. Such is the situation which the secondary teacher has to face and for which he should be adequately prepared. That is why I stress this second need for competency in pedagogy. Besides that, there has been a change in the approach to the teaching of the fundamental subjects in the secondary schools. We hear today of the new mathematics and the new science. It is not that these things are new, it is just that we have been doing things in the wrong way. We have come to realize now that we have got to think and relate methodology to the actual situation. Teachers, therefore, should receive specific training in this so called new method. Later I shall refer to how we are trying to cope with this in Sierra Leone, which will exemplify the point I am trying to make.

Further, in the past, the teacher's training in his academic disciplines has been separated from his training in pedagogy. The less developed countries have accepted, uncritically, the suggestion that the two types of training were best kept separate. The outcome has been that a short, hurried and

inadequate professional training has been superimposed on a longer and deeper study of academic subjects.

The assumption has been that, if a person knows his subject, he will be able to teach it. This assumption has proved false in too many cases. In some, not only is the first class honors man not able to put across much of what he has learned, but it also happens that some do not want to pass on the knowledge no matter how brilliant he may be. The present trend, therefore, is toward the integrated training program. And here I shall briefly describe the type of integrated program which, I am convinced, is superior to the superimposed professional training. At Njala University College, the University of Sierra Leone, we recognize that the schools from which the students come are uneven in quality and the students are not adequately prepared for university work, especially in the sciences. And so we have planned a four year program. The first year is devoted to a general curriculum which is partly remedial, partly diagnostic and partly liberal. During that one year, we have an opportunity to study the students who offer themselves as candidates for teaching, in order to find out what their interests and aptitudes are. And we do put them through a severe scientific program. But we do not allow them to decide on their academic discipline until the end of the first year. It is then we say to them, "Now that you have got to this point and you have done fairly well in this general curriculum what would you like to teach in secondary school? You are required to offer one major and one minor academic discipline." When that is decided, the second, third and fourth years are devoted to intensive study of these academic disciplines as well as how to teach them so that the integration takes place for three years. During that period, apart from their academic subjects, they are given courses in the

philosophy of education. We do put a lot of emphasis on that because we realize that because of the changing scene in Africa, and particularly tropical Africa, we need a new philosophy of education. And we try to get the students to interpret the needs of their society and to appreciate that education must meet those needs. They are also taught introductory psychology, educational psychology, and the development of educational thought, so that they will be able to draw upon this universal stream for the purposes of the adaptation which we emphasize. There is also some comparative education. In their fourth year, they have an intensive course in school administration and organization. That is the type of integrated course which we give and which we feel is superior to the program in which a person goes for B.Sc. honors in chemistry and then spends three terms trying to get all the professional training which we think he needs. The result in the latter case is that these students do not remain in teaching. I have mentioned that as the way in which Njala University College has tried to cope with what we consider to be the priorities in teacher training.

Other secondary school teachers are trained, at the sub-degree level, in what we call the advanced teachers college. There they are admitted with slightly lower entrance requirements, usually four O-levels in the general certificate of education examination. They are put through a three year integrated course in which they too select not more than two academic subjects but they concentrate one plus their professional training in preparation for teaching in the lower forms of secondary schools. This is a temporary arrangement because the need for secondary school teachers is so great that the demand far exceeds the available supply. There is also the post-graduate certificate in education to which I have referred, which has not been to successful because far too many of those who go in for a degree, followed by the diploma or

certificate, teach for one or two years and move out, - some to medicine, others to law, others still to business. You find, therefore, that after five years the number of practicing teachers with the post-graduate certificate is very small.

Few if any training programs for training teacher college staffs in sub-Saharan Africa exist. I refer specifically to those training colleges which train teachers for primary schools. This is a priority need and leads to a consideration of recruitment.

III. The Recruitment and Retention of Teachers

At present I observe that the training college teachers are recruited from anywhere - from primary schools, from secondary schools, and directly from secondary school teacher training programs. There have been cases of training college teachers who had themselves never attended a training college at the time of their recruitment. They had obtained the local teacher's certificate by independent study and acquired experience over five or ten years, and because they were successful at that level they were drafted to the staff of a training college. A recent survey by the Institute of Education revealed that, even in 1968/69, thirty percent of the total training college staff had no professional qualifications and 2.6 percent are academically and professionally unqualified.

Other teachers drift from secondary school teaching to the training colleges with no previous experience of primary school work. Others join the staffs of training colleges from their training college even though that training college does not train college teachers. One example will suffice: A candidate straight from secondary school, with four O-level passes at the general certificate of

education examination (G.C.E.), enters an advanced teachers college and obtains the higher teachers certificate (H.T.C.) after three years. He has never taught in a primary school but, on completion, he is taken on the staff of a training college. This happens and nothing can be more unsatisfactory. For this reason I think there is a high priority need for some provision to be made for the training of those who would teach in training colleges. It is my view that the staff of training colleges should have had previous experience of teaching in the primary schools or alternatively should be specially trained for the job. In Sierra Leone, particularly at Njala, we are encouraging primary school teachers to qualify for university entrance and then to proceed to a degree and further professional training. I'll give you an example of what I mean. We have a practicing school at Njala which is a primary school and we encourage teachers to come to that school. We provide inservice courses in academic subjects, encourage them to go in for the GCE and qualify for university entrance. We receive them into the degree course and give them more academic training as well as more professional training.

When they graduate, they are qualified to teach either in a secondary school or in a training college. Quite recently one such teacher who got the TAC qualification taught for some years. He was then attracted to Njala University and has now completed his degree with a first division pass. Such a person I could confidently recommend as he is the type of student we want in the training colleges. I submit, therefore, that the need for training programs specifically designed for those who are going to teach in the training colleges is an urgent necessity.

As regards primary and secondary schools, there are not enough teachers for the schools we have; a general inadequacy in West Africa.

The Institute of Education in Freetown is responsible not only for the conduct of the entrance examination into the training colleges but also for devising the programs for the different teacher's certificate examinations. In March, 1969, we invited student applicants for the primary teachers colleges and there were 1200 applicants. For the examinations only 844 turned up. Of this number only 200 passed, most of them at concessional level. Only about fifty of these obtained clear passes. We had to make the concessions in order to be able to admit 200, when actually we needed 400 to take up available places.

What pertains to other African countries today is true of Sierra Leone as well, that most of the teachers in the training colleges and a large percentage of those in the secondary schools are expatriates. Of course we welcome them and we appreciate their services. But this is a situation that cannot continue indefinitely. The balance has to be redressed. Because of the extent of this inadequacy the problem of recruitment is indeed a serious one which has to be considered.

Equally important, I should say, is the problem of the retention of the teachers that have been trained. There is a disastrously large wastage of trained personnel. Why is this so and why must it be the concern of all who are interested to ensure that those who are trained remain in the teaching profession?

First of all I submit that the duration of his training is one aspect in respect to which the four-year integrated program tends to ensure greater dedication. By the time a student completes four years of training, he would have made up his mind that there is something in teaching which should make him stay, or he would have dropped out earlier. By that time he considers himself a

professional. There is, I think, a better chance of retaining such a person. On the other hand the student who goes in for a straight degree followed by a much shorter professional training is more likely to be attracted elsewhere.

Secondly, the teachers prospects within the profession should be considered. What I have observed - and this is true not only in Sierra Leone but also throughout West Africa - is that however poorly equipped many teachers may be, there is a desire to improve, among the majority. Unless the situation in which they work allows improvement through inservice courses and upgrading, the teachers soon feel they are in a blind alley and are so discouraged that they move out. The teaching profession must, therefore, provide for inservice and refresher courses.

What, in effect, I am recommending here is what we are already trying out in Sierra Leone, namely, a lifting of the professional ceiling. It is now possible, as I have described above, for the holder of an ordinary teachers certificate to attend inservice courses in order to qualify for university entrance. It is also possible for one who obtained the higher teachers certificate (H.T.C.) at a high pass level to proceed to a shortened degree program covering two years. The teachers certificate is therefore, not the end of the road for such a person.

By lifting the professional ceiling, therefore, and by making the other conditions of service including financial remuneration relatively attractive we hope that there will be less wastage of trained personnel.

IV. Summary

Priorities for the preparation of secondary teachers dedicated and responsive to urgent intellectual and social problems in Sierra Leone include:

A. An integrated university based curriculum, including courses in the academic disciplines, pedagogy, measurement and evaluation and practical experience throughout the university career of the prospective teacher.

B. A ladder and in-service system which permits less qualified teachers to achieve university qualifications relevant to secondary teaching.

C. Establishment of higher standards and appropriate educational opportunity for experienced secondary and elementary teachers to assume positions in teacher training colleges.

D. Expanded secondary teacher supply to produce secondary school graduates who will eventually, through further training, assist in the localization of staffs to replace expatriates.

E. Lifting the professional ceiling through additional inservice courses as inducements to teachers to remain in the profession.

Chapter III

NIGERIA

Prof. A. Babs Fafunwa

NIGERIA

It cannot be over-emphasized that teacher education in the African context is the key to African development. To develop its human and material resources the continent requires the services of well-trained, competent and dedicated teachers both at the primary and the secondary levels. We are, however, concerned with the problem of secondary teacher preparation in this paper.

Before we proceed to the listing of priorities in this area we need to review, though briefly, the present state of affairs with regard to secondary teacher preparation in Nigeria. Traditionally there are three principal routes that are open to those who wish to qualify for a teaching position in the Nigerian secondary schools.

The first and the most common avenue is through the teacher training colleges, viz, grade III teacher training college and grade II teacher training college. Candidates who complete a six or seven year primary education may proceed to the grade III college after serving for a year as a pupil-teacher. After successful completion of a two-year course, mostly in methodology and some general education, the candidate is certificated as a grade III teacher. This means that he may teach at the lower level of the primary school. Some five years ago the grade III colleges were disestablished in Nigeria. However in 1966, over thirty percent of the teaching strength in Nigeria was made up of this category of teachers and another thirty percent had lesser qualifications

(see Appendix III). To advance to the upper primary level of teaching the grade III teacher may, after completing at least two years of teaching, proceed to the grade II teacher training college for another two-year course leading to the grade II certificate, formerly styled, "higher elementary certificate." In addition to the two-year grade II colleges, there are a number of grade II colleges which take students directly from the primary level and train them for five years in content and methodology. Since the disestablishment of the grade III colleges, admissions are now restricted only to candidates with two or three year post primary education or better. Such candidates are certified after a two-year course. To qualify for the grade I certificate the candidate may, after seven years of experience sit for an academic examination in two teaching subjects or enter one of the few rural science training centers and complete his grade I course. At this point, the grade I teacher is certified to teach at the lower secondary level.

The second route open to candidates who wish to teach at the lower secondary level is to gain admission to one of the five new Advanced Teacher Training Colleges (ATTC's) established partly by UNESCO funds and partly by the various governments of the Federation of Nigeria. This is a three-year course open to candidates who have completed a grade II teachers' course or a secondary education. Successful candidates teach at the lower level of the secondary school. The ATTC was the brain child of UNESCO. It was felt in 1962 that Nigeria needed well-qualified non-graduate teachers at the lower forms of the secondary school and that to meet this need, an emergency teacher education program of this type should be established and maintained for a period of fifteen years. The ATTC's were initially staffed mostly by UNESCO personnel and simultaneously a counterpart program was launched to accelerate the

Nigerianisation of the UNESCO posts within a period of five to seven years. Today, most of the teaching posts in these colleges are held by Nigerians. The colleges offer education, English and two teaching subjects.

The third route is through an academic university degree in a given subject plus one-year "post-graduate" certificate course in pedagogy or an integrated three-year combined degree course in education and two teaching subjects leading to the award of a Bachelor of Arts in Education or Bachelor of Science in Education or simply Bachelor of Education (B.A./B.Sc. (education) or B.Ed.). These two categories of teachers are classified as "graduates with teaching qualification."

Two important problems emerge from the above summary of practices with regard to teacher education, at the secondary level. The first is contextual and the second is professional.

Nigeria like all developing countries is passing through a period of rapid social, economic and political changes. Its educational institutions are expanding rapidly and so is the number of its teaching cadre. Like most African countries, the expansion is mostly physical in the sense that while the school population increases the content of education remains virtually unchanged. The academic content in the secondary schools stubbornly defies change. But far reaching changes cannot take place at this level as long as our method of training teachers remains undisturbed.

The contextual problem at the secondary level is two-fold: to educate the pupil to become a valuable member of his community and to prepare him for effectively economic participation in the modern sector; and where the sector is rural or agricultural, to prepare the pupil for the unavoidable change that is bound to follow.

If Nigeria and indeed Africa is to achieve these goals, an educational revolution must take place in teacher education. A teacher can only teach what he knows and in most cases teach the was he was taught.

What then are the priorities for the preparation of secondary teachers?

I. Priority One

There is an urgent need to clearly define the objectives of education in a modern African State.

For over a century the pattern, the content and the direction of education in Nigeria were tied closely to the apron string of the British system with little modification. Little attention was paid to the social, economic and political environment of the child and his society. Educational planners, parents and teachers followed the beaten track and faithfully accepted the British pattern as the only desirable model. For instance the European concept that elementary education does not and should not attempt to fit the child for work is a "middle class" idea which is accepted by many Africans. Yet most African children end their education at this level for ovbious financial reasons while most European and American children are compelled by law to remain in school till the age of fifteen or eighteen. Moreover, it will be a remarkable achievement if by 2,000 A.D. the average African citizen could claim to have had at least a six-year primary education or something similar to it.[1] At the secondary level education is still largely literary. Of the 212,000 pupils enrolled in the 1,350 post-primary schools in Nigeria in 1966, only 15,000 were enrolled in 73 technical, commercial and trade schools.

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[1]A.B. Fafunwa, New Perspectives in African Education, Macmillan & Co. Ltd., 1967, p. 31.

Examinations and certificates as the alpha and the omega rather than knowledge and satisfactory performance on a given assignment, help to confound an already bedevilled system. It is probably not an exaggeration to say that Nigeria like many developing African countries has a system of examination but hardly a system of education.

The three million children at the primary schools are being prepared for 210,000 places at the secondary level while the latter are being trained to compete for the 10,000 places available at the university level.

There are other problems related to these areas which space will not allow us to enumerate. It is obvious however that the need for a philosophy of education for African countries is extremely pressing.

To this end Nigeria is planning a conference in September 1969 to discuss the aims and objectives of Nigerian education. Conferees will be drawn from a cross-section of the Nigerian public: teachers, parents, farmers, youth leaders, education officials and planners and so on. It is anticipated that the Conference will agree on a broad conceptional framework which in turn will assist educational experts, specialists and planners to reconstruct the curriculum and develop new approaches suited to Nigeria's needs and circumstances.

II. Priority Two

The second priority is better expressed in the following statement:

"A self-respecting autonomous nation must staff its schools with its own nationals as soon as practicable and should do so with deliberate speed. It is politically, socially and culturally unwise, if not dangerous, to entrust the education of the youth of a country largely to the nationals of another country. If education is a vehicle for the transmission of culture, and if

the job of the school is to build into the personality of the young the selected aspect of the culture within which the school operates, it then stands to reason that every conscious effort must be made by an emerging nation to have its own nationals on its school staff at all levels: that is, from the elementary to the higher education level. This, of course, does not mean that nationals of other countries are not welcome . . . but it is a different thing entirely to rely on them almost exclusively without definite plans to change this state of things. Hence the plea that African Universities must bear the brunt of the responsibility for the training of the graduate teacher for the secondary, technical and post-secondary schools, as well as the preparation of the educational administrators and supervisors."[2] (We may add, for the rest of this century and with the assistance of international agencies competent to offer such aid).

III. Priority Three

This relates to the need to diversify the curriculum of the secondary school. To this end greater effort must be made to introduce more positively the idea of the comprehensive type of schools which will offer a range of subjects such as agricultural, technical, commercial and home economics education under one roof where practicable. Not only will such arrangement make for financial savings but will also emphasize the importance of so-called "non-academic subjects," which are in fact the main levers that will eventually transform the developing countries into modern states.

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[2] A. B. Fafunwa, Ibid., p. 110.

Naturally the education of the secondary school teacher must reflect the above needs if the teacher is to cope adequately with his newly assigned role. It is not enough for the secondary school teacher to be well trained in his own area of specialization; he must appreciate the interdependence of disciplines, understand his own cultural heritage and those of others; recognize the importance of vocationally-oriented education and appreciate the dignity of labor. Unless these desirable goals are achieved, the teacher may become more of a liability than an asset in the educational scheme of things.

"Priority Four" also relates to the need for curriculum development centers where experiments in the use of local materials, syllabus designs, action-oriented research and the like can flourish untrammelled.

V. Priority Five

There is dire need for the inservice training and further professional education of the teacher. The world of the child today has wider and more varied horizons than, for example, the old world of Plato and Aristotle. The ten or eleven year old child of the twentieth century has a larger vocabulary than had these learned men, for we live in a world of gadgets, books, space travel, television, radio, and satellite communication. The world of today is characterized by constant change and Africa is perhaps second to none when it comes to the rapidity with which changes take place. Africa may be rightly styled as the center of the changing world, for never in the history has a continent moved so speedily from colonial rule to independence, from barter economy to cash economy, from stultifying social circumstances to progressive social order. What is more, the African teacher more than any other stands at the apex of this great phenomenon and as a citizen of this new Africa, he faces a greater challenge than his Asian or European counterpart. He therefore

needs all the assistance we can muster to help him cope adequately with the challenge that faces him and his students. It is not enough to train him like his counterpart in Europe and elsewhere. He must be trained and equipped differently. He must be able to rapidly catch up with the twentieth century and prepare for the twenty-first at the same time. He must cope with the witch-doctor on one hand and the Western-oriented doctor on the other. Some parents are still in the eighteenth century while some other are already in the twenty-first. Hence my pleas for action-oriented research in curriculum development, equipment and the like.

VI. Conclusion

I have attempted in this short paper to identify some of the major problems confronting educational planners in Nigeria in particular and Africa in general. The list is far from being inclusive as far as the preparation of secondary teachers is concerned. For instance, this paper did not discuss the conditions of service, social security, teachers rights and obligations and above all, the professionalization of teaching in Nigeria. These are very important topics and they should be given the attention they so richly deserve.

APPENDIX I

Table 6 - Number of Schools, by Type and Controlling Authority*

1966

Type of School	North	East	Mid-West	West	Lagos	Nigeria
Government Schools						
Primary	1	10	8	1	1	21
Secondary Grammar	30	6	2	3	3	44
Secondary Commercial	-	-	-	-	-	-
Secondary Modern	-	-	-	-	-	-
Technical Institute	1	1	1	1	1	5
Trade & Craft Centers	15	2	1	5	1	24
Teacher Training	29	4	1	4	2	40
Local Authority Schools						
Primary	1,993	1,486	581	1,062	5	5,127
Secondary Grammar		17	2	48		67
Secondary Commercial	-	-	-	-	-	-
Secondary Modern	-	-	-	71	-	71
Technical Institute	-	-	-	-	-	-
Trade & Craft Centers	-	-	-	6	-	6
Teacher Training	3	7	5	6	-	21
Aided Schools						
Primary	595	4,399	1,210	3,277	104	9,585
Secondary Grammar	43	102	49	80	20	294
Secondary Commercial	-	10	-	-	2	12
Secondary Modern	-	9	-	-	8	17
Technical Institute	-	-	-	-	-	-
Trade & Craft Centers	-	9	-	-	-	9
Teacher Training	27	64	10	25	3	129
Un-Aided Schools						
Primary	125	30	-	-	19	174
Secondary Grammar	4	141	33	75	9	262
Secondary Commercial	4	21		5	8	38
Secondary Modern	-	-	222	323	-	545
Technical Institute	-	-	-	-	-	-
Trade & Craft Centers	-	11	17	-	2	28
Teacher Training	-	-	1	-	-	1

APPENDIX I (Continued)

Type of School	North	East	Mid-West	West	Lagos	Nigeria
		All Schools				
Primary	2,714	5,925	1,799	4,340	129	14,907
Secondary Grammar	77	266	86	206	32	667
Secondary Commercial	4	31	-	5	10	50
Secondary Modern	-	9	222	394	8	633
Technical Institute	1	1	1	1	1	5
Trade and Craft Centers	15	22	18	11	3	69
Teacher Training	59	75	17	35	5	191

*Federal Ministry of Education: Statistics of Education in Nigeria, 1966, page 27.

APPENDIX II

Table 8 - Number of Teachers, by Sex and Type of School*

1966

A. All Schools

Type of School	North	East	Mid-West	West	Lagos	Nigeria
Males						
Primary	13,559	27,648	9,683	18,379	2,160	71,609
Secondary Grammar	711	2,899	717	1,979	368	6,674
Secondary Commercial	33	305	-	22	147	507
Secondary Modern	-	9	-	1,218	2	-
Technical Institute	16	35	12	23	50	136
Trade and Craft Centers	232	125	86	76	64	583
Teacher Training:						
Rural Science	9	9	6	-	-	24
Advanced	26	24	-	38	24	112
Grade II	489	409	153	158	39	1,248
Females						
Primary	2,147	7,748	1,740	5,731	2,074	19,440
Secondary Grammar	219	750	154	555	176	854
Secondary Commercial	2	49	-	4	27	82
Secondary Modern	-	50	-	349	30	-
Technical Institute	-	-	1	2	6	9
Trade and Craft Centers	6	38	1	15	1	61
Teacher Training:						
Rural Science	-	-	-	-	-	-
Advanced	8	8	-	8	9	33
Grade II	218	138	34	62	14	466
Both Sexes						
Primary	15,706	35,396	11,603	24,110	4,234	91,049
Secondary Grammar	930	3,649	871	2,534	544	8,528
Secondary Commercial	35	354	-	26	174	589
Secondary Modern	-	59	869	1,567	32	2,527
Technical Institute	16	35	13	25	56	145
Trade and Craft Centers	238	163	87	91	65	644
Teachers Training:						
Rural Science	9	9	6	-	-	24
Advanced	34	32	-	46	33	145
Grade II	707	547	187	220	53	1,714

*Federal Ministry of Education: Statistics of Education in Nigeria 1966, p. 29.

APPENDIX III

TABLE 13 continued - Teachers, by Sex and Qualification*

1966

B. Secondary Grammar

Qualification	North MF	North F	East MF	East F	Mid-West MF	Mid-West F	West MF	West F	Lagos MF	Lagos F	Nigeria MF	Nigeria F
Graduate Teachers												
With teaching qualification	334	97	600	121	161	32	464	105	159	55	1,718	410
Without teaching qualification	189	44	664	175	240	60	578	118	132	47	1,803	444
Total	523	141	1,264	296	401	92	1,042	223	291	102	3,521	854
Non-Graduate Teachers												
N.C.E., U.L.T.E. or equivalent	177	51	323	94	29	4	288	107	67	30	884	286
Grades I and II	77	12	803	174	150	22	233	25	83	23	1,346	256
Grades III and IV	10	-	8	5	-	-	-	-	3	1	21	6
H.S.C. or equivalent	119	15	559	52	132	12	531	64	63	9	1,404	152
Others	-	-	649	127	159	24	389	117	44	5	1,241	273
Instructors	24	-	43	2	-	-	43	18	18	8	128	28
Special teachers	-	-	-	-	-	-	8	1	-	-	8	1
Total	407	78	2,385	454	470	62	1,492	332	278	76	5,032	1,002

(continued)

APPENDIX III (continued)

C. Secondary Commercial

Qualification	North		East		Mid-West		West		Lagos		Nigeria	
	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F
Graduate Teachers												
With teaching qualification	1	-	34	4	-	-	-	-	24	1	59	5
Without teaching qualifications	-	-	40	4	-	-	-	-	29	4	69	8
Total	1	-	74	8	-	-	-	-	53	5	128	13
Non-Graduate Teachers												
N.C.E., U.L.I.E., or equivalent	1	-	22	7	-	-	2	-	9	3	34	10
Grades I and II	6	-	45	15	-	-	8	1	37	2	96	18
Grades III and IV	-	-	-	-	-	-	-	-	4	2	4	2
H.S.C. or equivalent	-	-	67	4	-	-	2	1	25	5	94	10
Others	27	2	122	13	-	-	1	1	45	8	195	24
Instructors	-	-	24	2	-	-	13	1	16	2	53	5
Special teachers	-	-	-	-	-	-	-	-	-	-	-	-
Total	34	2	280	41	-	-	26	4	136	22	476	69

*Federal Ministry of Education: Statistics of Education in Nigeria, 1966, page 49

Chapter IV

REPUBLIC OF THE IVORY COAST

Toureh Yahaya

REPUBLIC OF THE IVORY COAST

In the developing countries, the key problem which arises and on which all subsequent progress depends, is that of elementary education.

In the Ivory Coast this problem is even more pressing than elsewhere, because this country's rate of growth is among the highest in Africa. More and more, the different sectors of social, economic and cultural activities require not only manual labor, but also and above all, specialized personnel trained to carry out increasingly varied and multiple functions.

Each year there is no lack of children for the schools. What is lacking, however, are the facilities and the teachers necessary for their instruction.

It is true that each year, thanks to agreements made with France and other European countries, we receive elementary and secondary school teachers from abroad. But their number is far from being adequate, if we wish to give an elementary education at all levels, in order to take care, on the one hand, of all the children eligible for elementary education and, on the other hand, to meet our staffing needs.

I. Elementary Education During the Colonial Times

In the field of primary education, the situation was far from being satisfactory. The figures shown below indicate the situation at that time:

TABLE 1

DEVELOPMENT OF ELEMENTARY EDUCATION
FROM 1948 - 1960

Years	Population of School-age Children	Children Enrolled	Percentage of Elementary Education
1948-49	523,000	22,876	4.4%
1949-50	535,000	28,383	5.3%
1950-51	547,000	32,259	5.9%
1958-59	653,000	165,233	25.8%
1959-60	668,000	200,046	29.9%

Thus, up to 1951, elementary education in the Ivory Coast was inadequate in relation to the total number of school-age children. This condition can be explained by taking into consideration the aims of the colonizers. In other words, to insure a firmer and longer colonial reign, one had only to limit education to as few nationals as possible.

In addition, foreign aid for development was almost non-existent, and the needs for skilled manual labor were kept to a strict minimum. There was, however, a need for some school teachers, some minor officials in the administrative agencies, in the army and in commercial establishments. But the number of elementary school candidates was sufficient then to cover this need.

II. The Period of Independence

This state of affairs began to change after the national independence, the Ivory Coast made a major effort to educate the greatest number of children, because the nation's leaders, through the inspiration of the chief of state, President Felix Houphouet-Boigny, had grasped the importance of education to national development.

We are not exaggerating when we speak of a national campaign to awaken the masses, intimidated and suppressed up to then, and instill in them the desire to learn. Since 1960, we have assisted in publicizing the importance of education.

Villages build schools for themselves at their own cost without being assured of obtaining teachers to staff them. It has even been necessary to restrict the communities in their zeal and desire to have their own schools, by placing them under the strict control of the Ministry of National Education. The statistics on schools for 1959 are as follows:

TABLE II

Years	Population of School-age Children	Children Enrolled	Percentage of Elementary Education
1960-61	683,000	238,772	34.9%
1961-62	698,000	263,452	37.7%
1962-63	714,000	310,000	43.5%
1963-64	730,000	330,551	45.3%
1967-68	814,000	407,609	48.0%
1968-69	?	?	?

Currently the Ivory Coast has 1,608 elementary schools which can accomodate 322,738 students and which are staffed by teachers as follows:

- Regular teachers 730
- Assistant teachers 4,226
- Monitors 1,615
- Assistant monitors 496

The rapid rate of growth in elementary education cannot decrease because the law governing trained personnel for the educational system foresees a considerable increase in the near future.

This means that there will be more teachers available. The problem of their recruitment and training remains unsolved however. The Ivory Coast at present has five "Ecoles Normales," i.e., elementary teachers colleges, with a total of 467 students. This number is entirely insufficient in relation to the rate of increase experienced in the school-age population.

III. Applied and Projected Solutions

Eight C.A.F.O.P. (Centres d'Animation et de Formation Pedagogique; Centers for Pedagogical Stimulation and Training) have been established in the past three years. These centers are designed to recruit graduate level candidates who after two years of training qualify as assistant teachers.

The establishment of a pilot elementary teachers' college is planned for the coming year. The uniqueness of this school will reside in its method and its pedagogical technique as well as in the object to be attained. The teachers who will be trained there will act both as school teachers and as social and cultural workers.

This teachers' college will recruit its students from among the best graduates of the C.A.F.O.P. In the first years of operation it will be able to accommodate only seventy students, who will receive three years of training.

IV. Televised Instruction

One solution planned to overcome the lack of teachers is the use of televised instruction beginning in 1971. The courses will be designed, prepared and programmed by specialists in pedagogy and psycho-pedagogy and will be

televised throughout the nation. Each class will be provided with a television set and the students will be supervised by monitors or assistant teachers whose training will require less time than the formal training received by regular teachers.

The Ivorian authorities believe in the efficacy of this procedure. As already applied experimentally in Nigeria and in the Samoan Islands, it has yielded encouraging results.

While waiting for these developments, the Ivory Coast will remain largely dependent on foreign countries for the trained personnel for the elementary schools. Today among the teachers in these schools one finds French, Nigerian, Voltan and Dahometan nationals.

We hope that all the measures planned will provide a solution for the lack of teachers.

V. Secondary Education

While the problems of elementary education are being resolved, others arise at the level of secondary education, since it will be necessary to accommodate the children who complete the primary grades in the first grade of the secondary school, i.e., the sixth grade.

The present number of secondary schools is as follows:

The Ivory Coast has eighty-five secondary schools comprising:

1. 3 Teachers' schools
2. 30 Supplementary courses
3. 28 Schools of general education
4. 4 Secondary schools for Humanities
5. 1 Secondary school for Science
6. 7 Rural technical centers
7. 12 Apprenticeship centers*

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*We have included these centers with the secondary schools.

Compared to 1960, the increase in the number of secondary schools is 69.1 percent (from forty-seven to sixty-eight).

But these schools are not sufficient to accommodate the yearly increase in the number of applicants for the sixth grade, i.e., the first year of secondary school. Consequently, each year admittance to the sixth grade becomes more and more selective.

Some years ago (1967) it became necessary, for example, to have a scholastic rating of eighty-five points in order to be admitted to the sixth grade. In 1968, it was necessary to have 100 points and in 1969, 111 points are needed. This means that every year nearly fifty percent of the meritorious applicants cannot obtain places in the sixth grade classes.

The private schools, which charge tuition and are subsidized by the State, cannot absorb all of them either. Therefore, new schools must be built or expanded in order to accommodate the new students. One can plan centers for instruction by correspondence, centers of pre-apprenticeship, or again, temporary school-like institutions where students can be accommodated for some time while waiting to be received in the new secondary schools that the State plans to build in the coming years. The above-mentioned projects should receive the utmost consideration if we do not want to alienate ourselves psychologically from our young who are thirsting for knowledge.

VI. Other Problems in Secondary Education

As in primary education, the lack of teachers in secondary schools makes the problem even more dramatic.

Presently almost ninety percent of the secondary teachers are from abroad and can be broken down as follows:

TABLE III

	Civilian Technical Personnel	Military	National Personnel	Contract Personnel	Volunteers	Total
Teachers	705	150	119	162	95	1,231
School Principals	53		13	2		68
		69.9%	10.7%	12.6%	7.3%	

As column 2 shows, national personnel comprise no more than seven percent of the total teaching force.

VII. The Reasons for the Lack of Native Secondary Teachers

In 1946 the Ivory Coast had no "lycees," i.e., secondary schools, to supply the nation with graduates whom it could have used to fill teaching positions after receiving their teaching certificates.

In order to train the future personnel for the nation, after 1946, President Felix Houphouet-Boigny, then member of the Chamber of Representatives in the French National Assembly from the Ivory Coast, obtained an agreement with France whereby the first fellowship holders from the Ivory Coast would be sent to study in the lycees and colleges of Paris. But very few of the fellows who studied in Paris entered the teaching profession. Fourteen years later, the country had scarcely a dozen native secondary teachers out of some 600 graduates of "lycees" and "colleges" sent to France.

This fact can be explained by the lack of an authoritative educational policy which was unsympathetic to the liberalism of those in power.

On the other hand, during the period preceding decolonialization, priority was given to the training of the administrative personnel who were called upon fourteen years later to replace the former colonizers.

We can also stress the fact that very few young people were attracted to the teaching profession, either because of a lack of information or because of the absence of a desire aimed at strengthening the profession. One must also add that the difficulties and the length of time required for professional preparation discouraged a large number of students. Finally, a teaching career seemed less prestigious for many students and less remunerative when compared with certain other careers.

The government of the Ivory Coast, well aware of this serious problem, has taken action to resolve it.

A. Measures Adopted by the Government on Behalf of Teachers

The training of secondary teachers having been given priority, the government, beginning in 1962, invited the students from the Ivory Coast in France who intended to teach, with the consent of the French government, to study at the I.P.E.S. (Institutes de Preparation a l'Enseignement Secondaire; Institute for the Training of Secondary School Teachers). The students who did so received grants forty percent higher than ordinary students.

At the present time a bonus is granted to young licenciates who wish to go on with their studies in order to become teachers. Other advantages also are offered, such as free lodgings and reclassification in the ranks of the National Public Service.

In effect, class I of the Public Service is taken up by university instructors, class II by the teachers who have passed the competitive examination for admission to the staff of a State secondary school, class III by the

holders of the certificate of aptitude for secondary teaching, and class IV by the licenciates. The teachers of the C.E.G. (Colleges d'Enseignement General; General Education Schools) have graduated from class VII to class IV.

It is still too soon to know if these regulations, which for the most part are recent, will stimulate many candidates for teaching. We must wait and hope that the regulations will succeed.

B. Institutions for Teacher Training

The first institution for training of teachers for secondary schools is the Abidjan Ecole Normale Superieure. Established in 1962 by joint grants of special funds from the United Nations and UNESCO, the school was entirely equipped by these two international organizations and operated until 1967 by UNESCO experts, who under the original agreement were to be replaced by native teachers whom the international organizations undertook to educate abroad.

The purpose of the Ecole Normale Superieure is to train professors for the C.E.G. (Colleges d'Education Generale; Schools of General Education), and inspectors for elementary education. After 1967, the year the last foreign expert left, the institution passed entirely under the control of the Minister of National Education of the Ivory Coast with a native director at its head.

C. Enrollment and Organization of Studies at the Ecole Normale Superieure

During the school year 1968-69, the Ecole Normale Superieure had an enrollment of 400 students distributed among three departments and was staffed by thirty-two instructors.*

Among the professors are foreigners (French, English, German, Spaniards, and Belgians) and ten nationals. This staff teaches courses in different fields.

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*Twenty-seven full-time and five part-time professors.

VIII. Departments of the Ecole Normale Superieure

Department 1 - This department is attended by the students who have completed the baccalaureat. They take theoretical courses in the different faculties of the University of Abidjan. Since 1967 they have been obliged to attend the Ecole Normale Superieure five hours weekly for courses in psycho-pedagogy and to carry out practical work and projects related to theoretical courses.

In the first five years this department was not very productive because the students tended to go where it seemed they would be better off financially than in Department 2. But after 1967, the students became more aware of their responsibility thanks to a strict control decided upon by the Board of Trustees of the Ecole Normale Superieure. The results obtained during the last two years are satisfactory.

We note in passing that the students of this department - future licenciates - are more attracted to posts in the University than to those in the lycees. They also prefer to pursue their studies up to the degree of Master and the examination for Agrege corresponding to the Doctorate. This lessens the effectiveness of secondary teaching as far as obtaining teachers is concerned.

In order to put a stop to this striving for the top, the Ecole Normale Superieure, in accordance with the Minister of National Education, is studying measures which will tend to restrict permission only to understanding students who wish to pursue general studies in the faculties of the University.

Department 2 - This department trains teachers for the colleges of general instruction* for the first level of secondary education. The diploma given on

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*C.E.G.: 6th, 5th, 4th, 3rd years of secondary education.

completion of studies in this section is the CAP/CEG (certificate of aptitude for instruction). These studies last for two years for those holding the title of the baccalaureat and three years, of which the first is preparatory, for those who have not passed the baccalaureat. Since its creation in 1962, this department has supplied 178 teachers to the country or nearly 26 teachers per year, distributed among the following fields:

Teachers of: French - History - Geography
French - foreign languages: English, German or Spanish*
Mathematics - Physics - Chemistry

Beginning with the next class of new students, a new field will be opened, namely that of mathematics and natural sciences. As the foregoing shows, the teachers graduated from the Ecole Normale Superieure are capable of teaching at least two subjects.

IX. Profitability

Compared to Department 1, Department 2 appears to be the most profitable for the country in the short run. It furnishes twice as many teachers as does Department 1.** Nevertheless, great efforts still must be made, because it is necessary to make up the deficit of nearly ninety percent in the teaching corps from the centers of general education, which are abroad. Not merely twenty-six teachers per year but 150 teachers per year are needed and the need will continue during the nex ten years for the same annual number of new teachers, whom the Ivory Coast must train. A decision has been made. Beginning with the next

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*The future professors of foreign languages are given the benefit of scholarship grants of one year of resident study in the country of the language they will teach.

**The students accepted in Department 1 must study four to five years in a University faculty to become professors of the second phase, i.e. of the 2nd, 1st and terminal classes.

class, the enrollment of Department II must be more than doubled. And as a consequence, it will be necessary to double the number of teachers. Furthermore, the present Ecole Normale Superieure must be expanded, including such things as buildings and equipment. We think that this will be possible beginning in 1971, since the Ecole Normale Superieure will be installed in new quarters to be built on the University campus.

But the main difficulty still remains: that of recruiting future teachers from the schools of general education. And, how to recruit candidates in sufficient number, and how to retain them in Department II? In reality, persons who pass the baccalaureat examinations and enroll are few. And those who do not pass take advantage of the instruction given at the Ecole Normale Superieure so as to present themselves for the baccalaureat. Thus after three years, from sixty to eighty percent of the successful candidates for the baccalaureat secondary diploma lower the value of the preparatory year by their personal success, so that this preparatory year risks becoming merely an antechamber for University studies rather than a means of developing new teachers. In other words, after passing the baccalaureat, the trainees for future teacher positions in the C.E.G. renounce that career in order to enroll in the University. How can this be prevented? By a legislative act which would channel and retain the students from this department under terms providing that they can or cannot be candidates to the baccalaureat. Such a measure would contravene the liberal policy of intellectual promotion espoused by the Ivory Coast Government.

We think that the solution is to be found by breaking the water-tight barriers that now exist between the different levels of education.

The traditional concept would have it that from the start, the training of the elementary teacher, of the secondary teacher, and of the professor of higher education should be completely independent from each other.

On the contrary one can well conceive a common basis for the preparation of elementary and secondary teachers and professors in higher education. Such a basis would guarantee to each student the possibility of passing sooner or later from one level of teaching to another, if he has the necessary ability and aptitude. Thus the fact of being an elementary teacher or a C.E.G. teacher would no longer appear as a final step or giving up, but as a voluntary choice, and at the same time a possible start towards the higher university levels.

In any case, it soon will be necessary to take measures to prevent the candidate teachers for C.E.G. from abandoning school teaching after the successful completion of the baccalaureat for the University. Or else it will be necessary to change the programs in the preparatory year at the Ecole Normale Superieure so that they cease to be the same as those of the final year at the lycee and make them attractive for professional training by emphasizing the pedagogical aspect of the program.

Department 3 - This section of the Ecole Normale Superieure is devoted to training of inspectors of elementary education. The program is more specifically based on general and special pedagogy. The duration of the studies is two years if the candidate is a previously certified C.E.G. teacher and three years, including one preparatory year, if the candidate, after a certain number of years of experience in teaching, is a regular elementary teacher, a school principal or a pedagogical counselor in elementary education.

Since its creation, the Ecole Normale Superieure has trained eighteen elementary school inspectors. The former C.E.G. teachers are qualified to

inspect the C.E.G.'s* while the former elementary teachers, principals and pedagogical counselors after training in the Ecole Normale Superieure exercise authority only in elementary schools.**

X. Instruction at the Ecole Normale Superieure

This instruction should be better adapted not only to the present situation: programs, knowledge and utilization of the methods and techniques of modern pedagogy, but it should also attain the objective of enhancing and expanding the outlook of the students by:

1. The acquisition of new knowledge
2. The introduction to psycho-pedagogy
3. Research at levels adapted to each circumstance.

Great importance, therefore, is attached to the personal initiative of the students, expressed through individual work and group work (bibliographic research, preparation of papers and of written assignments, group discussion, etc.)

In that spirit, pedagogy ceases to be a science of rigid courses which deprive the student of actual participation in his own development. Professors of specialized subjects and psycho-pedagogues try to attain this objective through conferences.

The studies in which the teaching skills are advanced are the following:

- linguistics
- foreign language instruction
- teaching of Negro-African literature and culture
- psycho-pedagogy.

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*It is hoped in coming years to form only inspectors of this category.

**The programs include general culture and the administration of educational establishments.

A. Linguistics

This new science has emerged as essential both for the knowledge of French as the language of communication and for training in foreign languages. The students are introduced to the comparative studies of linguistics. Today a language professor, if he wishes to be fully effective, cannot ignore the concepts of system and structure of syntactic and paradigmatic, synchronic and diachronic analysis of oral and written language, of the primary and secondary languages. The object of this knowledge is to understand that it is not necessary to teach French or any other language in Africa as one would teach it in the country of origin, without concern for the problems of bi-lingualism and linguistic interferences.

The practice, then, of making the students of the Ecole Normale Superieure aware of these problems aids to assimilate and transmit better their knowledge of the languages they teach. Apart from the theoretical courses, great use is made of language laboratories* designed to accustom the student's ears to the diverse elements of a language and to correct mistakes made in the course of learning and using a language.

B. Psycho-Pedagogy

The psycho-pedagogues of the Ecole Superieure Normale initiate the students in the study of scholastic difficulties, such as those stemming either from pedagogical methods and techniques or arising from the various handicaps which may affect school children.

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*The Ecole Normale Superieure has booths and a control table allowing the instructor to intervene whenever the student makes a mistake.

For this purpose, questionnaires are submitted to the students regarding their geographic, social, cultural and economic environment with a view to gaining better knowledge of school children in relation to their attitudes as well as their behavior.

The aim of psycho-pedagogy is to instill in the future professors the conviction that pedagogy is not only knowing how to accumulate knowledge but is also knowing how to transmit knowledge with the necessary skill and pursuation force.

C. Negro-African Culture and Literature

The aims of this subject are:

1. To awaken the curiosity of the students about all that has been said and written on Negro-African civilization, culture and psychology,

2. To stimulate comparative studies,

3. To promote research in the field of oral literature by the students who are instructed in the most current methods of investigation.

As in the case of linguistics and psycho-pedagogy, the teaching of Negro-African culture and literature is in its embryonic phase. Promising starts have been made which in the near future should force those in positions of responsibility to give this study more priority in the training program for secondary teachers.

XI. University and Teacher Training

The University of Abidjan grants the degree of Licenciate (and soon will grant the Master's degree). Strictly speaking there is no department for teacher training like that of the Ecole Normale Superieure, with its program

including pedagogical theory and practical courses.* The University devotes itself to general culture. While the University initiates research, it is with the object of augmenting the fund of man's knowledge without regard for its application to the plane of pedagogic training.

Nevertheless, since 1966, the effort has been made to establish a liaison control between the University and the Ecole Normale Superieure for the training of teachers. The history of Department 1, however, bears witness to the fact that we are still far from achieving full agreement.

We see often that the University's conception of the use of time does not allow enough free hours for the students of Department 1 to fulfill the requirement of five hours of weekly attendance at the Ecole Normale Superieure under the direction of the instructors there.

Such a situation is deplorable and demands a solution which will allow future students to benefit from the activities of the Ecole Normale Superieure while they also are enrolled (by authorization of the Ecole Normale Superieure) in the University.

XII. The Present

While waiting for our secondary education to be handled by teachers who are, if not all natives at least mostly natives, an urgent necessity emerges to prepare and inform adequately the foreign teachers recruited to serve in the Ivory Coast.

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*The students in the last year of the Ecole Normale Superieure complete eight weeks of practice teaching in the establishments of Second Degree.

The majority of them are ignorant of the culture of our country, where they come to serve for the first time. They know nothing of the psychology of their future students and it appears strange to the European mentality.

This gives rise to false judgements which in turn cause resistance and opposition on the part of the students toward their teachers.

We think that the lack of success and the waste or the "attrition of personnel" in second degree level instruction are mainly due to this fact.

Much has been said about the adaptation of programs and the subject of examinations during the courses and the end of the secondary phase in the Ivory Coast. That is certainly a good thing to do! But we would insist more upon the necessary change of mentality which must lead to change in the methods of instruction. This question, then, must be examined with the closest attention.

XIII. Conclusion

As we see it, secondary education each year takes priority in order to absorb the pupils from the elementary schools. In order of urgency, the Ivory Coast needs the following:

Teachers of French +++

Teachers of mathematics +++

Teachers of foreign languages ++

Teachers of science ++

Teachers of history and geography ++

The nation also needs to share experience with other countries which unceasingly struggle in the same miasma.

Finally, the nation needs assistance in bringing about a good outcome for the projects that have been cherished for many years: schooling at 100 percent at the elementary level through televised instruction for example, and in the near future the occupation by Ivorians of the teaching posts at the elementary, secondary and higher education levels. Without being naively optimistic, these objectives will be possible if a new formula is evolved for training and preparing teachers on the one hand, and on the other, if the majority of the students is accommodated in decently and well equipped secondary schools.

DEVELOPMENT OF THE BUDGET FOR NATIONAL EDUCATION - YEARS 1967 TO 1969

1967 7,453,150,000 CFA Fr. of the national budget

1968 8,543,500,000 CFA Fr.

1969 9,816,600,000 CFA Fr.

This amount corresponds to 204% of the national budget. In this budget funds for secondary education in 1969 amounted to 3,346,602,700 Francs, which was divided as follows:

Personnel	2,184,000,000
Materiel and construction	
Subventions and interventions budg. transfer.	1,162,602,700
	3,346,602,700

Chapter V

MALI

Djime Diallo
Gerard Lucas

MALI

In Mali there are three types of institutions concerned with the preparation of teachers. Each type specializes in training teachers for a particular level of education: the fundamental levels, the first and second cycles, and the senior secondary level. The first cycle of the Malian fundamental schools corresponds to the primary level in most countries. That level, as well as the institutions which prepare its teachers, that is, the regional pedagogic centers, will receive little attention in this paper, since its main object will be the education and training of teachers for the second fundamental cycle and for the Malian secondary schools.

The basic texts establishing schools for the preparation of the teaching staff were developed and published after the 1962 educational reform in Mali. The first text, dated June 28, 1963, created an institution of higher education designated as "Ecole Normale Superieure" (higher teacher training college); the second text, dated January 12, 1965, instituted secondary level normal schools. Both texts, as well as the subsequent changes made to them, will serve as a basis for discussion in this paper. The reasons which motivated the changes, the existing problems, and the solutions being considered will also be emphasized.

I. The Higher Teacher Training College

The Ecole Normale Superieure was first set up as a training institution for teachers of both the second fundamental cycle (first secondary cycle, that

is, senior high school). Preliminary discussions and eventual agreement concerning its establishment involved representatives of the Republic of Mali, the Republic of Guinea, and UNESCO. The school was to be located in Bamako and was supposed to serve both Mali and Guinea - with the technical assistance of UNESCO and the financial participation of the Special Fund of the United Nations. It was also to include a section for the preparation of school inspectors and a pedagogic institute devoted to educational research and to the production of educational material. It is on that basis that the Ecole Normale Superieure opened on November 1, 1962, with twenty-five baccalaureate holders in the first year (seventeen Guineans and eight Malians) and twenty-two students in the second year (seventeen Malians and five Guineans). Students admitted in the second year had all completed one year of studies at the University of Dakar and held credentials equivalent to the French "propedeutique" in Arts or Science. The first students being prepared were all to teach at the senior secondary level, since the other section was to select its student from among nineth grade graduates. Thus, the decree creating the Ecole Normale Superieure (Juen 23, 1963) only mentions a vague "participation" in the task of training junior secondary school teachers. It was believed at the time that a number of candidates holding the baccalaureate would fail to qualify as senior secondary school teachers and would then be assigned to the lower level, after receiving appropriate preparation through a short cycle of studies. In practice, the lower secondary section never functioned because the number of failures remained negligible.

The decision to restrict the role of the Ecole Normale Superieure (E.N.S.) to that of trainer of senior secondary school teachers was, it seems, at the origin of the first growth crisis of the new institution. Indeed, the final

examinations scheduled for June 1963 had to be postponed until the following October, because some students did not feel ready to face them. Then, at the October 1963 opening of the school, the Guineans failed to return to Mali, and thus the E.N.S. lost its regional character. That development might have threatened the very existence of the E.N.S. or at least caused it to lose the technical and financial assistance of the foreign organizations, national and international, which had contributed to its establishment. Fortunately, it was believed that Mali alone was able to supply a sufficient number of students to justify the cost of operating the school. Also taken into consideration was the fact that, not having a university, Mali needed an institution of higher learning to prepare teachers for the upper grades of its secondary schools.

The division to train primary school inspectors never opened, as Mali needed no more than a dozen inspectors. Therefore, it was impossible to justify the establishment of an entire section for such a small number of students. It should be noted that the E.N.S. professors, supplied by UNESCO from various countries, were university educated and, generally speaking, ill-prepared to teach in primary schools or train school inspectors. Most of Mali's present inspectors were trained at the French Normal School of Saint-Cloud.

From the start, then the Malian E.N.S. has functioned as an institution of higher learning, and it has since been confirmed in that role. The programs proposed in October 1962 were based on the lycees programs to which was added a certain enrichment borrowed from the programs of the first and second years of college ("propedeutique" and "certificats de licence"). The course of study was to be completed in two years. This plan tended to establish a school of ambiguous level and offered the students inadequate academic and professional

training. It was rejected by the Malian Ministry of Education. Instead, in January 1963, another plan was introduced. It offered higher education level courses spread over a three-year period of studies and training. The first year student was expected, roughly, to cover the program of the first year of college ("propedeutique"). Second year students were expected to absorb about two thirds of the subject matter required by the "licence", while third year students had to complete the "licence" studies and at the same time receive their professional training. The seventeen Malians who had been admitted in the second year in 1962 followed precisely that program. All obtained their diplomas in July 1964. They were distributed in five sections: Modern Languages, English, History and Geography, Philosophy, Mathematics - Physical and Biological Sciences. It must be remembered that the members of the first graduating class had studied one year at the Universities of Dakar or Abidjan before entering the E.N.S. The programs of the subsequent classes have been - and still are - subject to experimentation and change. Early in the 1964-65 school year, a special committee was appointed by the Director of Higher Education. The Committee produced new programs which were put into effect while the school year was in progress. The duration of the course of studies (three years) as well as the five original sections were maintained. Thus, two successive classes completed the programs in July 1965 and in July 1966. They produced fifteen and fourteen graduates respectively.

It is clear enough that the E.N.S. produced rather satisfactory results during its first years: thirty-six graduates who had attained a recognized level, of which several were subsequently admitted as graduate students (B.A.) in American universities. That was due to certain conditions, the first being the great care with which the E.N.S. candidates had been selected for admission.

The baccalaureate had already made a thorough selection. Many candidates had also completed one year of studies at university level. But above all, the majority were already experienced teachers who had previously received sound professional training and who - through life experience - had acquired a certain maturity. During those first years the E.N.S. was able to emphasize the essential and the practical. Another important factor: the UNESCO-supplied teaching staff was of a remarkable quality. The teachers' competence and dedication made possible - in spite of inevitable differences in philosophy, ideology, and national loyalties - frank cooperation and true team work.

But a severe critical examination leaves little reason for complacency. Indeed, numerous gaps were apparent. The positive results obtained did not satisfy the authorities of the E.N.S., nor those of the Ministry of Education. Immediately after national independence was won, and in the midst of the upheavals caused by a reform of education at all levels, a period of trial and error was inevitable. As indicated above, even the basic role of the E.N.S. changed since the time of discussions preceding its establishment. Consequently, important changes in curriculum were introduced, often during the school year, thus helping to spread confusion among both staff and students. Also, the physical conditions in which the E.N.S. had operated had complicated its task considerably. The School first opened in space borrowed from the National Engineering School. Few of the available rooms - laboratories, libraries, classrooms and offices - were well suited to the requirements of the E.N.S. When the new Lycee of Badalabougou (situated on a hill over-looking Bamako) was opened, during the 1966-67 school year the E.N.S. was moved there, into more spacious, modern quarters, but still borrowed from an institution of a very different nature. Such difficult material conditions should normally

have been settled in a rather short time. Indeed, as early as 1963, the U.S. Agency for International Development had agreed to build - on the Badalabougou hill - a group of buildings including classrooms, laboratories, boarding facilities, and even staff housing, enough to meet the needs of a 250 student enrollment. For reasons too long to explain here, these projects never progressed beyond the planning stage, however. But it appears that a satisfactory solution may soon be adopted. The E.N.S. has just been given a large and modern building originally planned as a training center for U.S.-RDA party leaders. But, once again, the new quarters do not include laboratories, and the science sections cannot yet move there. The addition of a science building is obviously essential if the E.N.S. is to function and develop normally.

It has become clear that the E.N.S. could not, in three years, guarantee to its students a level of academic studies comparable to the "licence" and at the same time provide adequate professional training. The obvious solution then was to add a fourth year to the course of study, and in October 1967 it was decided to postpone the July 1968 graduation for one year. Necessary adjustments were made to the programs, but no official decree sanctioned the changes. Such a text is currently under consideration.

According to the proposed reorganization, the E.N.S. would be given four main functions:

1. To prepare teachers for general and technical secondary education (10th, 11th and 12 grades).

2. To participate in the preparation of teachers for the upper grades of the fundamental schools (8th and 9th grades).

3. To prepare candidates for the competitive examination set up for the recruitment of control personnel, that is inspectors of the fundamental schools.

4. To pursue research in education.

The E.N.S. would have three sections corresponding to its three first functions, and a Pedagogic Institute designed to fulfill its fourth function.

A. Senior Secondary Teacher Training

The first section would offer the two first years of general studies. It would aim at strengthening the students' basic knowledge of college level academic disciplines. Its program would follow roughly those of the faculties of Arts and Sciences of French-speaking universities. After two years, the students who have demonstrated their ability to pursue academic studies to the "licence" level and to become senior secondary school teachers would be promoted to the second section for an additional two years of terminal studies. In this upper section, further specialization in major fields such as modern languages, classical language, history and geography, philosophy, physics and chemistry, and natural sciences would be pursued as studies in general pedagogy and special methodology. Some practice teaching would also be included.

B. Lower Secondary Teacher Training

At the end of the first two years of studies at the E.N.S. the students considered unable to pursue the long cycle of studies (preparing for senior high school teaching) would be transferred to a special section with the status civil service trainees ("fonctionnaires stagiaires"). They would receive their professional training, with emphasis on practice teaching. Successful completion of the training would qualify the candidates for teaching posts in the upper classes of the second fundamental cycle (8th and 9th grades) and in the beginning classes of senior secondary schools (10th grade).

C. Management Personnel - Inspector Training

The section assigned to the preparation of school inspectors would select its candidates among experienced junior and senior secondary school teachers, the former after eight years and the latter after three years of service, and would offer them a two-year course of studies and training. The programs would include general academic studies in the main disciplines, further studies in educational philosophy, psychology, and sociology, and initiation to the techniques of school inspection. It is interesting to note that students in this section would have widely different backgrounds. To qualify as school inspectors the junior high school teachers would tend to lack academic preparation, while the senior high school teachers would, by and large, be ignorant of methodology and classroom techniques appropriate in primary and junior secondary classes. Training both groups in a single section is likely to complicate the tasks of the E.N.S.

D. Research

The pedagogic institute attached to the E.N.S., would share with the National Pedagogic Institute the task of pursuing educational research. Since the main function of the E.N.S. is to educate and train teachers, it is appropriate for that institution to focus its research activities on educational theory and applied methodology. In close liaison with the E.N.S., the National Pedagogic Institute would then be free to pursue the tasks it has already undertaken in the fields of experimentation and production of teaching materials for all levels of Malian education. The caliber of the staff in terms of academic excellence and the long teaching experience of both institutes would ensure educational leadership and progress without requiring a costly duplication of materials production facilities.

Finally, it appears that over the next few years the E.N.S. may be called upon to perform a function not specifically mentioned in any official statement. The E.N.S. is one of three institutions of higher learning established in Mali. The other two, the Ecole Nationale d'Administration (E.N.A.) and the Ecole Nationale des Ingenieurs (E.N.I.), are professional schools specialized in rather narrow fields. As long as there is no university in Mali with arts and science faculties, it seems natural that the E.N.S., because of its nature and functions, would be the one institution best suited to provide general higher education courses. Indeed, it is with that objective in mind that the proposed first two years of studies at the E.N.S. have been given a marked general character. The E.N.S. could very well absorb, in one or the other of its two major options (literary and scientific) all the Malian baccalaureate holders that would not be oriented toward the E.N.A. or the E.N.I. It is at the end of the first two-year cycle of studies that E.N.S students would be oriented toward one of three main directions noted above. They would become trainees (Maitres-stagiaires), continuing students in the long cycle of E.N.S. studies leading to senior secondary teachers positions, or scholarship students in foreign universities. Such a scheme would postpone for two years the departure of young Malian scholars for higher studies outside of Mali, in itself an obviously desirable goal. Also, by supplying a larger number of students to the E.N.S., it would tend to increase the efficiency of the school's operation, and at the same time it would offer to the student-teachers stimulation, healthy competition and a true university atmosphere. Of course, for the E.N.S. to perform this broader role, an enlarged, high caliber staff will have to be provided as well as adequate physical facilities such as classrooms, libraries, laboratories, etc. It is understood, however, that such a role would be temporary

and that, as soon as the circumstances would permit, the E.N.S. would again be reserved for the preparation of Malian senior secondary school teachers.

II. The Secondary Normal Schools

The preparation of teachers for the first secondary cycle (junior high school) in Mali was assured at the federal level before independence. A normal school for boys at Katibougou (thirty miles from Bamako) has offered since 1951, the two first years of a four year cycle of studies. After passing the first part of the baccalaureate, the student-teachers would transfer to the Lycee of Bamako in order to complete the second part of the baccalaureate, and then to the normal school at Sebikotane (Senegal) where they received one year of professional training. Following their graduation, they were given a teaching post, usually in their country of origin, where they joined French teachers. In Mali, on the eve of independence, some fifteen secondary level institutions ("colleges modernes" and "lycees") were using those young teachers.

Soon after independence, Mali was suddenly deprived of three quarters of the French teachers assigned to the lower level of its secondary schools. Furthermore, educational reform in Mali created several new schools (sixty-two classes), since then designated as second cycle fundamental schools ("ecoles du second cycle fondamental"), in October, 1962. Mali was, therefore, facing extremely pressing needs. Emergency solutions had to be adopted, which were not entirely satisfactory, but which enabled the school system to overcome its temporary difficulties.

Thus Malian school authorities, without waiting for the publication of a formal decree, founded in Bamako a normal school for boys and one for girls at Markala. Those schools were expected to produce in a minimum of time and in

sufficient numbers teachers specialized in the various subjects taught in the lower secondary schools. They were asked to do the job through a twenty-three-month continuous cycle of studies. The schools selected their students among holders of the B.E.P.C. (9th grade certificate) and distributed them in six sections such as French, modern languages, mathematics, etc. Of course, this was only a first step taken in order to meet the most urgent needs. From the start, the shortcomings of the system were obvious: too short a training period and premature and too narrow a specialization. As soon as the circumstances permitted, successive reforms attempted to correct those shortcomings.

The basic text organizing the normal schools was published on January 12, 1965. It created secondary level schools which were supposed to offer baccalaureate level courses, but on a narrower base, and adequate professional training. Article 8 distributed the students among the following sections:

1. French and Literature; minor: History.
2. History and Geography; minor: French.
3. Modern Languages (I and II); minor: French.
4. Mathematics and Physics; minor: Chemistry.
5. Natural Sciences and Chemistry; minor: Mathematics and Physics.

That organization remained in operation until July, 1968, long enough for its defects to become manifest. First of all, the whole cycle lasted only three years - the same duration as the senior secondary school course itself. The normal school students were expected to reach the level of baccalaureate and at the same time to acquire their professional skills. To reach both goals, they obviously needed more time. Also, most Malian junior secondary schools which offered all four years of studies had a modest number of classes. It is extremely difficult - with a limited number of teachers - to set up a schedule

which imposes a reasonable work load on each teacher, and at the same time requires none to teach outside their special fields. An academic preparation of a high enough level in chosen disciplines ran the risk of being too narrow and of causing teachers to be assigned to teach secondary school subjects which they had not mastered. The solution adopted in practice since October 1968 consists of lengthening the course of study by one year and in a redistribution of subjects within the same five sections, with the addition of optional subjects such as music, drawing, domestic art, and handicrafts. Because the new system was introduced during the 1968-69 school year, there will be no graduating class this year. The 337 third year students will be retained in the school for a fourth and last year. It is hoped that the students will thus not only acquire sound professional skills but will also reach a level of general secondary education equal to the baccalaureate. Better still, at least as far as a student's major subject is concerned, a level of specialization equal to the first year of college will be aimed for. One must note, however, that the normal school graduates are not to sit for baccalaureate examinations. Neither can they enter a university. The only way for them to pursue their studies at a higher level is to enroll in the Higher Teacher Training College, which they may do after serving three years as junior high school teachers. In any case, they could not abandon the teaching career except for health reasons - since they are all bound by a ten-year engagement, an essential condition for their obtaining a full scholarship in the first place.

Beginning in October 1969, some third year graduates of the Secondary Normal School will be assigned in the higher classes of the first fundamental cycle (primary level). Until now teachers at that level were trained in two years in regional pedagogic centers. It appears, therefore, that the secondary

normal schools will, in future, be expected to participate in the training of primary school teachers, adding to that group a certain number of better educated and trained teachers. Of course, such a development will be possible only if demographic increase and the expansion of the school system remain modest. After the explosion of school enrollment which followed independence, a period of relative stability* has enabled the Malian school authorities to raise the percentage of adequately prepared teachers in the classes of the fundamental cycle. A sudden increase in enrollment would again undoubtedly cause emergency measures to be adopted, with a corresponding lowering of the average level of teacher preparation. However, thanks to the teacher training system now firmly in place, Mali will be able to count on a solid base from which to launch a school expansion program.

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*The rate of schooling in Mali is scarcely higher than twenty percent.

APPENDIX

Republic of Mali

Teacher Training Schools Enrollment
1968-69 School Year

Secondary Normal Schools

Major Subjects	1st Year			2nd Year			3rd Year			Total		
	Male	Fem	Total	Male	Fem	Total	Male	Fem	Total	M	F	T
French Hist. Geog.	36	22	58	67	9	76	125	16	141	228-	47-	275
Modern Languages	36	0	36	59	6	65	53	5	58	148-	11-	159
Math. Physics	35	0	35	65	4	69	53	7	60	153-	11-	164
Chemistry and Nat. Sc.	30	25	55	65	7	72	52	5	57	147-	37-	184
Totals	137	47	184	256	26	282	283	33	316	676-	106-	782

Higher Teacher Training College (E.N.S.)

Major Subjects	1st Year			2nd Year			3rd Year			4th Year			Total		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	T
Philosophy	10	0	10	9	0	9	4	0	4	1	0	1	24-	0-	24
Modern Languages	7	1	8	3	1	4	2	2	4	3	2	5	15-	6-	21
History & Geography	9	2	11	8	2	10	3	1	4	2	2	4	22-	7-	29
Physics & Nat. Sc.	19	0	19	15	2	17	6	0	6	3	1	4	43-	3-	46
Math. & Exact Sc.	14	1	15	-	-	-	-	-	-	-	-	-	14-	1-	15
Math.	-	-	-	5	0	5	2	0	2	3	0	3	10-	0-	10

(continued)

(continued)

Major Subjects	1st Year M	F	Total	2nd Year M	F	Total	3rd Year M	F	Total	4th Year M	F	Total	Total M	F	T
Physics	-	-	-	3	0	3	4	0	4	3	0	3	10-	0-	10
Chemistry	-	-	-	3	0	3	3	0	3	2	0	2	8-	0-	8
English	20	1	21	7	1	8	3	1	4	10	3	13	40-	6-	46
Total	79	5	84	53	6	59	27	4	31	27	8	35	186-	23-	209

Chapter VI

DEMOCRATIC REPUBLIC OF THE CONGO

V. Kibabu

DEMOCRATIC REPUBLIC OF THE CONGO

I. A Brief Survey of the Educational Structure

The educational system includes three levels of study, each one divided into several sections.

The first level, or elementary education, exists throughout the country; it consists of six school years, after which a certificate of primary (elementary) studies is awarded. In 1967-68, the elementary schools taught 2,338,895 students. In a few schools elementary education begins after attendance at a preparatory school which is equivalent to pre-school or kindergarten classes.

The second level includes two main divisions. Since the reform of the secondary schools, enacted in 1961, there have been two types of secondary education: one created by the reform, and a post-elementary education still following earlier regulations.

Secondary education begins with a two-year orientation cycle. This cycle leads to an "orientation cycle certification" (Brevet). After this common program, the students are divided in two cycles: the long cycle for the younger ones and the more gifted and the short cycle for those whose success in the long-cycle studies appears doubtful. The long cycle takes four years of studies. The short cycle generally lasts two years; it prepares directly for a trade, while the long cycle prepares for admission to the universities. A certificate of professional aptitude is granted at the completion of the short cycle, and a degree granted by a single panel of educators organized by the state, is obtained

at the end of the long cycle and gives admission to the universities. In 1967-68, the secondary schools were attended by a total of 171,288 students, distributed as follows:

Short cycle:	7,951
Long cycle:	52,292
Post-elementary education:	9,051

Post-elementary education is usually spread over two years and prepares directly for a trade.

The third level of education consists of the universities and the institutions of higher learning not connected with the universities. There are three universities and in 1967-68 they were attended by 3,476 students.

Institutions of higher learning not connected with the universities, were set up in the Democratic Republic of the Congo after independence. Studies last three or four years, depending on the institution. In 1967-68 these institutions were attended by 2,351 students.

II. Situation of Secondary Education at June 30, 1960

At the time the country obtained its independence, secondary education was far from being uniform: on one hand, there was a secondary education similar to the Belgian system, and, on the other hand, there existed secondary schools and schools giving a middle-level general education or vocational training set up for Congolese students.

The secondary education for the Congolese had more or less the same quality as the Belgian humanities curriculum, but one preparatory year of supplementary studies was required of the Congolese wanting to enter the universities. This secondary education consisted of six years of studies divided into two three-year cycles. Classes were taught by foreign teachers; a small minority of

Congolese, graduates of the six-year secondary cycle taught the first two years of the lower level. There were only two Congolese with an education degree (Licence en Pedagogie) teaching at the higher level, along with a few Congolese priests, representing a very small minority.

The middle-level education required four years of studies and prepared students directly for clerical positions or assistant workshop teachers. There existed a slightly larger proportion of native teachers or workshop supervisors. Generally, teaching was done by foreigners.

Two year vocational training following a cycle of five years of elementary education was given almost entirely by native teachers, who were holders of a certificate testifying to four years or more of middle-level education.

A shortage of native teachers existed after independence, following a massive departure of Belgian teachers. This situation gave impetus to a strong movement of expansion at the university level to prepare not only the teachers required to replace the foreign teachers, but also, executives badly needed by the country. It is useful to point out that, at that time, there were only two Congolese universities with a small number of students in the departments of philology and education. Almost all the Congolese students were studying social sciences and economics, fields which were not preparing them for teaching.

III. Situation of Universities or Specialized Institutions in 1967-68

As early as September 1960, the Congolese Government understood the need to organize higher education to respond to the great need for public administration officers and for teachers. Starting with two universities in 1960, the country in 1967-68 could count three universities, several institutions of higher learning and several teachers colleges.

In 1967-68, the situation can be pictured as follows:

TABLE 1

Student Distribution in the Universities

1967-68

Universities	Congolese			Non-Cong Afr			Non-Afr			Total		
	M	Fe	Total	M	Fe	T	M	Fe	T	M	Fe	T
U.O.C. (1)	1117	9	1126	26	-	26	28	5	33	1171	14	1185
U.L.	1734	45	1779	161	20	181	97	26	123	1992	91	2083
U.L.C.	191	-	191	15	-	15	1	1	2	207	1	208
Total	3042	54	3096	202	20	222	126	32	158	3370	106	3476

TABLE 2

Student Distribution According to Origin and Sex in Institutions of Higher Learning

	Congolese			Non-Cong Afr			Non-Afr			Total		
	M	F	T	M	F	T	M	F	T	M	F	Total
E.N.A.	403	3	406	-	-	-	-	-	-	403	3	406
I.N.B.T.P	153	-	153	-	-	-	-	-	-	153	-	153
I.E.M.	87	-	87	-	-	-	-	-	-	87	-	87
I.S.G.E.L.	58	-	58	-	-	-	-	-	-	58	-	58
C.F.M.	14	-	14	-	-	-	-	-	-	14	-	14
I.S.A./ISAP	60	-	60	-	-	-	5	-	5	65	-	65
E.S.C.	82	-	82	7	-	7	-	-	-	89	-	89
E.N.P.T.	23	-	23	-	-	-	-	-	-	23	-	23
ESD/INEP	101	-	101	-	-	-	-	-	-	101	-	101
I.S.E.P.	30	-	30	-	-	-	-	-	-	30	-	30
I.C.E.S.	52	-	52	-	-	-	-	-	-	52	-	52
I.P.N.	488	6	494	2	-	2	-	-	-	490	6	496
ENM/KALINA	-	82	82	-	1	1	-	7	7	-	90	90
ENM/Boma	116	-	116	-	-	-	-	-	-	116	-	116
ENM/Kikwit	32	9	41	-	-	-	-	-	-	32	9	41
ENM/Mbandaka	192	-	192	-	-	-	-	-	-	192	-	192
ENM/Lubumb	68	3	71	1	-	1	-	3	3	69	6	75
ENM/Kisangani	35	-	35	-	-	-	-	-	-	35	-	35
I.NM/Bukavu	130	-	130	-	-	-	-	-	-	130	-	130
ENM/Luluabourg	52	-	52	-	-	-	-	-	-	52	-	52
ENM/Bukavu	38	5	43	-	-	-	-	-	-	38	6	44
Total	2214	108	2322	12	1	13	5	11	16	2231	120	2351

Source: Statistical Yearbook 1967-1968 of the Ministry of National Education

Meanings of the Abbreviations:

U.O.C. - Universite Officielle du Congo in Lubumbashi
The Congo State University

U.L. - Universite Lovanium (Catholic) in Kinshasa

U.L.C. - Universite Libre du Congo (Protestant) in Kisangani
Private University of the Congo (Protestant)

E.N.M. - Ecole Normale Moyenne (Middle-Level Teachers College)

E.N.A. - Ecole Nationale d'Administration (National Institute of Public Administration)

The number of boys, 5,601, is far higher than the number of girls, reaching only 226. This is easily understood as secondary education for girls was only organized after 1960; before that date, girls were directed to post-elementary and vocational education.

In addition to the work of the three universities teacher education is divided into several categories. The training of secondary school teachers is handled by the "Ecoles normales moyennes," middle-level teachers colleges. In order to replace as rapidly as possible the foreign teachers, the Congolese Government decided to give first priority to the training of "Regents" trained to teach the first four years of secondary education. The training of specialized professors for the higher level secondary classes is done by the universities.

In 1967-68, the country had ten "Ecoles Normales Moyennes," with a total enrollment of 1,711 students. The opening of several other middle-level teachers colleges is anticipated in the expansion plan of the middle-level teachers training program. Table 3 illustrates the student distribution by year of study in the middle-level teachers colleges. Before 1970, this cycle

of education will have provided the secondary schools with less than a hundred graduates per year. In 1967-68, there were only 158 students in their last year of studies, and only 125 to 130 of them can be expected to graduate after their final examinations.

TABLE 3

Student Distribution According to Year of Study in the Middle-Level Teachers Training Schools

Schools	Prep Year M	Prep Year F	1st Year M	1st Year F	2nd Year M	2nd Year F	3rd Year M	3rd Year F	Grand Total M	Grand Total F	Grand Total Total
I.P.N.	-	-	282	3	129	3	79	-	409	6	496
ENM/Kalina	-	-	-	46	-	23	-	21	-	90	90
ENM/Boma	-	-	63	-	29	-	24	-	116	-	116
ENM/Kikwit	-	-	14	8	18	[illegible]	-	-	32	9	41
ENM/Lubumbashi	-	-	40	2	20	1	9	3	69	6	75
ENM/Bukavu	-	-	11	-	15	3	12	3	38	6	44
ENM/Luluabourg	-	-	40	-	12	-	-	-	52	-	52
ENM/Mbandaka	162	-	30	-	-	-	-	-	192	-	192
ENM/Kisangani	22	-	13	-	-	-	-	-	35	-	35
I.S.E.P. (2)	-	-	12	-	11	-	7	-	30	-	30
	184	-	505	57	95	31	131	27	1054	117	1171

(1) I.P.N.: Institut Pedagogique National; National Education Institute, which is the Pilot Middle-Level Teachers College.

(2) I.S.E.P.: Institut Superieur d'Education Physique; Institute (for Advanced Studies) of Physical Education which trains teachers for physical education and sports.

IV. Teacher Requirements in the Secondary Schools

After examining the distribution of teachers according to nationality and qualifications, the needs for secondary school teachers can be better understood. In conjunction with this examination, a comparison must be made between the number of students graduating from the elementary cycle and the number of those entering the orientation cycle.

TABLE 4

Situation of Secondary Schools of All Types
1967/1968

Provinces	No. of Schools		No. of Classes	No. of Teachers			No. of Students		
	Elem	Second		Cong	Foreign	Total	M	F	Total
Kinshasa	82	39	932	687	551	1238	27352	7414	34766
Kongo Central	151	73	785	801	395	1196	20037	5554	25591
Bandundu	125	49	493	377	373	750	12883	4098	16981
Equateur	72	39	278	206	184	390	8064	1016	9080
Pr. Orientale	101	32	336	308	185	493	10726	1694	12420
Kivu	80	51	334	272	219	491	8851	1984	10835
Katanga	119	83	529	364	527	891	12925	3673	16598
Kasai Oc.	17	28	365	278	181	459	12103	2069	14172
Kasai Or.	145	64	552	658	156	814	18671	3133	21794
Total	952	458	4604	3951	2771	6722	31612	30625	162237

Source: Statistical Yearbook 1967-68 of the Ministry of National Education

TABLE 5

Teacher Distribution in All Types
of Schools According to Teaching Load and State
1967/1968

Professional Status / Provinces	Religious		Lay		Total	
	FT	PTL	FT	PTL	FT	PTL
A. Congolese	121	236	2480	1115	2601	1351
Kinshasa	13	9	442	223	455	232
Kongo Central	18	50	580	153	598	203
Bandundu	24	37	216	100	240	137
Equateur	7	21	142	36	149	57
Pr. Orientale	9	20	170	109	179	129
Kivu	6	20	180	66	186	86
Katanga	14	15	182	154	196	169
Kasai Occidentale	5	18	196	59	201	77
Kasai Orientale	25	46	372	215	397	261

(continued)

Professional Status / Provinces	Religious FT	Religious PTL	Lay FT	Lay PTL	Total FT	Total PTL
B. Foreign Teachers	616	735	1133	287	1749	1022
Kinshasa	38	37	372	104	410	141
Kongo Central	80	114	170	31	250	145
Bandundu	104	145	90	34	194	179
Equateur	55	75	42	12	97	87
Pr. Orientale	46	55	67	17	113	72
Kivu	67	59	85	8	152	67
Katanga	144	138	205	40	349	178
Kasai Occidentale	51	65	48	17	99	82
Kasai Orientale	31	47	54	24	85	71
C. Congo & Foreign	737	971	3613	1402	4350	2373
Kinshasa	51	46	814	327	865	373
Kongo Central	98	164	750	184	848	348
Bandundu	128	182	306	134	434	316
Equateur	62	96	184	48	246	144
Pr. Orientale	55	75	237	126	292	201
Kivu	73	79	265	74	338	153
Katanga	158	153	387	194	545	347
Kasai Occidentale	56	83	244	76	300	159
Kasai Orientale	56	93	426	239	482	332

FT - Full Time; PTL - Part-time Lecturer

A comparison of Table 5 with Table 4 shows that the number of classes is greater than the number of full-time teachers, i.e., 4,350 compared to 4,604.

An examination of this Table reveals that the average number of students per class is 35. This is rather high in secondary education and leads to the conclusion that classes are over-crowded during the first years of secondary education. The teacher average per class is 1.4, i.e., less than a 1.5 teachers per class, an average considered by experts as below the minimum for the secondary cycle education. All this clearly demonstrates that the number of teachers currently teaching in relation to the number of classes in secondary schools is not sufficient. (See Table 5).

As the part-time lecturer is considered equivalent to a half-teacher, it can be said that the total number of teachers in 1967-68 reached 5,536 for a student body of 162,237, i.e., a ratio teacher/students of 29. This ratio in the preceding year (1966-67) was 26, which shows a slight regression to the year before.

The need for teachers is more easily understood after examining Table 6 showing the distribution of teachers according to their qualifications:

TABLE 6

Qualifications	Congolese	Foreign Teachers	Total
Licencies (B.A.) or Docteurs (Doctorates)	5.4%	27.1%	17.7%
Regents	10.9%	41.6%	28.1%
Elementary Grade Teachers (D6)	54.7%	21.4%	36.1%
Assistant Elementary Grade Teachers (D4)	23.2%	2.2%	11.4%
Certificates	2.1%	9.1%	1.0%
Undetermined	3.7%	7.6%	5.7%

Considering that only the "licencies" and the "regents" are qualified to teach in secondary schools, it is soon realized that nearly 53 percent of all those engaged in teaching are not properly qualified. In 1967-68 the situation was less favorable; for only 39.6 percent of the teaching personnel was qualified, in comparison to 45.8% in 1966-67.

TABLE 7

Teacher Distribution According to
Qualifications In All Types of Secondary Education
1967/1968

Required Degrees	Not Qualified	Assis.Elem. Sch.Tea.	Elem. Tea.(D6)	Grad. Regents	Lic. Doct.	Undet.	Total
Provinces							
A. Congolese	56	418	2514	654	198	101	3951
Kinshasa	4	48	437	133	49	16	687
Kongo Central	33	75	590	75	21	7	801
Bandundu	5	24	258	65	17	8	377
Equateur	-	18	134	25	13	16	206
Pr. Orientale	4	42	126	93	27	16	308
Kivu	2	24	150	61	26	9	272
Katanga	4	50	178	93	22	17	364
Kasai Occidental	-	36	209	24	6	3	278
Kasai Oriental	4	101	432	95	17	9	658
B. Foreigners	9	60	692	1056	748	206	2771
Kinshasa	1	14	120	194	201	21	551
Kongo Central	2	7	132	138	87	29	395
Bandundu	1	4	97	142	90	39	373
Equateur	1	1	43	66	52	21	184
Pr. Orientale	2	2	36	71	54	20	185
Kivu	-	3	51	87	59	19	219
Katanga	1	27	131	218	117	33	527
Kasai Occidental	-	1	42	78	44	16	181
Kasai Oriental	1	1	40	62	44	8	156
C. Congo & Foreign	65	478	3206	1720	946	307	6722
Kinshasa	5	62	557	327	250	37	1238
Kongo Central	35	82	722	213	108	36	1196
Bandundu	6	28	355	207	107	47	750
Equateur	1	19	177	91	65	37	390
Pr. Orientale	66	44	162	164	81	36	493
Kivu	2	27	201	148	85	28	491
Katanga	5	77	309	311	139	50	891
Kasai Occidental	-	37	251	102	50	19	499
Kasai Oriental	5	102	472	157	61	17	814

Table 7 can be summarized as follows:

	Congolese	Foreigners	Total
Licencies or Docteurs	198	748	946
Regents	664	1056	1720
Grade School Teachers (D6)	2514	692	3206
Ass. Gr. Sch. Teachers (D4)	418	60	478
Non-qualified	56	9	65
Undetermined	101	206	307

Keeping in mind that foreign teachers, who are costly to the country, have to be replaced by natives, one can then understand the need for native teachers. It will in fact be necessary to replace 2,771 foreign teachers; this number added to the number of Congolese teachers without the required qualifications (i.e., regents), representing a group of 3,089, gives the actual need for 5,860 teachers, or eighty-seven percent of all new teachers required.

This rather high percentage requires the government to use all means available to recruit native teachers. Thus, in 1966, the government created the "service civique" - a patriotic type of service - a quasi compulsory military service for any Congolese having completed a study cycle of higher education. So, as early as 1966, secondary schools could enjoy the services of more than 380 "miliciens" or servicemen. The number of these servicemen currently assigned to secondary schools is estimated at 400. This service lasts two years and the serviceman is free after this period. Only servicemen trained for teaching remain in teaching, others then may seek employment in private enterprise or in administrative departments.

V. Major Problems

To be able to replace this percentage (eighty-seven percent) of teachers in secondary education, the Government has encountered several difficulties. These difficulties are both material and educational. This report will take up only the main difficulties and will describe the solutions attempted by the government.

A. Financial Difficulties

To create a large number of middle-level teachers colleges adequate buildings and sufficient financial resources are required. In most cases, teacher training schools have been opened in existing buildings of former secondary schools or in clusters of abandoned houses. It is, however, obvious that these older buildings are inadequate substitutes for the type of structure required to provide a suitable education. The need to supply adequate pedagogical equipment and materials increases the financial problem in a country which already spends a large proportion of the national budget for education (over twenty-five percent for 1969). The Government, however, is building new middle-level teachers colleges, using funds derived partly from foreign borrowings and from counterpart funds coming from bilateral agreements.

B. Difficulties in Recruiting Qualified Teachers

There is also a problem in recruiting teachers with a doctor's degree or with an "agregation" who are to make up the top echelons of the middle-level teachers colleges. This problem is not easy to solve, considering the virtual lack of Congolese teachers. The Government turns for help to UNESCO and to French speaking countries such as Belgium, France, Canada and Switzerland.

Beside this foreign help, the Government actively prepares for the Africanization of the top echelons in the centers of higher learning. In the meantime

almost all the middle-level teachers colleges have Congolese administrators helped by a minority of Congolese assistant teachers.

C. Difficulties in Recruiting Students

For 5,827 students registered in universities and in specialized schools of higher learning, the distribution in the departments preparing teachers is as follows:

1. Universities

   a. education - 235 students
   b. sciences - 243 students
   c. sciences/philo-literature - 261 students
      Total - 739 students

2. Specialized Schools of Higher Learning

   a. graduate students in physical education - 77 students
   b. graduate students in the humanities - 524 students
   c. graduate students in sciences and other fields - 386 students
   d. graduate students in medicine - 87 students
      Total - 1,258 students

Out of a total of 5,827 students, 1,997 students or thirty-five percent are potential recruits into the teaching profession. One would be tempted to believe that these thirty-five percent will be all assigned to teaching. But this is by no means certain.

When only the students in the middle-level teachers colleges are considered, their small number stands out. The ten middle-level teachers colleges enrolled only 1,171 students in 1967-68, or an average of 117 students per school.

The majority of students prefer to study at the universities or in the specialized centers of higher education (hautes ecoles) rather than enter teacher preparation institutions. Teacher training is not an attractive profession for the working conditions of the teaching profession are hardly alluring. A teaching career does not offer the same advantages as an administrative career.

While the teacher is nailed to a static condition, his colleague in an administrative career climbs rapidly and enjoys a higher salary.

Secondly, the number of students graduating from secondary schools is low. In 1967-68, only 5,511 students were registered in the "6e"; the first year of the secondary school (approximately the American sixth grade). If only eighty percent were promoted, one arrives at the figure of 4,408 students, out of which barely half are likely to complete higher levels of education.

The Government is aware of this problem, and is consequently concentrating its efforts on expanding secondary education in order to enroll a student population of 7,000 in the first year of secondary schools, in the very near future. But to achieve this, qualified secondary teachers must be trained and kept in the profession. Table 8 illustrates the problem of an adequate source of students qualified to enter secondary level teacher training.

TABLE 8

Classes	Premiere	Seconde	Troisieme	Quatrieme	Cinquieme	Sixieme
1962-1963	30,861					
1963-1964		24,453				
1964-1965			16,281			
1965-1966				12,017		
1966-1967					7,942	
1967-1968						5,511

VI. The Universities' Role in Teacher Training

The Congolese universities play an important role in training teachers for secondary education. This role is direct and indirect.

This role is direct in the sense that the universities consist of departments which train teachers: e.g., philosophy and literature, mathematics and physics, education and psychology. Beside these departments which prepare students more immediately for the teaching profession, it is necessary to point

out that the higher training that university students receive in fields such as law, agriculture, and engineering qualify them to teach their respective specialties in the secondary schools.

The universities play an indirect role in the sense that they organize seminars for secondary school teachers, particularly seminars in modern mathematics and history. On the other hand, university professors collaborate with the commission for secondary education reform, which establishes the programs for this level of education.

VII. Role of the Secondary School Teachers' Associations

Teachers' associations play an important part elaborating the training policies for secondary school teachers. All these associations are fused into a single unionized federation, the FENECO/UNTC. A distinction must be made between the associations at the national level and those at the local level which are organized for the teachers of a single region or for teachers assigned to schools depending on a single authority.

Three such associations exist at the national level.

A. The association of secondary school teachers, the "Union du Personnel Enseignant du Secondaire" (UPESEC).

B. The association of the elementary school teachers assigned to secondary schools.

C. The association of the teachers servicemen in secondary schools.

All these associations deal with both working conditions and educational problems such as the priorities given to the training of teachers and improvement of teachers having already entered the profession. In addition education seminars are organized all over the country and continuing efforts are being made to achieve the Africanization of teaching personnel.

The Association of Assistant Teachers of the Lovanium University (APASCOL), the most prominent local association, is primarily concerned with the Africanization of teaching personnel in secondary schools and in institutions of higher learning and the amelioration of working conditions and salaries for native teachers.

VIII. Conclusion

The Congolese Government is aware of the contribution of education to the socio-economic development of the country. It, therefore, grants education a fairly substantial budget. As early as July 1960, the authorities understood the absolute need for training Congolese executives, of which there was a shortage in the country. Consequently, several secondary schools have been opened throughout the country and a new specialized center for higher education to train high-level civil servants for public administration (Ecole Nationale d'Administration) was founded.

Our authorities have quickly understood that education could not be left in the hands of foreigners and that to train a larger number of talented executives, it was necessary to appoint highly qualified teachers in the secondary schools. As a result, the Government has placed great emphasis on the training of secondary school teachers. For the first time in the Congo, several institutions of higher learning for the training of teachers have been established. By 1969, there were at least twelve in existence, others will be founded in the near future. The university departments preparing students for the "Licences" (B.A.) in mathematics and liberal arts have been strengthened as well as the education departments. In all the universities, courses preparing for the "Agregation," that is teachers for the middle-level have been established.

The teachers' situation has been made substantially better; there remain, however, some disputed areas which are being examined with favor by the Ministry of National Education. The appointment of Congolese directors of studies in almost all the secondary schools and centers of higher learning have encouraged students and the younger teachers to continue in the teaching profession.

The task ahead is still a vast one: the Government and the teachers' associations are very much aware of the fact and are examining every possible avenue, under the new regime, to create an educational system responsive to the needs of the Congo.

Chapter VII

UGANDA

W. Senteza Kajubi

UGANDA

I. Introduction

In Uganda[1] there are three avenues of further education open to children who complete seven years of primary schooling and pass the examination known variously as "Secondary Entrance", "Primary Leaving", or, more frequently in professional circles, the "P.7 Exam." These avenues are secondary schools giving a wholly or mainly academic education leading to the East African school certificate after four years, and the higher school certificate after six: the farm and technical schools leading to city and guilds or national certificates: and the primary teacher Training Colleges leading to the initial professional qualification of a grade II certificate. At the post-school certificate level, there are the higher school certificate classes in secondary schools; the National Teachers College (preparing non-graduate secondary school teachers) and the four teacher training colleges preparing teachers for the upper classes of the primary schools; the Uganda Technical College and College of Commerce: and the two farm institutes. All of these post-primary institutions are in the market for the supply of men and women available from Ugandan resources for post-primary teaching.

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[1]Uganda has an estimated population of about 8.5 million, growing at an annual rate of 2.5 percent. The last Census was taken in 1959, and the next Census is due to be taken in August, 1969.

II. Problems and Problem Solving

A critical bottleneck exists at the end of the basic seven year primary school course and at the entrance to the secondary school. The index of opportunity, i.e., the number of secondary level places available for every 100 primary school leavers is still very low, being only about 12-14 percent. At the end of 1966 for example, 70,000 children sat for the primary leaving examination and of these, 7,000 or ten percent were admitted into secondary level institutions. It is estimated that about 1.5 to two percent of children in the secondary level age group, years 14 to 18, are actually enrolled in the publicly supported post-primary institutions. A very high priority, therefore, is placed on the expansion of secondary education, the aim being to provide secondary level education for at least four percent of the national age group at this level.

The government of Uganda is trying to expand the facilities for secondary level education in several ways: by building completely new schools; by upgrading some of the existing primary schools to secondary status; by adding extra streams and extra sessions in existing secondary schools; and through the rationalization of teacher education and the consolidation of the many small teachers colleges into a smaller number of larger units, the building so freed being available for the expansion of secondary education. The number of pupils per class and the proportion of day secondary schools to boarding schools is also being progressively increased. All these measures are aimed at minimizing the capital requirements necessary, and at using the available teaching force most economically and productively.

The achievements of the Government in expanding the facilities for post-primary education as judged from enrollment figures shown in Table I, have been remarkable. There are seventy-five government-aided secondary schools in Uganda, of which about fifty percent have been established since independence. The number of secondary enrollments in classes 1-4 rose from 6,446 in 1961 to 33,390 in 1969, a substantial increase over the period. Likewise, the number of higher school certificate places, secondary classes 5-6 has, increased from the nominal figure of 351 to 2,420 over the same period.

TABLE I

Uganda: Enrollment in Post-Primary Institutions 1966-69

	1961	1964	1966	1969	1969 Index 1961-1969
Senior Secondary 1 to 4	6,446	11,709	18,500	33,390	517.9
Grade II Teacher Training	2,626	3,542	3,500	3,405	129.6
Technical Schools	620	802	900	993	160.1
Farm Schools	120	262	440	528	440.0
Senior Secondary 5 to 6	323	964	1,600	2,240	693.4
Uganda Technical College	450	395	480	440	98.0
Uganda College of Commerce	-	120	180	272	-
Grade III Teacher Training	369	466	415	546	147.9
Grade V Teacher Training	50	30	290	381	762.0

Source: The figures are compiled from Uganda's Second Five-Year Development Plan 1966-1971. Entebbe: Government Printer, 1966, p. 136; and from unpublished Government sources.

Yet in spite of this apparent success, the gap between social demand for secondary level education and the Government's capacity to provide facilities to meet this demand is still very wide. The large number of primary school leavers who cannot be absorbed in secondary level institutions nor find employment in the modern industrial sector of the economy, still poses a major problem.

A crucial obstacle to the expansion of education in Uganda is the shortage of secondary school teachers. Until recently, the practice was to rely mostly on graduate teachers in the secondary school, most of them being expatriates. With the shortage of graduates in almost all sectors of the economy, the tendency has been for new local graduates to avoid teaching and to gravitate to Government, other professions and to the private sector where they have found more glittering opportunities. Consequently, as Uganda's Second Five-Year Development Plan points out, "the whole secondary school system is still extraordinarily dependent on expatriate teachers."

There are two main sources of supplying Ugandan secondary school teachers - the post-graduate diploma, and the under-graduate program leading to the bachelor of education degree (B.Ed.) at Makerere.

The promotion of graduates from the Faculties of Science and Arts at Makerere, who chose to join the Faculty of Education for the post-graduate Diploma, has been small and in some cases decreasing. Most of the teachers who have been expatriate graduates recruited through the "Teachers for East Africa Project" - Table II gives the number of local and expatriate graduates trained in the post-graduate diploma at Makerere in the years 1961-1969.

In order to step up the production of local graduate teachers, the bachelor of education program was started at Makerere in 1963. The students for the B.Ed. program join the University entrance qualifications. They take three subjects in the first year, one of which is "Education", and two subjects in the second and third years, one of which is "Education", and qualify as graduate teachers at the end of three years. They have, however, a four-term year, teaching practice being done during vacations.

TABLE II

Number of Graduates Leaving Makerere and Number of Graduates Joining the Dip.Ed. Course 1961 - 1969

Year	No. of Graduates in Arts, Science and Fine Art at Makerere	No. of Makerere Graduates Joining the Dip.Ed.	No. Of T.E.A. Graduates
1961/62	74	18	48
1962/63	65	17	68
1963/64	52	17	65
1964/65	63	21	65
1965/66	137	33	55
1966/67	183	39	58
1967/68	196	40	63
1968/69	271	44	37
1969/70		80?	30

Source: Makerere Univeristy College Annual Reports.

The B.Ed. program has stepped up the number of graduates produced for secondary schools. Table III gives the number of undergraduates enrolled in the B.Ed. program at Makerere in the five years of 1965 to 1969.

TABLE III

Number of B.Ed. Graduates from Makerere 1965/66 to 1968/69

Year	Number
1965/66	23
1966/67	38
1967/68	38
1968/69	40

It should be pointed out, however, that both the Dip.Ed. and the B.Ed. are East African programs and that the teachers produced are for the three East African countries and not for Uganda alone. On the other hand, a small number of Ugandan teachers are trained at the University College, Dar-es-Salaam and at the University College, Nairobi.

In order to reduce the overdependence on graduate and expatriate teachers, and the consequent costs involved, the government introduced a scheme of training Grade V, non-graduate secondary school teachers at the National Teachers College at Kyamgogo near Kampala in 1965. The college is affiliated to Makerere University College and the students on successful completion of the course, are awarded the Makerere diploma in Education. This program in fact took over and expanded the former non-graduate diploma course which was for many years conducted at Makerere, and was phased out in 1964. The grade V teachers do a three-year course after the East African certificate of education, ordinary level or a two-year course after the East African certificate of education, advanced level. These teachers are expected to teach in the lower forms of the secondary school and may teach one subject in which they have specialised up to the fourth year of secondary school. This course has an output of about 100 teachers annually. It is expected, however, that when the level of intake rises to the East African certificate of education (advanced level) only, and the course is only two years, the annual output will rise to about 240 teachers.

II. The Demand for Secondary School Teachers

Official long-term projections of teachers who are likely to be needed in the future are not available, and their calculation is made more difficult by the great political and social demand pressures which are exerted on governments in developing countries and force them from time to time to expand educational facilities, particularly at the secondary level, far beyond the planned targets of secondary school expansion.

It may be argued that the number of secondary schools now available in Uganda is sufficient to cater for the children who, having completed the course of primary education, are able to profit from the type of secondary education now offered, and having completed the secondary school course, be absorbed in forms of employment requiring secondary education. On the other hand, less than fifty percent of the number of children in the relevant age group (i.e. 6 to 12 years inclusive) are in the publicly supported primary schools, although when the number of children attending school of some sort in unaided schools is considered, the proportion rises to about sixty-five percent. There is a wastage rate of about twenty-five percent from the entrants in the first year to those who complete the last year of the primary school, so that selection for secondary school is really drawn from about thirty to thirty-five percent of the relevant age group as a whole, of whom only about twelve percent are admitted to secondary level institutions. Therefore, fewer than four percent of the secondary age-group are admitted to the secondary school in the aided sector. This is a very small proportion of the country's children particularly when it is remembered that the four percent includes all secondary level institutions such as farm schools and teachers colleges. There is, therefore, a prima facie case for the expansion of secondary education opportunity.

As we said earlier, no long-term projections for secondary school staff requirements are readily available, so that one is compelled to work on a series of "guest'mates" of future school population as a guide to arrive at any sort of figure for staff requirements. The planned enrollment in secondary forms I to IV from 1966 to 1971 as indicated in the "Second Five-Year Development Plan," is given in Table IV.

TABLE IV

Uganda: Development of Senior Classes 1-4: 1966-1971

	1966	1967	1968	1969	1970	1971
In-take S.I	6,200	7,500	7,710	7,920	8,130	8,340
Enrollment S.1-S.4	18,500	22,700	26,100	28,000	29,900	30,500
Output: School Certificate	1,900	2,600	3,700	3,900	4,700	4,900

Source: Uganda Second Five-Year Development Plan, p. 138.

On the other hand, the actual enrollment in these classes in 1969 is already 33,390 or twenty-seven percent above the planned development. Assuming, however, that (i) the population of pupils who reach Primary 7, the top of the Primary School, will remain about 70,000 for some years; (ii) that the intake into form I of the secondary school will stabilize at about fourteen percent of those children completing primary 7; (iii) that roughly one quarter of the pupils completing senior 4 as at present will continue to higher school, i.e. forms 5 to 6, and (iv) that the wastage of pupils in the secondary school largely between S.3 and S.4 and between S.5 and S.6 continues as at present at the rate of five percent, then the secondary school population will increase progressively until 1973 and then stabilize. The estimated figures are given in Table V.

To arrive at a guestimate of the staff situation we shall assume an overall teacher/pupil ratio of 1:25. This seems reasonable in the light of the present situation: the figure for 1969 will be seen to be somewhat less than the figure for teachers actually employed, but there is perhaps an element of overestablishment at the moment to account for periodical absences on leave

of expatriate staff: a situation which will not arise if the staff is wholly or largely Ugandan.

TABLE V

Uganda: Estimated Enrollment in Secondary Classes 1-6
1969 to 1973

1969 -	33,390 S.C. and	2,420 H.S.C.	totalling 35,810
1970 -	36,630 S.C. and	2,870 H.S.C.	totalling 39,500
1971 -	37,950 S.C. and	3,470 H.S.C.	totalling 41,420
1972 -	38,710 S.C. and	4,050 H.S.C.	totalling 42,760
1973 -	38,710 S.C. and	4,240 H.S.C.	totalling 42,950

As we have already indicated, there are two main sources from which local secondary schools teachers are drawn: Makerere University College for graduate teachers, and the National Teachers College, Kyambogo for non-graduate secondary teachers. If these two sources continue to produce secondary school teachers indiscriminately, an imbalance between graduate and non-graduate staff in the secondary schools could develop. If, however, it is assumed that an acceptable minimum of graduates to non-graduates should be one third of the staff in forms V to VI, then the estimated staff requirements, in accordance with these conditions and estimates, will be as follows:

TABLE VI

Estimated Staff Requirements for Uganda
Secondary Schools - Forms I to VI: 1969/1975

Year	Requirements		Existing in Schools		Estimated Output			Surplus/Deficit	
	Grad.	Gr. V	Grad.	Gr. V	B.Ed.	Dip.	Gr. V	Grad.	Gr. V
1969	542	890	135	465	-	32	115	407	425
1970	603	973	167	580	32	65	105	436	393
1971	653	1004	264	685	22	75	110	389	319
1972	678	1032	361	795	55	90	150	317	237
1973	686	1032	506	945	60	90	180	180	87
1974	686	1032	656	1125	60	90	200	30 +	93 +
1975	686	1032	806	1325	?	?	?	120 +	293 +

*Graduates of non-degree programs from training college certified to teach in lower forms of secondary school.

A number of modifications have to be made to these figures. First, it is expected that a small number of B.Ed. graduates (say twenty over the period in the Table) will go into teacher training, and thus the surplus will be 100. An attempt has been made to allow for the very high drop-out rate at present obtaining at the National Teachers College (something like thirty-five percent of the intake do not finish the course or are eliminated at final examinations) and for the proposed expansion of the college to a population of 250 per year. There is however, one more factor which at present particularly affects grade V teachers, and that is the factor of the private schools. There are almost 350 of these schools in Uganda, some of them purely mercenary. Most of them are inadequate, lacking qualified staff, textbooks, suitable buildings and other physical requirements, but seventy-two of them are recognized and classified by the government. Some of these schools will almost certainly grow and prosper to the point at which the government draws them into its own net, and so a further "legitimate" market for qualified secondary teachers will be opened up. At present, grade V teachers in particular are being attracted to the private sector by premiums on their salary scale: and because, according to the "Pensions Ordinance," service in recognized private schools counts as qualifying service towards the "Uganda Teachers' (Non-contributory) Pension," this practice constitutes no hardship on the part of teachers who are attracted to private schools, and later select to join the publicly supported system. It is known that forty-seven of the eighty-seven grade V teachers who qualified in 1968 are teaching in private schools in 1969. Perhaps it is not unrealistic to look for an average leakage of twenty percent per year into these

schools, which will reduce the grade V output to something under 700, over the period in the Table VI and, therefore, modify the projected surplus.

With regard to all the prospective secondary teachers, there is an even more pressing problem - the problem of supplying teachers with the required subject combinations. At the moment expatriate teachers of various nationalities are filling 875 posts, reasonably well scattered over the curriculum. The phase-out of these teachers, however, is going to be anything but even, since the education students, whether undergraduate or post-graduate, are by no means evenly distributed. The bachelors of education who qualified in the 1968/1969 academic year or those who are due to qualify in 1969/1970 total seventy-six. Of these only six offer English as a principal subject, four offer chemistry, one offers mathematics, and none at all offers physics: but nineteen each offer biology and history, and twenty-seven offer geography. The pattern of total subjects offered is similar - thirteen students offer English, sixteen chemistry, six physics, two math: twenty-six offer biology, thirty-one history and forty-one geography. The non-graduate students of National Teachers' College are divided roughly fifty-five percent sciences and forty-five percent arts. No further breakdown is available, but common opinion among the staff is that students are either weakest or least confident of their ability in those subjects which have so far attracted the fewest undergraduate and post-graduate students. This could easily be because industrial or commercial opportunities are still open for young men and women with good English, mathematics and sciences, with a very much more attractive salary scale. The pattern of Uganda students entering the University of East Africa this year in the academic session 1969/1970 - shown in Table VII - is also relevant. This Table shows that the proportion of Uganda students who

are entering the university and selecting education is still small and that only a very small minority of them are offering math/science subjects. Tables VIIa and VIIb show the prospective B.Ed. output up to 1971 by subjects and principal subjects.

TABLE VII

University of East Africa

Offers of Admission to the University for Undergraduate Courses Relating to Education - Academic Year 1969-1970

	MUC B Ed	UCN BA Ed	UCN BSC Ed	TCN BA Ed	TCD BSC Ed	Total All Faculties	Education Students as % of Total Admission	Science Teachers as % of Total Education Students
Uganda	58	7	3	1	1	757	9.2	5.7
Kenya	32	52	13	13	4	804	14.2	15.0
Tanzania	-	3	-	131	70	579	35.2	30.9

Note: The breakdown of B.Ed. Students into science and arts is not yet available.

TABLE VIIa

Prospective B.Ed. Output 1969-1971 by Subjects and Principal Subjects

By Subjects	1969	1970	1971	Total
English	4	6	3	13
Mathematics	-	1	1	2
Physics	3	1	2	6
Chemistry	6	4	6	16
Biology	5	8	13	26
History	10	16	5	31
Geography	10	21	10	41
Rel. Ed.	4	6	2	12
Art	2	1	-	3
Physical Ed.	-	-	1	1
	44	64	43	151

TABLE VIIb

By Principal Subjects	1969	1970	1971	Total
English	3	3	-	6
Mathematics	-	-	1	1
Physics	-	-	-	-
Chemistry	4	-	-	4
Biology	2	5	12	19
History	4	10	5	19
Geography	9	14	4	27
Rel. Ed.	-	-	-	-
Art	-	-	-	-
Physical Ed.	-	-	-	-
	22	32	22	76

There will, thus, continue to be a serious shortage of teachers offering science subjects particularly physics and chemistry and a lamentable dearth of mathematicians.

The shortage of science and mathematics teachers is all the more serious in view of the need for rapid industrial and agricultural development, all of which demand an emphasis on science teaching in the schools. The policy of the government is to reserve sixty percent of the places in forms 5 and 6 of the secondary school for science students and forty percent for arts students. These proportions, however, are far from being reflected among the graduate teachers presently being trained.

The supply of teachers of cultural subjects and other specialized fields is also barely enough to scratch the surface of the need for such teachers since the output of artists, musicians and physical education specialists, graduate and non-graduate, will not exceed twenty to twenty-five per year altogether in the foreseeable future.

Both primary and secondary education provided in the past has been basically academic and for the most part irrelevant to the problems and aspirations of African countries.

As Mwalimu Nyerere points out in "Education for Self-Reliance,"

> ". . . The most central thing about the education we are at present providing is that it is basically an elitist education designed to meet the interests and needs of a very small proportion of those who enter the school system. . .It is designed for the few who are intellectually stronger than their fellows; it induces among those who succeed a feeling of superiority, and leaves the majority of the others hankering after something they will never obtain. It induces a feeling of inferiority among the majority. . .".*

It would be expected that in a predominantly rural and agricultural country such as Uganda, agricultural education would occupy a central position in the curriculum of the schools, and that farm schools would become a vital part of both the educational and agricultural system. Unfortunately, this has not happened. Agriculture has continued to be regarded by school leavers as menial work requiring only physical toil rather than intelligence. The farm schools, wherever they have been established, have tended to lanquish; and in 1969 there are only four of them with a total enrollment of just over 500 pupils.

The main obstacle to the success of farm schools in particular and to the popularization of agriculture among pupils in general, has been the wide disparity in the index of economic opportunities between the rural and urban sectors of the economy. School leavers, no matter how much agricultural education they may have received, cannot be satisfied with a rural existence based on a one-acre-one-hoe-one-goat economy. The transition from the status of school

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*Nyerere, Julius K., Education for Self-Reliance. United Republic of Tanzania. Dar-es-Salaam: Government Printer, 1967, pp. 9-10.

pupil to that of adult farmer has proved a major hurdle. In order to go over this obstacle, land, capital or credit, some form of supervision during the initial period, organization of produce marketing and other facets of development planning aimed at making life in the rural areas more economically and socially attractive. In the absence of such arrangements farm school pupils and even primary school children have tended to regard the schools merely as a stepping-stone to urban white-collar employment.

There are proposals in Uganda's Second Five Year Development Plan to revitalize the farm schools, and of giving agricultural education a place in the curriculum of secondary schools which is commensurate with its pivotal position in the economy. The secondary school curriculum leading to the East African certificate of education includes agricultural biology, and the college has plans of offering the teaching of agriculture as part of the post-graduate diploma course in education and to produce graduate 8 teachers of agriculture in 1970, as the first step of a long-range project revitalizing agricultural education in the secondary schools. There are, however, no projections of the number of teachers who are likely to be needed for this project.

There are plans also of ruralizing the primary school curriculum to include more agricultural and manual subjects and a UNESCO Pilot Project in this connection is already underway, involving a number of primary schools and a Teachers College.* Teachers of agriculture, therefore, will be needed in the teachers colleges to ensure that those who are trained as primary school teachers

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*See UNESCO No. 1140/B.M.S.RD/APS Uganda Rural Education in Primary Schools. Paris: March 1969. Also UNESCO No. 725/B.M.S./RD/APS. Paris: August 1968; and No. 636/B.M.S./RD/APS. Paris: June 1968.

in the future have an appreciation and understanding of the problems and principals of agriculture.

Turning to technical education, there were at the end of 1967 five institutions giving post-primary courses in a variety of technical fields including artisan and other skilled fields. These schools had a population of 993 pupils, with a staff of twenty-one expatriates, of whom five were graduates, eighty-two local technical teachers of various grades; none of whom were graduates.

It is planned to raise the enrollment of these colleges to 1,500 by 1971. According to the latest available Government statistics, however, there are no Uganda technical teachers who are due to be qualified up to 1974. There are at the moment, no courses for technical teachers in Uganda, and it does not appear that there are any Ugandan technical teachers in the pipeline abroad. There are, on the other hand, Ugandan technicians who could be trained as technical teachers.

The education and training of specialized graduate teachers of agriculture, technical subjects, and indeed of handicapped children such as the blind, deaf, and spastic children, is still a virgin field. It may well be an area in which there could be regional cooperation in view of the relatively small numbers which are likely to be needed by each country. Kenya, Tanzania, Uganda, Ethiopa, Malawi, Zambia Lesotho, Swaziland and Botswana have already formed a Regional Council on Education which, among other things, is concerned with promoting such cooperation.

The shortage of adequately qualified local tutors in the primary teachers colleges has also posed a major problem. Out of a total of 196 tutors in the twenty-six colleges of Uganda in 1969, only sixty are Ugandans of whom fifteen or 7.6 percent are university graduates. There is, therefore, great need to

raise the proportion and to improve the academic and professional qualifications of local tutors in the teachers colleges.

There are plans to rationalize teacher education in Uganda, and to consolidate the many small teachers colleges in four large regional colleges with enrollments of about 1,000 students. It is planned also to raise the standard of admission into these colleges to the East African certificate of education as the minimum.

The staffing of the colleges, however, like that of secondary schools, will continue to depend mostly on non-graduates. An "acceptable non-graduate" is one whose academic and professional training amounts to a minimum of nine years from the end of the Primary School stage and who has satisfied the examiners of the Institute of Education or of a comparable body abroad: he is known by his Ministry salary/qualification grading as a "grade V teacher": or, to distinguish him from colleagues whose training has been for secondary schools as a "grade V tutor": he possesses a diploma in education from the National Institute of Education and is regarded as being capable of dealing with students at the post-school certificate level.

The National Institute of Education is the principal source of supply for these grade V tutors: and by the end of 1970 will have added to the tutors already in the field some sixty men and women similarly qualified: thus at the end of 1970 there will be 105 grade V tutors in colleges. The faculty of education has, in the last academic year, instituted a "Primary Option" in its B.Ed. curriculum. Six second-year students are following this optional study, and it is calculated that perhaps half of these will take up service, ultimately, in teacher training. Requirement figures for 1972, when the first two regional colleges open, are twenty-one graduates and 105 grade V tutors:

and it seems that this figure will easily be met. It seems possible that after 1970 the institute will turn its attention to teachers in need of the full two-year diploma course so that its output will drop to thirty grade V tutors every two years, but even if this is done, provided tnat two or three graduates each year opt for the primary school alternative at B.Ed., the final number of forty graduates and 195 grade V tutors will be available in 1978, when the second pair of colleges open. This calculation makes allowance for normal wastage due to marriage of women, mature entry to degree work, student counselling courses and the like. Past, present and immediate future output from the institute is rather biased in favor of men: this bias will be redressed in time for the final completion of the changeover to regional colleges.

Chapter VIII

TANZANIA

George A. Auger

TANZANIA

The United Republic of Tanganyika and Zanzibar, which has since been renamed the United Republic of Tanzania, came into being on 30th April, 1964, as the result of a merger between mainland Tanganyika, which had gained independence on 9th December, 1961, and of the newly liberated Islands of Zanzibar and Pemba.

Education, however, is not a union matter; it is administered separately in the mainland and in the Islands. This paper will deal exclusively with mainland Tanzania.

According to the census taken on the night of 26th-27th August, 1967, the total population of mainland Tanzania was then 11,877,000. The annual increase in population over the previous ten years lay somewhere between 2.5 percent and three percent. The majority of children entering primary and secondary school belonged to the seven and fourteen years old age groups respectively. It is estimated that in 1967, there were 320,000 children in the first group and 260,000 in the second.

I. The School System

Primary schooling in Tanzania lasts seven years; secondary education four to "0" level plus two to "A" level; and the basic university courses leading to a Bachelor's degree are of three years duration.

Secondary school teachers qualify at degree and post higher school certificate levels. Primary school teachers, with the exception of a few graduate specialists, are trained at lower levels.

TABLE 1

The Main Tanzanian Teaching Qualifications

	YEARS OF EDUCATION					
	Primary	Secondary	Higher Sec.	University	Professional	Total
Graduate Teachers	7	4	2	3	Concurrent	16
Diploma (E.O.3)	7	4	2		2	15
Grade A Certificate	7	4			2	13
Grade B Certificate	7	2			3	12
Grade C Certificate	7				3	10

Note - The Grade B course has been discontinued and the Grade C course is now open to female candidates only. Until recently, the Primary School course lasted eight years.

The priority objective in education of the (first) "Tanganyika Five Year Plan for Economic and Social Development, 1st July, 1964 - 30th June, 1969" was undoubtedly the achievement of self-sufficiency in the supply of high level man-power by 1980. Consequently, the expansion of provisions for secondary - and higher - education was one of its main concerns; and the training of secondary school teachers ranks high in the execution of this plan.

TABLE 2

Secondary School Enrollment in 1964 and Enrollment Projections at 5 Year Intervals Between 1969 and 1979

Form:	I	II	III	IV	V		VI		Total
					Arts	Science	Arts	Science	
1964	5302	5013	4873	3630	274	342	238	225	19,897
1969	7110	6958	6473	6421	552	840	494	736	29,584
1974	7985	7732	7483	7238	552	1320	538	1194	34,042
1979	8860	8598	8341	8087	792	1800	725	1661	38,864

II. Teacher Requirements

In the past, the secondary schools of Tanzania have been largely staffed by expatriates.

TABLE 3

Teaching Force in the Secondary Schools in 1964 and Estimated Force in 1969

		1964	1969
Tanzanian citizens	Graduates	33	200
	Non-grads	193	250
	Total	226	450
Non-Tanzanians	Graduates	552	775
	Non-grads	80	90
	Total	632	665
Tanzanian and non-Tanzanian citizens	Graduates	585	975
	Non-grads	273	340
	Total	858	1315

Teacher requirements for the public schoold of Tanzania until 1969 have been estimated as follows:

TABLE 4

Estimated Public Secondary School Teacher Requirements
(Forms I to VI) at 5 Year Intervals Between 1964 and 1979

	Arts	Science	Others	Total
1964	319	347	47	713
1969	647	470	78	1195
1974	741	470	164	1375
1979	1038	658	229	1915

A more detailed analysis of secondary school teacher requirements in main subjects for the quinquennium 1969-1974 has been calculated on the basis of a number of assumptions, which reflect expansion and orientation policies as well as professional considerations. There will be an increase of five form I streams and of four form V streams each year; teachers will be expected to take between twenty-four and twenty-seven periods each week (1½ teachers per forty period time-table); non-graduate teachers will represent about half the establishment in forms I to IV; fifth and sixth form teachers would be specialists in one subject only.

TABLE 5

Estimated Full-Time Teacher Equivalents
for Forms I - IV in Public Secondary Schools Between 1969 and 1974

	1969	1970	1971	1972	1973	1974
Swahili	120	124	127	130	132	134
English	256	264	271	275	280	287
French	5	10	15	20	25	30
History	103	105	108	110	111	112
Civics	60	62	63	64	65	66
Geography	103	105	108	110	111	112
Mathematics	220	228	228	224	224	224
Biology	98	97	93	85	82	78
Physics	76	78	79	80	83	84
Chemistry	76	78	79	80	83	84
Agriculture	3	7	13	19	25	31
Engineering	14	16	19	22	26	29
Domestic Science	53	58	62	64	66	67
Commerce	6	6	12	18	24	30
Arts and Crafts	2	3	4	5	6	7
Total	1195	1241	1281	1306	1343	1375

TABLE 6

Estimated Number of Specialists in One Subject Only Required
to Teach Principal Subjects in Forms V and VI of Public Schools: 1969-1974

	1969	1970	1971	1972	1973	1974
English Literature	18	11	11	11	11	11
History	26	17	17	17	17	17
Geography	27	23	23	23	23	23
Mathematics	31	19	22	26	28	29
Biology	26	17	18	18	19	20
Physics	30	27	29	32	35	37
Chemistry	28	25	26	28	31	33
Economics	22	10	10	10	10	10
Total	208	149	156	165	174	180

In brief, by 1974 there will be a need for approximately 1550 practicing teachers in the grant-aided schools of Tanzania: 865 should be graduates and

685 non-graduates; 180 should teach in form V and VI and 1375 in form I to IV: language will require 462, the social studies 340, mathematics 253, the sciences 336, and the practical and vocational subjects 164.

It will be noted that the above figures relate to grant-aided or public schools only and that a number of other factors, which were not taken into account in reaching these approximations, have to be considered in order to obtain a more realistic appreciation of the secondary school teacher requirements in Tanzania.

The number of unassisted schools has increased rapidly during the last five years and there is no reason to believe that this trend will not continue. The 5991 students enrolled in these schools in 1967 accounted for 19 percent of the total enrollment, equaling 23 percent of the enrollment in grant-aided schools.

The majority of the 340 non-graduate teachers, representing about 25 percent of the establishment in 1969, has not been trained and does not qualify as secondary school teachers. They will have to be up-graded or replaced by others in the near future.

One may reasonably assume that, despite the bondage system which is operative in Tanzania, from 5 percent to 10 percent of all newly trained teachers will go on for further studies; that, at any given time, another 10 percent will be called upon to perform other important functions in the ministry of education, at the University, in the Institute of Education, at the Head of Secondary Schools, on the staffs of teachers colleges, etc.; and that another 5 percent to 10 percent will quit the teaching profession each year for reasons of ill-health, marriage (in the case of women), transfer to other ministries and occupations, death, etc.

It would seem, therefore, that the number of teachers which will be required to staff the secondary schools of Tanzania in 1969 will be closer to 2000 than 1550, and that self-sufficiency in the field of secondary education could be reached by 1974 provided that some 850 graduates and 800 non-graduates were trained -- or up-graded - for the teaching profession.

III. The Supply of Secondary School Teachers

The education of teachers for the secondary schools of Tanzania is provided for at the University College Dar es Salaam, at the Dar es Salaam Teachers College and at the Morogoro Agricultural and Teachers Colleges.

At the University College, the faculty of arts and social science and the faculty of science offer three-year degree courses with education. The entrance requirement to all degree courses is a higher school or "A" level certificate of studies.

The Dar es Salaam Teachers College runs a two-year education course for practising teachers who have qualified for entrance through private studies and for students who have obtained a higher school certificate through the established school system.

The Morogoro Agricultural College and the Morogoro Teachers College co-operate in the training of degree and lesser qualified candidates for the teaching of agriculture in secondary schools.

The number of candidates who are expected to obtain secondary school teaching degrees and diplomas outside Tanzania is negligible.

The estimated annual output of these three institutions is recorded in Table 7, below.

TABLE 7

Estimated Output of Secondary School Teachers for Tanzania, 1969-1974

	Graduates				Non-Graduates				Total of Grads & Non-Grads
	Arts	Science	Others*	Total	Arts	Science	Others	Total	
1969	76	18	15	109	20	26	21	67	176
1970	180	100	15	295	25	29	21	75	370
1971	100	80	15	195	25	29	21	75	270
1972	100	80	15	195	25	29	21	75	270
1973	100	80	15	195	25	29	21	75	270
1974	100	80	15	195	25	29	21	75	270
69-74	656	438	90	1184	145	171	126	442	1626

*The category 'others' covers agricultural, commercial and domestic science specialists.

By comparing these figures with the requirements described in Tables 5 and 6 above and subsequent paragraphs, it appears that the public secondary schools of Tanzania are likely to be entirely staffed by Tanzanian citizens early in 1973 and that, by the end of the following year, the entire secondary school system could be in the hands of Tanzanians.

If the prospects of localization are so good in the field of Secondary Education, it is undoubtedly due to the tied bursary scheme which has been closely related to the Government's manpower development plans from the very beginning. According to this scheme, not only university graduates but in general all post-secondary students are required to take employment with the Government, or on Government advice, for a period which is equal to the duration of their full-time education beyond form IV.

It so happens that a large number of secondary school teachers will have fulfilled the obligations of their bond by the time the third five year development plan comes into operation and at a time when the supply and demand secondary school teachers will have levelled off. At that stage, the government will undoubtedly have to reconsider the number of grants ear-marked for teacher education in relationship to future requirements and to the number of teachers who leave the profession when their period of bondage has come to an end. At a later date, it might decide that the tied bursary scheme should be reduced or even done away with altogether.

IV. Priorities in Teacher Education

The 1964-1969 Development Plan was admittedly geared to meet the high-level man-power needs of the country. Secondary and higher education were given prominence and teacher education, to staff both the primary and secondary schools, easily topped the professional training lists.

As the current plan is nearing completion and the blueprint for development in the coming quinquennium is taking shape, an increased emphasis is being placed on science education in the secondary schools and in the teachers colleges. Indicative of this re-orientation is a recent circular from the Ministry of Education (n.d.) on the "Reorganization of Fifth and Sixth Forms," authorizing the following fifth form entry groups - and thereby determining the number of fifth and sixth form streams for 1969.

TABLE 8

Fifth Form Entry Groupings for 1969

	No. of Groups	No. of Candidates
Science Subject Groupings		
Physics, Chemistry and Mathematics	9	216
Physics, Pure Mathematics, Applied Maths	6	144
Physics, Chemistry and Biology	18	432
Chemistry, Biology and Geography	2	48
	35	840
Art Subject Groupings		
History, Geography and Economics	7	168
History, Geography and Language	12	288
Economics, Geography and Mathematics	4	96
	23	552

A similar re-organization of forms I to IV is underway. It will result, in most cases, in separate secondary schools for arts and science courses.

The intake of Education students at the University College Dar es Salaam in 1969, and the anticipated intake for the following five years is slightly over 100 in the faculty of arts and social science and a little less in the faculty of science, a far cry from the predominantly art-orientated contingents that were trained in Tanzania and abroad in previous years.[1]

By and large the education of future secondary school teachers will take place in Tanzania, with an increasingly strong emphasis on the role of the teacher as an agent for spreading the national ideology and for developing

[1]The estimated output of 180 Art with Education graduates in 1970, recorded in Table 7, is the outcome of the rustication of a large number of students for one year in 1966-67.

a spirit of national understanding, dedication and self-reliance in their charges and within the community.

The curricula, syllabi and teaching materials at all levels of education are in the process of being revised with a view to rehabilitating traditional values and relating all courses to the cultural aspirations and felt needs of the nation. Teachers in training, as well as practicing teachers, are being made vividly aware of their responsibilities as curriculum developers and are frequently called upon to assist in the collection of source materials and in the production of experimental and more permanent teaching manuals.

The teachers of Tanzania are expected to participate in nation-building activities and in community development projects, which involve a considerable amount of adult education. There is a growing concern among teacher educators to equip intending teachers with the knowledge and skills that are required to perform these functions effectively.

V. Recommendations

The rapid process of localization which is taking place will soon leave the secondary schools of Tanzania with relatively few highly trained and experienced teachers in any discipline. It is imperative to embark upon a program of further studies for a selected and considerable number of subject specialists who will return to teach fifth and sixth form students, to head departments in the lower form of the secondary schools, and to become active and effective members on government committees and the panels of the Institute of Education.

Provisions should also be made for the training of specialists in educational fields other than teaching. Post-graduate courses, together with their appendices of in-service courses, conferences, workshops and seminars are needed to increase the number and improve the quality of educational researchers,

planners, administrators, statisticians, counsellors, curriculum developers, and other para-academic personnel, whose role is of paramount importance in the elaboration of any forward-looking development program in education.

At yet a more advanced level, the africanization of staff at the University College, particularly in the Department of Education and at the Institute of Education, requires highly trained and skilled man-power to lead the country in its intellectual and cultural pursuits and to enable it to hold its own in the world of learning and research. The preparation of such men and women demands talent, time and perseverance, and possibly more generous provisions for advanced graduate studies in East Africa and abroad. It also requires guarantees that the holders of such qualifications will be returned to the jobs and institutions for which they have been trained. Special attention should be paid to the advanced training of behavioural scientists, including psychologists and sociologists for the University and teachers colleges, who will be able to develop a body of knowledge and initiate courses which are consonant with and relevant to the behavioural patterns of the local community.

The greatest contribution teachers can make to adult education, community development and nation-building programmes is in the field of education. A strong plea could be launched, not only to provide them with the training which is needed to undertake these programs effectively but also to entrust them with responsibilities which correspond to their professional training as teachers.

And finally, in a country which is predominantly agricultural, such thought has to be given to the adaptation of curricula, syllabi, teaching methods and time-tables to the agricultural vocation of the majority of

school-leavers and to the training and re-training of teachers who are called upon to implement such programs.

Chapter IX

KENYA

Professor F. C. A. Cammaerts

KENYA

The views expressed in this paper are those of an expatriate who has worked in Kenya for less than three years. The statistics are as accurate as possible but are limited in value in view of the very rapid turn-over of staff in secondary schools and the enormous problem of 'marginal secondary education' which is outlined in the paper. The author, while working as a member of staff of University College, Nairobi, has been associated in a very close working partnership with both the Ministry of Education and the Kenya Institute of Education, which is a government organization. The views of this paper, while taking into consideration government policy, are personal views and in no way represent the views either of the Kenya Ministry of Education or of University College, Nairobi.

I. Major Policy Problems

This symposium of views on Priorities for the Preparation of Secondary Teachers prepared by I.C.E.T. comes at a very timely period for most independent African countries, indeed for all developing countries and for many of those who are called developed. All countries are engaged in a reappraisal or a re-evaluation of their Secondary school systems. This reappraisal may be caused by student unrest, by doubts about the relevance of much that is being taught, by questions about the reality of equality of educational opportunity or by many other problems which face different countries in different situations.

In most independant African countries the direction of Secondary education has passed, or is rapidly passing from the hands of the missions into the hands of the central government. The last generation of expatriate headmasters or headmistresses are completing their careers, or have already done so, the plans for training local staff of secondary schools are now reaching their maximum annual output, the remaining period of dependance on expatriate staff can be calculated with some assurance and it is possible for governments to plan ahead with some reality. The time when students were prepared to do anything rather than teach is passed. These are certainly the conditions of Kenya, within a decade Kenya will have its own Secondary teachers and will, therefore, have a much greater control over the whole range of curriculum in the schools.

The Republic of Kenya has some 239 maintained and assisted secondary schools with a staff of 2,715 teachers of whom 1,853 are non-citizens. The following table shows the change over the last three years:

TABLE 1

	1966	1967	1968
Schools Maintained or Assisted.	199	206	239
Schools Unaided	201	336	362
Staff in Maintained or Assisted Schools	2,042	2,320	2,715
Staff in Unaided Schools	962	1,733	1,929
Non-Citizen Staff in Maintained or Assisted Schools	1,481	1,632	1,853
Non-Citizen Staff in Unaided Schools	485	695	736
Unqualified Staff, in Maintained or Assisted Schools.			
Citizens	91	146	183
Non-Citizens	290	362	461
In Unaided Schools. Citizens	246	645	800
Non-Citizens	217	430	733

These figures show the situation fairly clearly. The rapid expansion of secondary education, particularly in the 'unaided' section has not yet permitted a real change in the proportion of local and expatriate staff, but, at the same

time, the program of local teacher production had not reached its full output during this period. The situation is not only unsatisfactory as far as the number of expatriate staff are concerned but also in regard to the increasing numbers of untrained teachers both from Kenya and from overseas.

There are, at present, three full secondary teacher training establishments in Kenya; University College, Nairobi, whose output of trained graduate teachers in June 1969 will be fifty-six, in 1970 125, in 1971 150, rising rapidly to an annual output of some 300 teachers annually. Kenyatta College, and Kenya Science Teachers College produce teachers who hold what is called an S.1. certificate. These colleges recruit students after school certificate (four years of secondary education), and award them a certificate after three years of full time study. Small groups are recruited after higher school certificate (six years of secondary school), and are given one year of study. Kenyatta College trains students in all subjects and Kenya Science Teachers College only in the sciences, mathematics, and geography. The output of Kenyatta College is, at present, over 300 a year and of Kenya Science Teachers College 100 per year, which is due to rise to 150 early in the 1970's. It will thus be seen that in two or three years Kenya will be producing 750 graduate and non-graduate teachers every year. By 1980 secondary teachers will have been trained to join the existing trained local staff of about 1,000. It will be seen that, even if there is a great wastage and sustained expansion of secondary education the proportion of local staff to expatriate staff must improve steadily during the period. Furthermore teachers of agriculture and of technical subjects are being trained at Egerton College (agriculture) and Kenya Polytechnic who will produce some 100 further qualified teachers between them each year.

These figures must be considered in relation to a number of major problems which are outlined here.

The establishment of the Kenya Science Teachers College has ensured a reasonable balance between "Science" subjects and "Arts" subjects in the provision of non-graduate teachers but at the level of the university graduate the problem is severe. In its development plan the government of Kenya estimated that it would require fifty percent of its arts graduates and thirty percent of its science graduates to enter the teaching profession. For excellent reasons the government, while bonding graduates to three years of service to the government after graduation, has been reluctant to oblige graduates to become teachers. The following table shows the very small proportion of students studying education at University College Nairobi who have specialized in mathematics or science subjects.

TABLE 2

Numbers of Students Studying Education, University College, Nairobi 1966-69.

	1966/67	1967/68	1968/69
First Year	0	0	56 (0 Science)
Second Year	7 (2 Science)	25 (5 Science)	47 (2 Science)
Third Year	0	7 (2 Science)	25 (5 Science)
Postgraduate	19 (9 Science)	32 (11 Science)	32 (7 Science)

The reasons for the shortage of mathematics and science teachers coming forward have not been fully analyzed, alternative employment, comparative salaries, shortage of science equipment in the schools, all these and many other reasons probably have a part to play. The position of teachers of technical and commercial subjects may be even more difficult of solution. The initial Kenyanization of the country's administration was achieved very largely at the expense of the teaching profession, but teachers of history, geography, economics and languages

are flowing back into the schools to replace those who have turned to administration or politics. The Kenyanization of the private sectors of industry and commerce of the banks and the insurance companies has been much slower and the, relatively small output of Kenyan graduates will be rapidly absorbed with few left for the teaching profession. The danger of this lack of balance between subjects is not only a question of numbers. The schools may well attract some of the most able and enterprising of arts graduates but there is a real danger of the mathematicians and scientists, the technical and commercial teachers coming only from the ranks of those who were not particularly sought after in other posts either because of their lack of scholarship or their lack of personality and ambition. Such a situation, only too familiar in Europe and North America, would create a vicious circle, since the least inspiring teachers will not inspire their pupils to enter the profession.

This lack of subject balance will mean that Kenya, and countries with similar problems will be short of those teachers of whom there is a world shortage.

The provision of local staff is being tackled, and tackled with imagination but the need for some form of expatriate assistance will remain for some time. While Kenya will rapidly supply her own leadership in the form of secondary school headmasters and headmistresses, many of these will be relatively young and inexperienced in the problems of management of increasingly large institutions. Some assistance may be needed in the form of experienced expatriates used to the problems of time tabling, school finance, communications with staff and students while the new headmasters and headmistresses gain their own experience. These, in addition to the teachers of 'scarcity' subjects may be needed for some time after the majority of staff have become Kenyans. This changed situation should occur sometime towards the end of the 1970's.

The problem of local supply of teachers cannot be considered solely in terms of numbers and subject areas. It will be seen from the above figures that Kenya is producing a large number of non-graduate secondary teachers. This year, 1969, it is as high as eight non-graduate to one graduate but even with a fully satisfactory development it would remain as high as 1.5 or even two to one. The non-graduate secondary teacher cannot be expected to teach above form 4, and even at this level he is faced with considerable difficulties. There will be an early demand to extend the period of full time education for all secondary teachers. This will produce a certain delay in the output of teachers unless the size of the colleges is rapidly expanded.

Kenya's secondary education system follows, at present, the British pattern of four years to school certificate, two years to higher school certificate and a three year bachelors degree course. Kenyan graduates have, to date, been trained either in the University of East Africa or overseas. The government is unlikely to sponsor bachelors studies overseas in the future and, although a few students may study privately overseas, Kenya will have to look largely to its own resources for its graduate teachers.

In 1970 it is almost certain that there will be a change in structure of the University of East Africa and that a University of Kenya will emerge. In its design for its own University the country will be concerned in narrowing the gap between the graduate and the non-graduate teacher. Consideration will have to be given, indeed is being given, to the whole structure of post school certificate education and the provision of secondary school teachers is central to the whole consideration of this problem. It is too early to say what decisions will emerge, though it can be said with confidence that the university and the secondary teachers colleges will be drawn much more closely together.

At present there are two methods of secondary teacher education that exist; in parallel, concurrent courses for undergraduates and for S.1. teachers and one year course for graduates and for students holding higher school certificates. The one year course, while easier to run and to administer, is likely, in the end, to prove of less value than the concurrent courses which introduce a basic conceptualization of the whole teaching process over a longer period of time and in the end force a proper partnership between educational studies and all other forms of study.

The single year spent on teacher education is bound to concentrate on how to teach and the basic theories of education. The concurrent course allows a continous study of the philosophy of the subjects themsleves, of their place in Kenyan schools, in other words a study of what is to be taught and why it should be taught. The separation of teacher education from the main stream of study has always tended to produce neglect of these aspects of study. In all countries, but particularly in developing countries this is essential to the healthy development of the system.

The British system demanding, as it does, an early choice of subjects of study has particularly grave disadvantages in a country such as Kenya. Most pupils do their first four years of secondary education in small country schools with inadequate equipment in libraries, laboratories and teaching skills. Kenya has its old established schools where the pupils may have a reasonably balanced choice of studies, but in the country school their choice is heavily conditioned by the nature of their schools in favor of the social studies. The present structure will tend inevitably to emphasize the elite character of the established schools and of the pupils who studied there.

The British system of early specialization in schools is peculiar to England and Wales. It developed at a time when secondary education was a prerogative of children from educated homes and it assumed a great deal of knowledge acquired outside school. In England and Wales serious weaknesses were revealed when secondary education became available to all. In Africa it has never, I believe, been a valid structure. Secondary education should provide the whole education of pupils and early specialization is perhaps the greatest single weakness in Kenya's imported school system. The early neglect of such essentials as language communication, mathematics and practical skills by many pupils means that they often arrive at university, or into employment ill equipped to pursue their studies any further. The review of higher education in Kenya referred to above will have to include the whole structure of education after the first four years of secondary schooling.

For future teachers this is particularly true. The medium in which the teacher has to work is a foreign language so that he needs to follow a continuous course in language skills, he needs manual skills, since he is bound to have to devise much of his own teaching materials, he needs a wide range of interests since he will be asked to teach subjects other than those he has embraced as his own. He is to teach in a rapidly changing society and he must be equipped to understand the changes which are occuring around him.

The amazing growth of unaided secondary education as shown by the statistics in Table 1 requires some little explanation for those who have not observed anything on this scale. The Kenya Government at independence, urged the people not to make constant demands on the limited resources of the government, but rather to take the initiative to provide for themsleves if they thought that state provision was inadequate. The word 'Harambee' or self-help was the rallying

cry of President Kenyatta and of the new independant government. Thus clinics, hospitals, irrigation schemes, but above all, schools were built, and, above all, secondary schools by the efforts of local communities, who invested an amazing proportion of their very meagre resources in this very admirable declaration of faith in education.

In some respects this sacrifice has proved a considerable embarassment to the Kenya Government. Their initial development plan was to expand secondary education in relatively large, and therefore economic, units. It has, however, not been able to ignore the enthusiastic explosive growth of small schools built by community effort and has been obliged to provide a place for some of them in the national provision for education. This will, for some time, mean that much of Kenya's secondary education will take place in small units where the teacher has to be able to put his hand to a wide variety of tasks, perhaps in the long run this may have great advantages for the quality of the profession, though it will have many drawbacks, including the obvious one of the dispersal of resources.

Finally there is the problem of the influence of their own school experience on the secondary teachers being trained today. Last year East Africa began the process of creating its own secondary school examination system in the shape of the East African Examinations Council which will take over rapidly from the Cambridge Overseas Examination Syndicate. However rapid the "localization" of the syllabus may be it will be at least ten years before the localized syllabus and the localized staff will have influenced to any definite extent the future secondary teachers of the country. Meanwhile, we will be deluding ourselves if we think that the process of teacher education removes the effect of experience in the classroom. The majority of teachers will have

been taught by expatriates whose teaching has been largely conditioned by their own experiences at home, whose interpretation of their subject will have been deeply marked by their own culture and tradition and by their own national problems. These teachers will have been taught a syllabus designed in a foreign country and designed for use in widespread areas of the world.

If this aspect of the formation of their teachers is ignored, then the development of a genuine national philosophy of education will be much too slow for the nations' needs. Only by a carefully planned and continuous process of in-service training can a change of attitude be developed in the majority of teachers.

These are the background problems which influence any choice of priorities in the preparation of secondary teachers in Kenya today.

II. Priority I: The Kenyanization of Secondary School Staff

Kenya has inherited the British model of education. This model is still basically the model which evolved rather than was planned for British needs during the 19th century. It grew out of the economic needs which emerged from the first industrial revolution. Its general design was to produce the professional and managerial skills required by Britain in an industrial society which required about ten percent to twenty percent highly educated people to manage the affairs of a semi-skilled or unskilled labor force consisting of the remaining eighty percent. It was designed to assist the children of a highly literate middle class to realize their aspirations, and, in some respects, it was designed so that the majority did not acquire ideas "above their station". Indeed this was the argument used in the 1860's to reduce the period of training of primary school teachers from three years to two years. It evolved before the

ideas of equality of educational opportunities or of education as a human right were more than the wild fancies of a group of "dangerous revolutionaries."

In some respects, of course, this pattern has been thought to fit a country where opportunities for employment in the cash economy are only available to one-third, or fewer, of school leavers. Economists discussing the development of education in Kenya sometimes use arguments about the nature of education which have a curiously familiar ring to those who have read the history of British education in the 19th century.

The concept of equality of educational opportunity and of education as a human right is now understood by the illiterate farmer and even the nomadic tribes of Africa. The British pattern just will not fit. It was imported by well intentioned former pupils of British "status" or public schools serving in the colonial service who imported it because it was all they knew; they were unaware of its basic philosophy or of its inherent defects. Its unsuitability for British needs in the post second world war period has been clearly shown by the move towards comprehensive secondary education, by the constant introduction of curriculum changes and by the changes in the nature of university studies in the new British universities.

The important and relevant fact about the need for a total change from the British model of education, to a Kenyan, or at any rate an East African model, is that this cannot be done by expatriate teachers. There are many excellent young men and women from overseas countries who are fully aware for the needs of change, but both by judgement and by length of service their contribution can be of only limited significance. Their judgement of what is needed is necessarily impaired by their own experience at home in a totally different situation. They can say "this is all wrong", but they cannot stay long enough

to be able to say "this is what is right." Indeed expatriate teacher innovators are more dangerous than those who do the best they can with the situation as they find it. The expatriate innovator is liable to introduce innovations which are totally foreign to the country, he is certain to create disturbances by his innovation, and he is very likely not to be followed by anyone who wishes or who knows how to continue the train of his innovations. To introduce new mathematics, or "Nuffield Science" for two years, leads to confusion, frustration, and, often, a confirmation in the minds of conservative teachers, of whom there are many, that all innovation is bad.

The necessary changes, the radical changes, can only come from Kenya itself, and from a stable and secure Kenyan secondary school staff. This is why the first priority must be the rapid Kenyanization of the teaching force. There are of course other very good reasons, the danger of dependance on foreign resources, the inequity of home and foreign salaries and standards of living, the difficulties of removing unsatisfactory "foreign" staff, but these and many other arguments that may be advanced are insignificant compared with the need for change and the serious limitation of foreign teachers in effecting the necessary changes or even in identifying them. The limitations of foreign teachers are s seen when they are in a majority and when they serve for short periods of time (e.g. two years). All countries will benefit from an international exchange of teachers and from the contribution of those who are able to look at the schools from outside. It is to be hoped that as Kenyan teachers take control of their schools, the value of this contribution will not be overlooked.

This priority is so urgent that, in one sense, quantity must take precedence over quality.

There is no reason to suppose that the present level of admission to secondary teaching is set too low, apart from the possible adjustment of the proportion of graduate and S.1. teachers which is under review. The financial rewards of secondary teachers should attract local recruits in adequate numbers. The S.1. teacher is paid on a scale (K) ₤684 - ₤1110 the graduate on (K) ₤847 to (K) ₤1,700. The head of a school can earn an additional allowance of K₤360 and deputy heads of K₤180. Nevertheless, it is a curious contradiction that, in a country where education is so highly prized parents will make almost absurd sacrifices to buy it for their children, the status of the teacher remains, relatively low. The title "mwalimu" in Swahili is highly respected, and yet something has gone wrong with the "image."

It may be that so many teachers have moved into politics and the higher levels of administration that he who remains in the school is regarded as something of a failure, it may be that the profession in secondary schools has been so dominated by expatriates that the profession has been regarded as something "undignified" in a newly independant country. Whatever the reasons it is probable that some action will be needed to keep the good teacher in the classroom. Perhaps the creation of a position of "master-teacher" will be necessary. The position may become aggravated in the future. Just as the filling of senior posts in the civil service by young men has made the prospects of promotion there look somewhat bleak, so the filling of headships by young men and women in the next three or four years may reduce the popularity of the teaching profession with students.

The status of the teacher is also particularly important in relation to his peers with similar qualifications. The historian or geographer who teaches is already recognized in his profession, but the scientist, the mathematician,

and particularly the applied scientist, who teaches at any level below the university is regarded as something of a failure or, at best, as something of an eccentric. In these fields some real examination of the situation will be necessary, unless the country is to be satisfied indefinitely with third rate teachers or remain heavily dependant on expatriates for longer than would be healthy. Perhaps the answer would be to make all scientists, mathematicians and applied scientists do a period of "national service" as teachers at some time in their career. Such suggestions have been advocated in so-called developed countries where it would be much more difficult to create a reality out of such an idea than it would be in Kenya.

III. Priority II: Provision of the Right Kind of Teachers

The first priority is, largely a quantitative one which requires planning and provision of places where secondary teachers may be educated in sufficient numbers. This first priority is being tackled in an immaginative and realistic way in Kenya and, with the exception of certain problems which have been mentioned, the problem will decrease rapidly during the next decade. The second priority concerns the nature and quality, rather than the quantity, of teacher education.

This problem, as a whole, has been recently treated by a very complete report submitted by the Kenya Institute of Education to the Ministry of Education. New Directions in Teacher Education was published in 1969 by the East African Publishing House. This is a complete survey of teacher education in Kenya carried out during 1967 and 1968. The author of this paper working with the secretary of the Kenya Institute of Education and the principal of a primary teacher's college visited every institution in Kenya concerned with teacher

education and prepared a report and recommendations for a conference of representatives of all colleges held in May 1968. This conference, and subsequently the Board of Delegates of the Institute, amended and approved the report as published. The document is at present under consideration by the Kenya government. Many of its recommendations, however, can be carried out by the colleges themsleves, though some of the most important require government support and additional funds.

It is only necessary here to highlight some of the most important findings and recommendations of that report.

It is important to examine what kind of secondary teacher the country requires at the present time. Clearly, he must have an adequate knowledge of the subjects he will be required to teach. It is more important, however, for him to have a real understanding of the relevance of his subjects and of how they fit into the requirements of a developing education system. They must have a knowledge of their own country, that is to say of the family and primary school influences which have influenced their pupils before they enter secondary school. Most teachers have knowledge from their own experience, they know something of the urban scene, but the rest of their knowledge is collected in a rather haphazard way from their friends at school and at college. Since secondary education is organized on a national rather than a local level, a real understanding of social history is vital to the equipment of the new teacher.

The teacher must be able to communicate with assurance and precision in the language of instruction. Whatever language policy may eventually be decided upon, the Kenyan teacher will almost always be using his second or even his third language as the main tool of his profession. Recent research with students at University College Nairobi has shown the great difficulties in both reading and

writing under which many students labor. Accurate communication with his pupils and the ability to evaluate the success of his communication will clearly be vital to all teachers, and, equally important, the language of isntruction will be the teachers medium for extending his own education and for collecting all the material he needs from day to day in the exercise of his profession.

One of the most vital components of a teacher's professional education will be the understanding of the role of his own specialist subjects in the whole education of his pupils. One of the most serious results of the "transplantation" of the British model of education has been the exaggeration of a tendancy in that system to isolate subjects from a total concept of education, or at best the isolation of a group of subjects. It is not only essential that subjects like history, geography and civics, or mathematics, physics and chemistry should be related, but all activities in the curriculum should have clearly defined relationships. It is difficult enough in a society where the threat of unemployment hangs heavily over the pupils if they fail in their studies for any purpose, other than examination success, to appear important to the pupils but, if the teacher himself does not understand clearly why he is teaching certain things and how they fit into an overall pattern, it is impossible for him to introduce the element of pleasure and excitement into school activities which is essential to the effectiveness of his work. If he fails to do this, his work will be sterile for him as well as for his pupils.

Kenya's need at present is not primarily for the labelled "specialist teachers." With four or eight classes and a staff of six or twelve teachers, the normal country school needs a team of teachers who understand each others' work, who can readily turn their hands from one job to another as sickness or promotion

creates gaps in the team. For many years the good all rounder will be the vital element in the teaching profession.

Our program of secondary teacher education must produce, adequate scholars with a knowledge of their own country, skilled in the use of one or more foreign languages, fully aware of the reasons and assumptions of the school curriculum and capable and willing of working in a team and turning his hands to a wide variety of activities within the school.

This is demanding enough; but, in addition, and this is very much stressed in New Directions in Teacher Education he must be a social worker fully aware of the central role that he has to play in national development and particularly in rural development.

Kenya has the opportunity, during the next few years, of restructuring its higher education. The proper preparation of secondary school teachers will be a very important element in the consideration of all the problems involved.

Certain it is that the present structure of secondary teacher education preceded as it is by a choice of the specialist study of two or three subjects does not lay sufficient emphasis on the lines of study which seem most desirable. It would seem that a much broader course after school certificate leading to a pyramidical structure of specialization would serve the immediate needs of the country more efficiently than the present structure of courses.

The content of the courses will not, alone, solve the problem of producing the right kind of teachers. At present, I suspect, far too many teachers enter the profession because they cannot think of anything better to do, rather than because they feel that this is one of the most essential tasks in nation building. Perhaps this is due in part to the fact that secondary teaching has been so largely an expatriate activity that they have been unable to see this as their

own profession, partly due to relative consideration of pay and partly due to the lack of status previously mentioned. Whatever the reasons, a constructive effort must be made to make local teachers understand that they are taking into their hands one of the most essential elements in determining the future character of their country. I believe that the most effective way to do this is to ensure continuous consultation with teachers in the changes in structure and in curriculum. Methods of appointment and methods of promotion require the most careful consideration. A change has to be brought about as rapidly as possible to ensure that "mwalimu" carries with him the respect of his compatriates and that his position in society is recognized by everyone.

IV. Priority III: Diversification of the Curriculum

The essential need for integrating the various elements of the curriculum in both schools and teachers colleges is emphasized by the growing movement towards diversification of the curriculum. Because most subjects, and in particular social studies and science studies have been taught in a "foreign way" and have been imported rather than home grown, they have appeared to be remote from the day to day problems of the growing community. The Kenya government has reacted, like many other governments, by introducing new subjects such as agriculture, industrial arts and civics, and programs of teacher education have been devised to ensure that they are taught, and that they are taught properly.

These new subjects are not specifically vocational subjects and are not primarily thought of as a means to produce more farmers or more technicians, but rather to introduce into the field of experience of the educated Kenyan subjects which are vital to the understanding of his own country.

The problem of introducing these new subjects has been tackled in an imaginative and practical way with the running of extensive pilot projects and some careful evaluation of the feasibility of the program. What has made these innovations necessary has been the failure of the schools and the teachers to adapt their own fields of study to the circumstances of the country.

The whole answer to this problem cannot be the continual addition of further subjects. A self respecting secondary school today is already teaching too many "subjects" English, Swahili, another foreign language, history, geography, civics, mathematics, physics, chemistry, biology, agricultural science, industrial arts, home economics, physical education, art, music, and there are already pressures to introduce economics, health education and other foreign languages. The number of subjects is rapidly moving up towards the twenty mark. A system which attempts to introduce all these elements with their own specialist teachers is either going to treat each subject in a completely inadequate way or must move away from the conventional program structure and the conventional school day. Moreover, except in very large schools, you cannot have specialists in all fields. Diversification appears at first sight to be a contradiction of integration, though in fact they are mutually dependant. As new subjects are introduced, something that is being taught must be removed. A careful examination of all syllabus content will be required from the primary school to the university. The demands will be particularly heavy, in the first instance on secondary teacher education.

Four or five major areas of study will have to be defined. Let us say language communication, social studies, science studies, physical skills, arts and health education. Within each major area teachers must have certain dominant interests but there will have to be a great measure of overlapping.

To achieve these ends without losing the intellectual excitement of specialist study and research will require great wisdom and much imagination. If the teacher is to remain a respectable scholar, the change will have to be reflected in the pattern of university studies. For the teacher who is a scientist must be a respectable member of the international community of scientists and not be regarded simply as a "jack of all trades." The high priority given to diversification of the curriculum should really be called rationalization of the curriculum. It cannot be done in teacher education alone but will have to be reflected in the whole process of education at every level.

V. Priority IV: Stability of Staff and Salaries

In the early days of independance, the educational system suffered from the drainage of good teachers into government. Teaching was one of the few professional activities fully encouraged before independance and teachers formed much the largest single group of educated people in the country. It is rare to meet a senior government official or minister or member of parliament who has not at one time been a teacher.

The result, after independance, was that, on the one hand Kenyan teachers with ambition and drive tended to be drawn out of the teaching profession, and, secondly, the long service expatriates in missions and elsewhere in the government teaching service tended to look towards their own country for their ultimate career opportunity.

The replacement of expatriates by Kenyans in positions of authority in education has meant that career development has been very rapid. Ambitious young Kenyans in education are looking for promotion after only one or two

years service. With most expatriates on short term contracts and with local teachers moving rapidly towards promotion, the stability of staff in schools and colleges is very insecure. A staff turnover of fifty percent in one school or college in a single year is nothing exceptional and this is true among head and principals as well as among assistant staff.

Such a situation although, in some ways, innevitable, in a new country produces two disastrous results. On the one hand curriculum reform and innovation is seriously hampered. Real change, as opposed to planned change, takes place on the initiative of the individual teacher, head teacher, or principal, and becomes effective with a relatively stable staff to see it through. Where the staff moves rapidly, changes may be initiated but they can rarely be sustained or properly evaluated.

The second result is that staff student relations tend to suffer. These can only grow and prosper on the basis of personal knowledge and mutual respect. The only other basis is that of rules and regulations which can frequently be misunderstood and misapplied. Without strong and stable human relationships the inevitable tensions and conflicts of institutional life are exaggerated and emphasized. Incidents of student strikes and dissatisfaction inevitabley increase when students cannot visualize their teachers as stable elements in their schooling. To the Kenyan student so much is at stake when he sits his examinations that, if he feels that his chances are affected by the departure of one of his teachers, he is not going to accept such a situation easily.

Thus instability of staffing delays progress, disrupts the social life of an institution and young teachers are asked to take responsibilities before they have gained the experience to be able to handle them with confidence. This situation is alleviated somewhat by the constant flow of good, experienced

primary school teachers who enter secondary schools and teachers colleges through the "mature age entry scheme" to university or by various upgrading programs. But if secondary schools and teachers colleges gain from this process so by the same measure the primary schools suffer.

The present salary scales for secondary school teachers in Kenya are:

1.	Graduate trained teachers	K£852 - K£1710
2.	Graduate untrained teachers	K£810 - K£1710
3.	S.1. Trained non-graduates	K£684 - K£1110
4.	P.1. Primary trained	K£378 - K£756
5.	Untrained with higher school certificate	K£366 - K£330
6.	Untrained with school certificate	K£252

In addition head and deputy heads can earn a substantial addition. It is doubtful whether a shuffling of salary scales would in itself create much more stability in the profession.

In face of these realities how can a country like Kenya slow down its school and college staff turnover? Perhaps certain special incentives for long term service in one institution might help, the creation of paid department heads normally promoted from within the school, a change in the system of appointments and a statutory period to precede any posting would help.

If this position is important in schools, it is even more serious in teachers colleges. They must be at the center of innovation and of research. The special responsibility of teacher educators can be recognized by special salary scales and this is suggested by the report on New Directions in Teacher Education quoted above.

Stability in higher technical and in university staff has been recognized by different salary scales, these are:

Technical College Grades:

Senior Asst. Technical Instructor	₤378 - ₤756
Technical Instructor	₤684 - ₤1119
Senior Technical Instructor	₤1155 - ₤1239
Technical Master	₤810 - ₤1446
Asst. Lecturer Grade II	₤810 - ₤1302
Asst. Lecturer Grade I	₤1158 - ₤1446
Lecturer	₤1497 - ₤1710
Senior Lecturer	₤1839 - ₤1989

University Grades:

Asst. Lecturer	₤1125 - ₤1245
Lecturer	₤1350 - ₤1830 BAR ₤1830-2230
Senior Lecturer	₤1950 - ₤2615
Reader	₤2545 - ₤2825
Professor	₤3150

The next step should be for teachers colleges.

Salaries alone will not solve the problem. The first area of stability must come among heads and principals. Staff housing is important, facilities for study by improvements of libraries in all colleges and schools, but particularly for those in remote country areas will be equally important.

Whatever the solution, or rather solutions, may be this is a matter requiring a very high priority in its consideration.

VI. Priority V: Leadership in Schools and Colleges and In-Service Education

It has already been emphasized that the healthy development of schools, colleges and teacher education as a whole depends heavily on the quality of the leadership. This means, not only the heads and principals but also department heads and all senior teachers in the institution. The whole structure of education, as it moves more closely towards the needs of the country, will require a constant program of in-service education of teachers so that they may keep up with all the changes introduced. The Ministry of Education, the

colleges, the university, the institute of education and various other agencies all have their role to play in such a program, but, however effective and well coordinated this work may be, it can only touch the surface of all the needs of in-service work.

It is extremely expensive to get teachers together for such courses; the teachers themselves are often needed during their vacations to help in other forms of in-service education themselves, it is difficult to make such courses compulsory, and very difficult to evaluate their results.

The essence of continued teacher education, in the long run, is not the quality and extent of the in-service training run in the country, important as this must be, but rather the day to day guidance that heads and senior staff can give to their young colleages.

Eventually the value of in-service training will be to guide the leaders so that they themselves will carry on the whole process in the schools.

The process of education of the profession by the profession must start at the initial training stage in the teachers colleges. At that stage practicing teachers must be brought into partnership so that they themselves understand very clearly the importance of this side of their professional role.

It would be desirable to have attached to every teachers college practicing teachers selected for their high level of professional skill. They should not only be used for the guidance of students on teaching practice, though this is very important, but also for some lecturing and some course work.

The danger that students should think that their work is over the day they pass their examinations is very great in all countries. It is the teachers themselves who must ensure that the idea of education being a continuous and never ending process is accepted throughout the country. The most obvious place

for them to start is in the studies of the skills and practices of their own profession.

In Kenyan secondary schools this should be a fairly simple process. As will be seen from the program of secondary teacher education, almost all secondary schools in the country will be used for teaching practice, and so the contact of the teachers colleges and the schools is an immediate necessity. That this opportunity should be used to recruit the help of practicing teachers is a matter of the highest priority.

The divorce between teacher educators and their colleagues practicing in the schools is an unfortunate fact in most countries. Students readily believe that teacher educators are talking from theory and would fail to practice what they preach in a real teaching situation, and often the students may be right. One of the ways to avoid this is a real partnership between the schools and colleges as outlined above, another is for all tutors to have some study leave from time to time actually teaching in the schools. This may be especially true in a country like Kenya where changes are so rapid that it is more than usually easy for teacher educators to lose touch with what is happening in the schools.

VII. Priority VI: Research

The pressures of urgent and immediate national needs are so great in a new country that research tends to be put off indefinitely. Indeed it is doubtless wrong, in this paper, to put the priority for research towards the end. However a country in the immediate post-independance period is bound to consider those matters outlined above as the very first priorities. An establishment of an order of priorities does not mean that each previous target has to

be achieved before the next is considered. Indeed all the priorities mentioned have to be the subject of immediate attention. Educational research can only produce conclusions and results over a long period of time. Teachers and educators are not alone concerned with research into educational matters. Economists, sociologists, psychologists, planners and administrators are all concerned and involved. Although there are certain areas of research which demand obvious early attention in the particular situation of Kenya and East Africa, child growth and development, multi-lingualism, visual perception, examination and testing and many others, it is the approach to research rather than the fields of work with which this paper is chiefly concerned.

Part of the inheritance of educational practice from Britain which has been passed on to East Africa is the structure of research incentives. The pupil and the student at college works largely on his own to achieve his examination successes. After passing his bachelor's degree he goes on to work for his master's degree or his doctor's degree on his own, or largely on his own. The rewards for research, or for the publication of research findings tend to go to one man who, on the basis of the credit he acquires gains promotion and the expectation of advancement.

Yet really valuable educational research requires large teams of workers, it also requires to be carried on for many years to be fully evaluated. The problem of the effect of multi-lingualism on children is one that has innumerable facets which require study, each one should fit into a required pattern which will add to our knowledge of the problem and of the measures to be adopted to deal with the problem. The day to day work of teachers and teacher educators should be harnessed to this advancement of knowledge. Research should be guided and planned, and doubtless the university is the place where skilled research

techniques and guidance should be most readily available, but research is not the prerogative of the university nor is it the exclusive place for research. Every time a teacher sets a test he is engaged in a piece of research and he should be aware of this. If the teacher can examine the results of his day to day work with the eye of a research worker he will become a much better teacher, far more capable of evaluating the results of his practice. The most important first step is to break down the old concept of one man research and to involve the whole profession in the task. This is not easy and will demand very special efforts from everyone and particularly from the university.

The second point about research in Africa is that it should be shared by neighboring countries having common problems. Recently in Eastern Africa a Regional Council for Education has been set up with just this object in mind. The old Afro-Anglo-American program on teacher education has now become the Association for Teacher Education in Africa and works with two regional councils one in Eastern Africa and one in Western Africa. These councils are sharing work and resources in the kind of subjects mentioned above as well as in programmed learning, micro-teaching, the education of the handicapped and many other areas of research.

VIII. Conclusion

Only six priorities have been listed in this paper. This does not mean that the list is complete, that the priorities are in the right order or that this paper written next year might not present a very different set of priorities.

Every country has, eventually, to establish a national policy in education. Most African countries have agreed on certain basic aims. The targets set in 1961 at Addis Ababa were reconfirmed by the Ministers of Education at Nairobi

in 1968. In Nairobi it was shown that the targets for higher and for secondary education had often been achieved or even passed but that the targets for primary, technical and agricultural education had often fallen seriously behind.

Many countries like Kenya have, probably wisely, delayed setting out too firmly their own national policies. But eventually policies for languages, for length of general, as opposed to specialized education will have to be defined, and at that time many other considerations including political and economic as well as educational will have to be taken into consideration.

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Chapter X

SUMMARY

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SUMMARY

The previous chapters highlight the extensive problems and massive multinational efforts being made to sustain and foster an educational system relevant to the aspirations of the peoples of Middle Africa. The problems and efforts are also illustrative of those that occupy the attention of sub-Saharan nations not included in this survey. The studies describe the attempts to educate a professional cadre of secondary school teachers whose skills, knowledge, and leadership are desperately needed to decrease the gap between future national objectives and contemporary achievements.

The cultural stress, born of this gap, provides the continuing motivation for political leaders and educational planners to review current structural and instructional patterns and to expand and diversify educational opportunities so that, ultimately, every citizen will have access to his cultural heritage and be prepared to forge new patterns of political and economic growth. Each national report is based on the premise that education is the avenue towards a richer and more just life, even though the means employed are conditioned by each nation's own history and a constellation of social forces and sets of conditions within which educational policy must be formulated.

No nation in this report exhibits an indifference to the tremendous struggle that lies ahead or is complacent about the inadequacies of its present system. They have accepted the fact that older, informal systems of education for the development of skills or the expression of talent no longer meet the demands of modern economies or independent nations. The high percentage

of national economic resources allocated to educational development and the quantum growth in student enrollments are evidence of a commitment to and a faith in the fact that the creation of viable national entities is based on concentrated and continuing efforts to systematically educate its citizens.

Questions may be raised whether the institutionalization of education and the neglect of informal avenues to educational growth, especially those which fall under the rubric of on-the-job training, is most appropriate for nations undergoing a transition to a modern economy. Attrition rates at all levels of the formal system are high and are most apparent at the critical junctures in which the individual passes from elementary to secondary school and from secondary school to university. The formalization of the structure and the elimination of other patterns to vocational development and career mobility creates a growing pool, proportionately and in aggregate, of unused, wasted manpower which adds its frustration and discontent to increasingly restive societies.

Nevertheless, the modern emphasis on the training and mobilization of educated manpower and the relaxation of colonial tutelage have undoubtedly been instrumental in creating the demand for education and an outlet for its products. But, whatever the reason, formal systems of instruction and an improvement in their capacity to enroll larger numbers of youth and to raise the level of sophistication and relevance of the curriculum remain in the forefront of national strategies.

The success of this strategy will depend in large measure on the nations' capacities to prepare and train teachers; in numbers adequate to keep pace with and permit expansion at a level of quality that stimulates intellectual and vocational growth.

The quantitative pressures imposed on the formal educational system are indeed awesome. Spurred on by the establishment of educational achievement levels and growth rates in Addis Ababa less than a decade ago, the educational systems of all the countries described in this volume have created vast new opportunities for education. The new opportunities in turn have generated increasing demands to open up higher levels of education to the broad base which has been created at the elementary level. This problem will increase in the next decade and poses serious problems for secondary education, which is the focus of this study.

But the pressures are not only quantitative in nature. Not only will more schools, more teachers, more buildings, more instructional materials be required, but a new education capable of providing middle level manpower and education for a rural society, as well as one which will redirect its priorities to a socially useful education for potential dropouts of the present system will be required. And all of this will have to be accomplished within an economic system whose resources have already been strained to meet current needs, and have little capacity left to cope with the population explosion, higher costs and decreasing resources to apply to the educational sector.

To the problems created by the dramatic expansion of educational opportunity, financial strictures, and the lack of a socially relevant curriculum is added, with varying degrees of rapidity, the disappearance of expatriates, especially at the secondary level and in administrative positions, accompanied by the need to localize or Africanize the teaching force. In the post colonial era, this transformation is both politically expedient and desirable and in the long run educationally necessary. But education faces serious competition from

other sectors of the economy for the graduates of the secondary schools and universities. Higher salaries, better conditions of work, greater opportunities for advancement in industry and the civil service provide sufficient inducement for trained teachers to leave the profession or in many cases never to enter it, having received the fundamental, basic education equally applicable for other types of work or further education. As a result, the ability to increase proportionately the number of teachers required to cope with Africanization and enrollment expansion is jeopardized.

It must be emphasized, however, that these problems in no way minimize the achievement of these nations in providing vast new educational opportunities which has been the primary target in the post independence era. In large measure, the problems reflect the success of this effort and are the normal products of intensive concentration on the strategy of quantitative expansion, so as to create a base for existing vocational opportunities and a growing literate citizenry capable of entering new educational programs more directly adapted to future needs.

What is suggested in this volume is that quantitative expansion has indeed reached a point where it has created social and educational problems which require a new strategy. This includes a new set of priorities that focus on an educational system capable of directing its energies toward a greater utilization of existing resources, increased productivity of its teachers and students, a redirection of existing patterns of instruction and curricula, and a thorough investigation of socially useful objectives geared to local needs and their translation into learning materials and activities, with the clear aim of retarding human wastage in the system and reorienting the social commitment of youth toward national betterment.

The concentration on expansion has tended to overshadow, in the main, the need to examine an existing, derivative system and to assess its utility for the future. The allocation of manpower to undertake the necessary research has been minimal because of the pressing need to utilize all resources, human and economic, to support the expansion strategy. Experimentation in program content and instructional design and methods have suffered for similar reasons. The existence of an established pattern of education, familiar to planners and teachers who were products of the system, created a natural dependency on it, thus building up an inertia that inhibited exploration of different patterns. The necessary centralization of the control and governance of education may well have inhibited local initiative toward change.

But lack of systematic leadership training for administrators in ministries of education, teachers colleges, secondary and elementary schools may also be a contributing factor. Burgeoning enrollments, curricular innovations, efficient use of limited financial resources, optimum utilization of staff members with varying educational backgrounds and professional training, call for a high degree of managerial skill if educational improvement is to take place at the local level.

The low priority of teacher education in the universities has exacerbated the gap in the relationship between the traditional academic disciplines and the professional studies thus providing little interaction related to the substance and method of teaching. This situation, as well as the need to rapidly provide teachers of whatever qualification for the exploding school population, helped to create a three tier system of teacher preparation corresponding to the three levels of schooling--upper secondary, junior secondary and elementary. Each tier required lesser academic and professional preparation

and in many cases was organized so as to prevent teachers trained for one level from systematically rising to the next if they so desired. Where a continuing and open ladder system did exist, further preparation concentrated on academic subjects which opened up the way for more diversified training in other fields and contributed to a growing neglect of highly qualified teachers for the lower levels where the critical rudimentary skills and habits of thought should be cultivated.

The priorities suggested in this chapter focus primarily on the preparation of secondary teachers and summarize the common and unique suggestions found in earlier chapters. If any single characterization of all the suggested priorities can be made, it is that teacher education is in a state of transition; coping, on the one hand, with the continuing needs for quantitative expansion and probing, on the other, for qualitatively productive rearrangements and realignments in theory and practice that will prepare tomorrow's change-makers in the nations' schools.

The priorities fall into six major categories and are expressed as needs calling for resolutions. While this volume emphasizes priorities rather than resolutions, a thorough study of previous chapters will reveal that efforts are already underway in response to these needs.

Priorities

To provide guidelines for the development of priorities for the preparation of secondary school teachers two factors are taken into consideration: (1) the demands of the school system and a requisite response within the teacher training institutions and (2) the changing needs of society at large which furnish the stimulus toward change and create the expectations to which the schools and teacher education must respond. The response is twofold, insofar

as the schools and teacher education must consider the aspirations and expectations imposed on them by society and secondly, fulfill their function as change agents, thus creating new social patterns and achievements.

In the light of these factors, the following priorities for education generally and teacher education specifically have been identified in this study.

I. A Redefinition of the Objectives of Education Relevant to the Needs of Africa

Education and teacher education must become oriented toward development, broadly conceived, rather than the gateway to academic proficiency for its own sake. A broader conception of development would include the preparation of teachers whose teaching would not only respond to the need for high and middle manpower needs, but would foster social, cultural, political and intellectual growth related to contemporary African problems and aspirations.

A recent study of East African teacher education enumerates the following objectives:[1]

1. Emphasis on African history, culture, ecology and economic, political and social institutions and philosophies.

2. Broadening education by adding manual and agricultural arts subjects or content to the general curriculum. Increasing the attention given to physical education, art, music and other cultural activities. Integration of related subjects to make education more general and less specialized.

3. Encouragement of individual self-reliance through problem solving and inquiry oriented methods of instruction.

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[1] Clayton M. Schindler, Dale C. Draper, John A. Fitz, Analysis of Teacher Education in East Africa, 1969. American Association of Colleges for Teacher Education, Washington, D.C., 1969, p.10 (unpublished).

4. Improved relationship between school and community to increase the congruence of formal education and community life, and to develop students' sense of responsibility to their communities.

5. Adoption of an examination system which reflects, not directs the curriculum.

II. The Africanization of Secondary School Administrators and Teachers

To achieve African educational objectives will require concerted effort to attract and train qualified African teachers whose training is grounded in the cultural heritage and committed to the development needs of their homeland. It is suggested that curricular change, staff stability and closer identification of the schools' effort with national priorities will proceed at a more rapid pace with the replacement of expatriate personnel by African teachers.

III. A Larger and More Diversified Role for African Universities in the Preparation of Secondary Teachers

The pattern of university participation in the training of secondary teachers varies from country to country. Generally, however, they have assumed responsibility for training teachers for the upper secondary. The majority of the teachers in the elementary and junior secondary levels do not receive the benefit of the highly professional resources of the university. The partnership of the intellectual resources of the university and the post elementary and secondary forms of teacher education should be increased.

Additional functions, other than the training of secondary teachers, should be undertaken by the universities. These functions include the preparation of faculty for teacher training institutions (both primary and secondary), research leading to curriculum and instructional materials development and the training of administrators for all levels of the educational system.

IV. The Preparation of Teachers Capable of Initiating Curriculum Change in the Secondary School

The output of the secondary schools and the universities will be faced with new challenges as the African nations proceed toward modernization in their rural economies and the greater utilization of their natural resources. This situation demands a more diversified curriculum for teachers who can introduce a wider range of academic and vocational subjects into the mainstream of the educational system.

The role of the teacher in fostering and sustaining diversification is a significant one. His competence and commitment to diversified educational opportunity is required in order to overcome the resistance by students--and parents--to a curriculum which deemphasizes academic specialization necessary for university entrance--even though relatively few will find a place in higher education. Furthermore, with the severe dearth of instructional materials that exist in most schools, self learning on the part of the pupil is inhibited. This implies that the quality of instruction and learning will be dependent on the quality of the teacher. This also implies a more socially relevant role for teacher preparation in the teachers colleges and universities and emphasizes the need, as the Nigerian report suggests, "for curriculum centers where experiments in the use of local materials, syllabus designs, action-oriented research...can flourish..."

The support for diversification does not imply a neglect of the traditional, university oriented subjects; and each report indicates subject matter areas that are in dire need of well qualified teachers, especially in the sciences, mathematics and second languages. But even in the specialized fields, their relevance for, interrelationships with, and application to other subjects and vocational fields has been largely neglected. Curriculum change is thus

not viewed as an additive principle, but a reorganization and redefinition of basic studies to broaden their scope and application to developmental needs of students and the nation.

V. Training for Leadership, Management and Planning

The training of well qualified, experienced school administrators for secondary schools and training colleages is of paramount importance if the modernization objectives are to be achieved. The rapid expansion of a school system, a diversification of the curriculum responsive to social needs, increasing operational and capital costs related to expansion, the Africanization of staff who in general do not, at this stage of development, possess the experience or training of the expatriate, and the continued inservice needs of unqualified faculty call for a new type of educational administrator. He must be one who function in a leadership role with respect to his staff, the students and the community; who can apply modern management skills to the problems of scheduling, to curriculum diversification, school finance, capital expansion; and who can apply conceptual tools of analysis to the planning process.

Each nation in the post independence era has annually increased its expenditures for education. Limits for a proportionate increase in the future are being reached as costs spiral. Questions are being raised with respect to the need for greater productivity and utilization of existing personnel and facilities. Improvement in the pre-service and inservice components of education for secondary school personnel should, therefore, be directed to greater productivity. And in conjunction with this development the role and function of the educational administrator will also change significantly, so that the diverse elements of human resources, student demands, instructional patterns, and available finance may be coordinated.

VI. Teacher Education: Patterns and Objectives for Professional Preparation

The professional preparation of African teachers for secondary schools is generally conducted on two levels, corresponding to the lower and upper levels of the secondary school. Teachers for the lower, or junior secondary usually achieve their professional diplomas at non-degree granting institutions whereas the upper levels require a first university degree and pedagogical training. The latter pattern varies considerably from nation to nation with some institutions providing a variety of opportunities: either a one-year post-graduate course in pedagogy, or a three-four year integrated course of general and professional studies, or shorter integrated courses leading to a bachelor degree for experienced teachers with lower teaching qualifications.

The general consensus of the reports suggests the adoption of two professional patterns or future priorities:

1. Greater coordination between universities (except for Mali) and non-degree granting institutions in the preparation of teachers for the lower secondary levels.

2. An integrated or concurrent course of general and professional studies at university level for the upper secondary schools. This approach would provide an early identification of teaching as a profession by university students and provide an opportunity for prospective teachers to relate their academic studies to the professional problems of teaching throughout their university career.

There is agreement, as well, that the interrelationships between these two systems be reexamined so that an open ladder system can be established to enable teachers with lesser qualifications to move up the educational ladder without necessarily abandoning their positions in the lower secondary levels.

Furthermore, teacher educators must focus on the quality and character of professional training. Early acquaintance with and involvement in actual teaching behavior in the classroom is suggested, to provide an experiential base that develops, within the prospective teacher, an awareness of and skill in the actual teaching-learning process. In addition, this involvement in the classroom provides the educational conditions to which the professional subjects must be related. Practice teaching, as currently conducted, near the end of the professional training program does not provide an adequate link between general and professional studies and the problems of teaching.

Interrelationship between levels of training, integrated programs at the university level and the correlation of experience and professional studies are suggested as major priorities for the future. As indicated earlier, attempts are already underway to experiment with these approaches in most countries.

Conclusion

The country reports, individually and collectively, suggest a variety of additional concerns and future needs. The six categories delineated in this chapter have been drawn from the reports as representative of the major and most pressing priorities. The need for research, the exchange of information among the countries regarding their problems and achievements, and bold attempts to achieve these priorities can and should be undertaken.

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