THE ROLE OF TEACHER TRAINING INSTITUTIONS IN THE DEVELOPMENT OF NATIONAL LANGUAGES INTO LANGUAGES OF INSTRUCTION IN AFRICA

by Joseph Poth

Document prepared under UNESCO contract United Nations Educational, Scientific and Cultural Organisation

Paris, February 1977

ED-77/WS/27
Note

The views and opinions expressed in this document, prepared at the request of the UNESCO Division of Higher Education and Training of Educational Personnel, are the sole responsibility of its author.

We wish to express our gratitude to Mr. A. Biancheri, Inspector General, who, at the request of UNESCO and with the agreement of the author, has been kind enough to check the psycho-pedagogical and methodological aspects of the study.
Table of contents

PREFACE

I. GUIDING PRINCIPLES OF THE OPERATION
   A. National language introduction is necessarily linked with subject integration
   B. Student participation is a necessity
   C. Participation of training institutions should be in conformity with the spirit of relevant official documents
   D. Training of teachers should be seen in the overall framework of country development
   E. Training of teachers should be a continuous process

II. TECHNICAL TASKS TO BE UNDERTAKEN BY TRAINING INSTITUTIONS TO SOLVE INITIAL PROBLEMS
   The child
   The future teacher
   Training institutions and curricula
   A. TASKS RELATED TO THE AVAILABILITY OF PSYCHO-PEDAGOGICAL DATA
      The exact nature of the problem
      Tasks to be undertaken by training institutions
      1. The child's relations with school bilingualism and transfer phenomena from one language to the other
      2. The child's verbalization of intuitive notions in the new language of instruction

Page

1
2
3
5
6
7
9
10
11
14
15
15
17
3. The child's functional utilization of the new language of instruction 22

B. TASKS RELATED TO THE SITUATION OF SCHOOL CHILDREN IN RESPECT OF THE NEW LANGUAGE OF INSTRUCTION

The exact nature of the problem 23

Tasks to be undertaken by training institutions 26

1. Ascertain, in the school context, the level of universality of the chosen language 26

2. Ascertain, in the school context, the level of homogeneity of the chosen language 29

C. TASKS RELATED TO THE SITUATION OF STUDENT-TEACHERS AND TEACHERS IN RESPECT OF THE NEW LANGUAGE OF INSTRUCTION

The exact nature of the problem 31

Tasks to be undertaken by training institutions 32

1. Identify the situation of future teachers in respect of the new language of instruction 32

2. Elaborate admission requirements based on practical and theoretical knowledge of national languages 36

3. Study possibilities of modifying training programmes in the light of the appointment of new teachers to different linguistic areas of the country

D. TASKS RELATED TO THE PROGRESS OF APPLIED RESEARCH

The exact nature of the problem 37

Tasks to be undertaken by training institutions 39

1. Collect lacking linguistic data 39
2. Analyse collected data with a view to identifying and codifying the language of instruction 40

3. Participate in the process of adapting and actualizing the language in view of its full educational utilization 41

How to proceed? 42

1. Research on loan words in the mother tongue 42
   a. Objectives of this research 42
   b. General remarks on how to proceed 43
   c. Practical methodology of loan word research 44
d. Pedagogical suggestions 46
e. Other lines of action 47

2. Research on original mother tongue vocabulary 49
   a. Introduction 49
   b. Objectives of the study conducted by the student-teachers 50
c. Practical methodology 50
d. Theoretical remark 52
e. Practical suggestions 53

E. PROBLEMS CONNECTED WITH AVAILABILITY OF EDUCATIONAL MATERIALS 54

The exact nature of the problem 54

Tasks to be undertaken by training institutions 55

1. Reader for beginners 56
2. Selected reading passages 62
3. Normalized basic vocabulary 63
4. Fundamental grammar 69

F. PROBLEMS CONNECTED WITH ALLOCATION OF CONTENTS 71

The exact nature of the problem 71
Tasks to be undertaken by training institutions

1. Link between school and environment
2. Vehicle for initial knowledge acquisition
3. Medium for school communication and social exchange
4. Vehicle for inter-cultural exchange
5. Other functions

III. CONDITIONS OF IMPLEMENTATION

A. CO-OPERATION WITH SPECIALIZED INSTITUTES
   1. Before the operation
   2. During the operation
   3. After the operation

B. MODIFICATION OF TRAINING PROGRAMMES
   1. Programme spirit
   2. Programme content
   3. Professional training

IV. CONCLUSION

From thesis to text book ...
This Guide has been prepared for educational personnel in charge of teacher training in those African countries where the national authorities wish to introduce one or more national languages either as medium of instruction or as a teaching subject in primary schools.

Its aim is to provide those engaged in practical field work with a methodological tool meant for immediate use in making future teachers capable of playing an active and decisive role in the process of endowing the officially selected languages with a partial or complete status as languages of instruction.

No need therefore to look in these pages for justifications or condemnations of any particular trend in respect of language policy. Such problems are outside the scope of this volume which will not develop, either, the numerous and diverse arguments in favour of using African languages in teaching programmes. This question has already given rise to important analyses recently. The subject dealt with in this Guide is clearly limited to a new and concrete phase of the more general reflexion currently going on in respect of these problems. The Guide proposes training institutions to assume their responsibilities as to a new line of action based on a number of experiments and operations, both justified by theoretical analysis and validated by applications in the field.

After a succinct introductory definition of the principles necessarily underlying a certain type of approach and a certain type of attitude to methodology indispensable for the coherence of any action, the contents of the Guide will be resolutely devoted to the technical tasks that the training institutions can and should undertake within the limits of their competence, their means and their own responsibilities within the national educational system.
I. GUIDING PRINCIPLES OF THE OPERATION

The pragmatism aimed at by this Guide dispenses it with elaborating on the state of mind in which to approach the totality of the problems raised by the use of African languages in teaching. Refusal to hierarchize cultures and languages, scientific stringency and objectivity in dealing with analysis results all characterize the attitude that should normally be shared by all those who have responsibilities within the educational process.

It is not possible on the other hand, to avoid problems as soon as a specific training programme has to be defined. Past experience show that the activities of even the most sophisticated projects fail if those participating in them have not in advance defined and accepted a common set of principles. The practical tasks to be undertaken by training institutions to endow an indigenous language with a partial or complete educational status indeed require of all the participants a certain identity of views, an agreement on the main lines of their thinking. This agreement is an absolute necessity as a solid base for the technical phase to give it the methodological coherence it needs.

These guiding principles are obviously no postulates: they are due to the necessity of a psychopedagogical approach and to the strong conviction that the African child is in the last analysis the beginning and end of any operation aiming at modifying the language situation. This is to say that children's language development is inseparable from their cognitive, affective and social development.

A. National language introduction into teaching and training curricula is necessarily linked with a tendency to subject integration.

Insofar as the institutionalised use of mother tongues in school activities aims at making the children fully developed and well balanced mentally by encouraging their spontaneity and self expression, the linguistic factor is not the only relevant one. Preparation for the use of African languages in the classroom should indeed be made in view of the child's entire personality, the real focal point of all programmes. The result is that psychology, sociology, language teaching methods and, in particular, psychopedagogy constitute the basic subject areas to be permanently taken into account so as not to lose sight of any significant facts.

Theoretical studies aiming at exhaustive language description will certainly be reinvested straight into the methodology of teaching national languages. Any research related to their introduction into the programmes have to be based on all language phenomena. To this effect linguists, psychologists, sociologists,
methods specialists and pedagogues have to cooperate. The linguists and the theoreticians of the other areas could surely limit their studies to within their own specific fields. But research applied to pedagogy should always take place within the general perspective of the child's psychomotor, affective, intellectual and social development.

The mainly pedagogical aim of the Guide does therefore not exclude a rigorous analysis of language as defined by the sciences of language. But it also supposes an analysis of psychological realities, the foundations of pedagogy. The sociological factors related to the attitude of public opinion should equally be considered. This is why the elaboration of an alphabet and a spelling system or the development of a reading textbook for beginners should not be exclusively guided by linguistic criteria: historical, psychological, political, economic. factors should be considered as equally relevant and taken into account.

This leads to a first important practical consequence. As soon as the national authorities have announced their decision to introduce an indigenous language into the classroom, the training institutions would do the right thing if they undertook within the limits of their human and material resources, such applied research and studies as to facilitate the integration in school curricula of the national linguistic and cultural heritage. The absence, in the country, of an institute of linguistics is not a sufficient reason for delaying these activities. Even if the existence of such an institute within the country is highly desirable and even at a certain level necessary, the training centres are able on their own accord to undertake the necessary interdisciplinary investigations. Their competencies allow them to concentrate their research on the developing African child.

B. Student participation in national language promotion is not only an ideological requirement but an absolute necessity for practical and technical reasons.

In spite of a notable evolution and apart from a few isolated cases, training institutions have up till now remained inactive leaving to other specialised institutions all the work connected with research applied to African languages. Even educational materials, where they do exist, have been produced without the help of teachers who are however the principal utilizers of them...

The relative passivity of the field teachers can certainly be attributed to this attitude of training institutions as well as the insignificant progress achieved up till now by certain national language development projects whose preliminary phases have extended indefinitely. A rapid analysis suffices to show that the teacher is a necessary link in the chain which ties up the specialised institute, where the research is taking place, to the classroom, where its
results are applied. As a national language speaker organically integrated with his linguistic origin he is in a better position than anybody to collect authentic linguistic data. As a bilingual speaker he is in the centre of inter-language transfer phenomena. As an educationalist he is specially apt to draw attention to the importance of psychopedagogical viewpoints. As a civil servant he has the interests of the nation at heart both in periods of professional activity and when on leave. As a student he can understand, better than the illiterate informer, the reasons for being asked information. As a utilizer and a teacher he is in the last resort more than anybody else instrumental to the success of the operation.

It is not possible to carry out an educational and linguistic reform of national scope without the moral and technical support of those recruited from teacher training colleges. As for both its finalization and practical implementation, the success of such an effort depends to a large extent on the present and future teachers and generally speaking on the active cooperation of all those who constitute the utilizers. (1)

The question could legitimately be asked whether making the training institution a centre that promotes and coordinates the operation is not in the last analysis the only realistic way to approach the problem and to achieve progress in the practical aspects of promotion and use of national languages in the class room.

It is clear from what precedes that the present status of students will have to be thoroughly modified. Insofar as they will become fully involved in a task of national importance, the nature of the hierarchy separating them from their teachers will have to change. The technical necessities will indeed require a wide diversification of the roles played by students in the course of the operations. They will successively act as pupils, investigators, research fellows, group leaders, co-producers of educational materials, etc... This new profile implies a decisive change in traditional educational interactions towards a well-balanced mutual instruction

(1) The necessity of not entrusting only to specialists the tasks connected with research on African languages was strongly underlined during the nineteenth session of UNESCO General Conference (Paris, 1972): "... Nothing is possible, specially when implementing priority projects, without the assistance of the population, alone able to assemble the necessary materials to make a critical analysis of traditional knowledge and to provide the nucleus of staff whose abilities will facilitate the use of educational materials once these are available." (Extract from Ten Year Plan for Study of Oral Tradition and Promotion of African Languages).
model where the role as a group leader is defined according to the needs and competencies found in the working groups and is not necessarily entrusted to the former instructor. It would be easy to prove that competency in using the new language of instruction is often less developed in lecturers than in students who can maintain closer and more frequent contacts with their original linguistic environment.

The introduction of African languages into educational programmes will greatly contribute to the evolution of educational structures towards greater conformity with the spirit of educational renewal as usually defined in Africa. The new activities will inevitably lead to the gradual appearance of a new educational system more dynamic, more stimulating, more fraternal, less vulnerable to protest actions, and in which the competencies and skills of each participant, successively "donor" and "receiver", will be used together in the service of the same national task.

C. The participation of training institutions should be in strict conformity with the spirit of the official documents defining the national language policy.

Past experience confirms the justification of this remark. The choice of a language of instruction as well as opposition to it give rise to passionate reactions both in parents, teachers and students. Training institutions should refrain from tempting but too far-reaching interpretations that would lead to their overstepping the limits of their field of action.

The use of an African language in the class room does not imply the automatic exclusion of the language previously in use. As a whole, national projects whose task it is to return to indigenous languages their function as teaching instruments, do maintain the simultaneous or deferred use of a European language in school activities. In countries where the African language has already taken up its rightful position on the school premises, the internationally spread language has generally remained an important part of the programmes. This is the reality that has to be taken into account: European monolingualism and African-European bilingualism represent at present the only existing situations in African school systems whereas African monolingualism still remains exceptional (1).

(1) Though an exhaustive typology of the teaching situations does not exist at present, it is possible to find specific and quite recent information on the use of languages of instruction in two documents produced and distributed by UNESCO: Report on the Kaduna Seminar, 1976; Education and National Language in West Africa, 1976.
This is why the action of training institutions since it is not concentrated on pure research but on its application in the schools, should be based from the beginning on a bilingual or a plurilingual situation wherever official policy confirms either.

If the national choice is to familiarize school children simultaneously with a national language and a European language, it would be an advantage, while preserving the independence and functional autonomy of each language area, if the training institutions participated in the elaboration of an economical and complementary methodology underlining possibilities to use approaches applicable to both languages and based on correlations rather than systematically stressing features that focus on differences.

It is therefore necessary that the interdisciplinary training teams permanently keep up their research applied to the language or languages of instruction. They could of course, as it were, anticipate official decisions but should by no means substitute by their own options those of the authorities concerned and choose a line of action other than that implied by the national language policy.

D. Training of teachers in the use and promotion of indigenous languages should be seen in the overall framework of country development.

Introduction of a new language of instruction is not an educational reform for its own sake that can be left to the control of technicians only. It is closely related to the country's socio-economic development and constitutes very much an affair of national importance. The language of instruction has indeed a decisive influence on development in its different phases since it conditions various aspects of access to theoretical knowledge while spreading mastery of basic techniques. Most educational reforms tending to use the school as a development instrument insist on the interdependence of the factors concerned. Whence the attention given to the conceptual groups: "language and development", "language and environment" and "language and techniques". It would be an error to plan separately the timing of cultural development and the timing of socio-economic development. The latter naturally receives its strength and capacity for renewal from the dynamics of the former.

New programmes based on the use of national languages should therefore be worked out in cooperation with those in charge of the science, economy and technique sectors to which the educational sector is complementary. Training institutions should work in close relationship with bodies connected with post primary education, literacy agencies and community development projects which incidentally are often pioneers in using national languages for
educational purposes. Their approaches should be taken into account and analysed while making sure that the specificity of the child is respected since its apprehension of reality differs from that of the adult.

The use of African languages in school programmes is therefore a good opportunity to break the isolation of training centres and to promote inter-institutional relations not only with specialized university institutes but also with the entire production sector. This is in complete methodological conformity with the requirements of the educational reform that considers the African teacher no longer as a simple instructor but as a national development agent with all the dimensions and diversity that this new profile confers.

E. Training of teachers in the use and promotion of indigenous languages should be a continuous process throughout the period of professional activity.

The internal dynamism of a language and its changing character require continuous curiosity. Linguistic sciences applied to African languages keep improving and pedagogical techniques are in constant evolution. The theoretical and practical foundations of language teaching methods are now well established. It is not a matter of reducing them to a few rigid approaches nor to the mere enumeration of procedures. Continuous access to information is necessary if the teacher is to remain conscious of what he is doing and why he is doing it.

The necessity of institutionalizing continued psycho-pedagogical and linguistic training for all teacher categories obliges training institutions to use pre-service approaches that are apt to develop in teachers their desire and capacity for self training. This implies a modification of timetables to include periods reserved for personal investigation and institutionalised tutoring and peer teaching. It also supposes the availability to students of certain materials and services such as adequate documentation, free access to library and resource centre within the institution as well as to sources of outside information and documentation.

Joint working groups of lecturers and students should start creating and making available sets of self-training materials as a support to the continued training of all those engaged in linguistic renovation and likely to be of benefit as well in other institutions and other countries where similar operations are going on.

These are, briefly defined, the guiding principles for students in their practical activities and for the training institutions in their tasks suggested below. Rather than lead to a wholesale adherence to the ideas expressed, the preceding pages were meant to make the reader think for himself and become conscious of the
implications of this operation that does not aim at a change of contents only, but at a thorough modification of future teacher training in Africa by giving it a new dimension, rooted in its cultural substratum as a solid base for progress.

The active responsibility of training institutions in African language promotion requires an evolution of the relations between trainers and trainees towards a larger extent of collegiality which is exactly what our young colleagues of tomorrow rightly demand.

By considering students as full partners by providing them with the necessary means to assume their new responsibilities, tensions will be eased and training institutions will be fully able to play their role in the service of national cultures and in the well balanced development of the African child. Students' participation in research on their mother tongues therefore goes far beyond the linguistic framework and is in conformity with the ideas underlying educational reforms as defined in the African context and is perhaps the most realistic and immediate approach to such reforms.
II. TECHNICAL TASKS TO BE UNDERTAKEN BY TRAINING INSTITUTIONS TO SOLVE INITIAL PROBLEMS

The variety of language situations in Africa makes any attempt vain to define technical tasks with purely linguistic criteria. Each country has its own characteristics due to the number of languages spoken, their social, economic, religious, historical and numerical importance. The language policy of a neighbouring state can therefore not be copied. The diversity of the approaches recorded during the Kaduna seminar shows well that those in charge of these policies refuse to adopt foreign models. They prefer to define their approach according to national needs and the characteristics of their situation.

On the other hand the psycho-pedagogical approach focusing on the child and the teacher, brings out a certain number of common basic features justifying the elaboration of a programme of activities and its diversified applications to all training institutions.

The child

Even if instances of research applied to the African child are still too rare and too recent to establish a theory of African pedology, which will one day have to materialize, pedagogical practice suffices to ascertain that constant reference to the psyche of European children tends to hide the true nature of the personality of the African child. Those who systematically operate these arbitrary transfers forget that in almost all cases the African child right from his first contact with school is conditioned by a conflict situation in which his mother tongue which allowed him up till then to express and assert himself, runs the risk of being looked down upon. His own language, however rich, diversified and expressive, then tends, in the eyes of the child, to assume an inferior social status compared with the imported language by the fact that only the latter is considered worthy of being taught and learnt. This language conflict easily develops into a cultural conflict since the exclusive study of one language supposes constant reference to a set of extra-linguistic values of cultural and moral nature. It is clear that the poor status conferred on his mother tongue insidiously makes the child used to looking upon as pejorative everything connected with his original linguistic heritage. This situation is not commonly experienced by European children even if the problem of "original languages" and the confrontation between the cultures they represent and the national culture is increasingly felt in Europe with the violence it generates. For the African child it remains a permanent feature in the first days of his schooling. This essential fact seen in our psycho-pedagogical perspective makes it legitimate to endow the African child with a specific identity beyond national characteristics and with certain motivations due to such experiences and situations as hardly vary throughout the region.
The future teacher

The student who receives his professional training in the institution is the product of a school tradition which, both in Africa and Europe, has always reduced the list of basic instrumental knowledge to reading, writing and arithmetic with priority given to written aspects rather than to oral. Official examinations and those held for admission into teacher training colleges focus on capacities related to the teacher's future responsibilities and the real needs of the environment. Mastery of national languages and knowledge of national cultures, however, are not taken into consideration as admission criteria.

The traditional structure of secondary education on the other hand does not make students' working methods diversified. Hardly any of them have had experience of team work, of continued personal research, of environmental study. They have acquired no interest in communication, no disposition and no means for self-training.

As for national languages, a number of studies carried out by training institutions show that students have a good practical knowledge of their mother tongue (1) and also frequently of a second national language. The internal structure of these languages is however almost unknown. It is viewed through that of the European languages described in the grammar books used in secondary schools. The student-teachers always tend to apply to the grammatical phenomena of their mother tongue such denominations, nomenclature and analyses as are associated with the study of the European language. This tendency is particularly important. Since it is scientifically unproductive it has to be taken into account as an initial constraint in the training process.

Studies carried out among students also show strong motivation for the study of mother tongues in training institutions. The aim is surely an improved knowledge of the language for its own sake but also, what is more rare and more important, a clearer notion of phenomena of interference between mother tongue and the language of instruction.

These remarks should help rectify the standard portrait of the present student-teacher in an educational perspective. The programme of participation by training institutions will of course, be based both on the negative and positive aspects of this profile.

(1) Out of 450 students interviewed in francophone countries only one had French as mother tongue and said he was unable to express himself in an African language.
Training institutions and curricula

Most African training institutions have a number of characteristics in common. They are the meeting points of students converging from all ethnic areas. A well-balanced recruitment is believed by the authorities to be a guarantee of national cohesion in the teaching staff and to make training institutions genuinely representative of the country's linguistic and cultural structure. In these institutions one usually finds speakers of all the languages used in the country. Research is thereby facilitated and loss of time avoided.

Another characteristic of African training institutions is their remarkable autonomy in respect of admission procedures, research orientations and study programmes. They have no responsibility for appointment of outgoing students. Staff are not all nationals but partly expatriates under technical assistance.

Primary school programmes are of course analyzed in all training institutions and the general tendency is to reformulate the objectives according to the basic needs of national development. It would be difficult to find an African country that is not either planning or initiating a primary education reform. This is usually the task of specialised national commissions or in some cases of special ministries. In such a favourable situation the introduction of national languages into teaching and training programmes could easily be a decisive element both in elaborating the reform and in the national development generally.

The points briefly raised above show how similar the situations of children and students are with regard to African language realities. As for training institutions they are bound to be the necessary point of entry for each major innovation introduced into primary education.

These considerations as well as the experience of practical difficulties inevitably encountered by language renovation projects in Africa lead to the break down, into a few operational headings, of the more or less acute immediate problems facing those who are in charge of the implementation of a new language policy aiming at the introduction of national languages into the classroom.

A. Problems connected with the availability of psycho-pedagogical data

How important and valid are the psycho-pedagogical data already collected in respect of the African child?
Does any material exist in the new language of instruction that is able to mobilize operational activities and to make children verbalize technological and mathematical situations and, in a more general perspective, their relations with the environment, both the nearest and the more distant ones?

What contributions could training institutions make in this vital field?

B. Problems connected with the situation of school children in respect of the new language of instruction

The language chosen is not always the child's mother tongue. How can training institutions help reducing this major difficulty in educational practice?

C. Problems connected with the situation of the teacher in respect of the new language of instruction

The language situations of teachers and future teachers are equally varied. The new language of instruction could be their first language, but also their second language and even their third language. What could the training institutions do to solve this problem?

D. Problems connected with the progress level of theoretical and applied research

How far has the collection of linguistic data advanced that genuinely reflect the realities of the language?

Do sufficiently elaborate descriptions exist of its phonological, morpho-syntactical and lexical systems? How can training institutions contribute to the progress of research in this respect?

E. Problems connected with availability of educational materials

Does the language officially adopted as medium of instruction already have the educational materials necessary for its efficient and immediate use for class? What can training institutions do to
provide this language with a basic stock of educational materials or to improve this stock if it is found insufficient in quality or quantity?

F. Problems connected with allocation of contents

What methodological and psycho-pedagogical criteria should be used to decide what part of programme contents is to be taught in the old and in the new languages of instruction respectively? On what could the division be based? What solution could training institutions suggest to this specific problem?

These are the questions, worded as succinctly as possible, to which answers will have to be found before the new language policy decided on can be translated into action i.e. introduced into the classroom. In all the following chapters, an attempt will be made realistically to determine the nature of the tasks that training institutions can undertake in view of a rapid solution of these problems. That will facilitate the effective introduction of indigenous languages into primary education.
A. TASKS RELATED TO THE AVAILABILITY OF PSYCHO-PEDAGOGICAL DATA

The exact nature of the problem

What is important is to possess a maximum of certainty about the intimate relations of the African child with the new language of instruction. It would be careless to launch a big operation without having previously clarified the basic psycho-pedagogical points that are to serve as foundation for the pedagogical and methodological use of the African languages that are introduced in the schools.

Objective information is thus required on how from his own viewpoint the child experiences the ambiguity of his African-European bilingualism. This is a normal language situation for young Africans even if the fact is not officially recognized in the school. Outside school the child continues using his mother tongue. The resulting phenomenon of cultural discontinuity should be identified and reduced so that the presence of two languages will contribute towards making the child’s personality more harmonious and better equipped instead of impeding its development. Students of training institutions find themselves at a point where two or more linguistic and cognitive worlds converge. They are therefore able, with the help of their own experience, to help identifying the most important difficulties arising from bilingualism in a school context.

Another problem to be solved before introducing a new language of instruction into school programmes concerns the children’s verbalization possibilities in this language. What words (from a semantical point of view), what means of connexion and relation (from a syntactical point of view) does the child use when comparing, evaluating, reasoning? How does he express intuitive notions of space and time? To what extent is the African language, introduced in the class room, sufficiently mastered by the child to become an appropriate instrument for him to carry on conceptualization and abstraction while asserting himself in respect of his own self, of others and of the world around him? Such information is necessary for those who are to define new school programmes. A pedagogical activity that tries to make concrete actions generate mental operations will remain unsuccessful unless the child concerned is able to verbalize his daily and immediate concerns as well as those associated with affectivity and cognitive requirements.

Before making him acquire technological knowledge and skills, it is important to know precisely what is the child’s ability to use the new medium of instruction functionally. If the language, though already familiar to them, does not constitute an instrument that is well enough known and can be fully enough used by school populations the child will not benefit by the instruction as planned. Rudimentary language use would limit the scope of operational thinking. Introduction of technological education into the class room supposes a previous determination of the child’s expressive capacity concerning the relation between
human needs and the technical objects produced to satisfy them: materials, utilization, production, transformation, taboos, sacralization, etc. These problems have to be solved. Not doing so would amount to adopting an empirical pedagogy instead of a pedagogy and a methodology based on the child and his possibilities.

Tasks to be undertaken by training institutions

The work of training institutions should consist of finding answers to the above questions. Students should therefore collect the necessary psycho-pedagogical data and then take part in the analysis of them. Information on the following points in particular should be obtained:

1. The child's relations with school bilingualism and transfer phenomena from one language to the other.

2. The child's verbalization of intuitive notions in the new language of instruction.

3. The child's functional utilization of the new language of instruction.

1. The child's relations with school bilingualism and transfer phenomena from one language to the other

Students of our training institutions know these problems since they have already experienced them in their own childhood. They are therefore precious witnesses able to identify and explain the motivations and mechanisms of acquisition in a bilingual or multilingual context, that of the African child. There is much to be gained by soliciting their personal experience of desculturation. Students have a rich subjective experience that should be analyzed in view of practical use. Has school monolingualism inflicted any typical dramatical experiences on them at the wrong times? What was their nature and how did they manifest themselves? How does the child experience the two languages and cultural worlds that jointly structure his personality? Are the results entirely positive or entirely negative?

Studies should be carried out in the field, in schools. Questionnaires previously elaborated in cooperation with the student-teachers so as to avoid ambiguity of contents and objectives could cover the following areas:

a) Psychological area:

What conscious or unconscious motivations make the child use his mother tongue or the second language in any given situation?
Could an objective or systematic inventory be established of the types of situations that lead to and predetermine the choice of one or the other of the languages?

What exactly are the points of conflict and sources of tension due to cultural transposition and the use of two or more media of expression corresponding to different interests, activities and social norms?

Could an inventory be made of specific cases where, in children and students, the simultaneous use of several languages functioning differently, leads to confusion in logical reasoning?

b) Intellectual area:

Does a child always, in his first year of schooling, resort to translation when asked to use the language that is not his mother tongue? Does he always pass through his mother tongue to express his experience in the foreign language?

Between the first and the last years of primary schooling can the specific time be identified at which the matrix of the mother tongue is no longer used to organise life experience expressed in the foreign language?

Up till which point, which school age does the mother tongue serve as a mould not only for the form (linguistic interference) but also for the contents of reasoning while the foreign language simply remains a necessary and imposed code?

Can examples of psychological anomalies be identified through specific symptoms that are due to intermittent use of different comprehension and reasoning patterns appearing simultaneously in the mind of a plurilingual speaker?

Can the symptoms be inventoried and analysed that represent a momentaneous break down of the mechanism of apprehending reality, an almost pathological variety of what has been called the "brainfag" of certain African francophone and anglophone students? (Dr. R.A. Prince, Nigeria; Fr. Guondet, Central African Empire).

c) Linguistic area:

Children's intuitive knowledge of their mother tongue precedes their reflective (semantic, grammatical) knowledge of it. Could exceptions, if any, to this general rule be identified and classified?
Objective knowledge of the foreign language precedes the child's subjective knowledge of it. Within the grammatical system of the language concerned, could exceptions to this rule be identified and perhaps classified, and in particular all those that concern spontaneous learning?

The interest that such studies would be of, is easy to understand. The result of their analysis would make it possible to draw maximum benefit from the teaching situations of African monolingualism and African-European bilingualism. It would be taken into account by the pedagogues who are to divide curriculum contents between the different languages used in the schools.

Though the headings suggested above are not exhaustive, they are essential and should guide the elaboration of the questionnaires to be used by students in their investigations. It is desirable that these studies lead to through monographs and become an important part of the stock of documentation available in training institutions. A well made synthesis of all these documents would considerably contribute to the progress of knowledge of the African child and of his relations with the various languages that he uses. Studies of this kind have hardly begun and the importance of the problem has only recently been realized. This is confirmed by the case of bilingualism in the Cameroons which was viewed in the light of the interrelations of French and English and only rarely interpreted as the relations of an individual first with his mother tongue and only later with a European language.

2. The child's verbalization of intuitive notions in the new language of instruction

So as to improve, within a given cultural and educational context, the continuity and balance of children's cognitive and intellectual development it is important for the educationalist to acquire a correct comprehension of the basic intuitive notions that prevail in their daily life and immediate interests. The research that precedes the actual teaching should therefore satisfy three main requirements:

- use the child and his possibilities as a starting point,
- follow the successive phases of his mental development,
- consider the African language as a medium of expression and not as an object of analysis.

The training institutions will plan and carry out studies on how children apprehend and verbalize basic concepts in the new language of instruction. These concepts that are to a large extent inter-dependent, could be presented as follows, for the sake of analysis:
Space: Awareness of one's body. Localization of objects in relation to oneself, to other people, to other objects. Situation in space, space structuration.

The training proposed here to develop verbalization is not sufficient to produce a sense of abstract space but is a necessary preparation for it as it is for comprehension, at a later time, of topographical, geographical, geometrical, technological and other phenomena. The teaching, at a later date, of geometry and geography will contribute to space construction and will facilitate the child's access to notions of level, perspective and so on.

To obtain verbalization of space concepts, teachers should prepare possible examples of actual manipulations. Space perception and conceptualization are indeed based above all on experience. The hand should describe, draw, explore, make perspectives, vary. Body movement is linked to hand movement. This psychomotor experience will facilitate situational verbalization of relations of direction as well as the coordination of these relations.

Time: Determined in relation to oneself, to others, to changes it generates in the outside world. The experience of what is ahead should be linked to increasingly specific references. Once these references have been perceived in respect of present, past and future, the expression of modal values (hypothetical, unreal, conditional) could be introduced, in situations.

The child has not yet a past. He lives mainly in the present and the future: ("When I am grown-up"...). The past as a universal dimension will not really be assimilated until the present is seen as continuously generating the past. The concept of past time conditions the acquisition of historical notions included in the study programme. With no concept of past time the child is unable to perceive what is before and after, simultaneous and differed, as well as cause-effect relations. Verb conjugation then is only nonsense.

Studies undertaken by training institutions on how the African child perceives space and time notions in African languages should be the psycho-pedagogical foundation of all methodological documents produced in these languages in the fields of geography, history, verb syntax.

Teaching these subject areas without reference to research previously carried out in the field would amount to showing evidence of rigid empirism. It is important above all to get rid of unadapted educational traditions and, through the contact with the African child, to identify the natural order of appearance and development of his first intuitions and verbalizations.
Other intuitive notions: space-time relation, causality, consequence, cause-effect relation, concession, comparison and so on.

Why give so much importance to adequate verbalization, in African languages, of these basic intuitive notions?

Though verbalization is not enough to guarantee the child's acquisition of the corresponding notions, whose structures originate in sensory-motor mechanisms located deeper than language, this verbalization is necessary for completing the elaboration of these structures and is therefore indispensable for abstract reasoning. That is why training institutions, due to their responsibility in the psycho-pedagogical field can not dispense with such research, closely associated with the analysis of the new language of instruction.

It is obvious that verbalization can be preceded by intermediate representations. It is useful, between psycho-motor activity and verbal expression, to insert the discovery and manipulation of both abstract and concrete symbolic systems (models, schemes, cuttings, various graphic codes). Beside their clear pedagogical value such intermediate systems are of great interest in another respect. They allow simultaneous verbalization in several languages and represent a type of communication able to overcome purely linguistic obstacles.

So as to bring forth the expression of all the above notions, student-teachers when preparing their questionnaires should take children's egocentrism into account as being their essential motivation for self expression. Each item should place the child in his own social context, and in his own sentimental, physical and cultural world. Student-teachers should therefore together elaborate situational sequences that are easily accessible (pictures without words, photography combinations) where the relations of space, time, causality, etc. are unambiguous and compelling.

The progressive character of the approach used in this preliminary phase should also appear in the pedagogical application later. The aim of education is to help the child pass from an egocentric to an anthropocentric point of view making him realize, through a process of decenteration, the viewpoint of other people and eventually the universality of logical reasoning.

The following summary provides elements of systematization likely to be of use in active field work. It was conceived in the specific context of the Central African Empire and sums up a series of lessons meant to test Bangui school children's ability to verbalize in Sangö the concepts necessary for assimilating future teaching programmes in this language.
The training institution teams participating in this study adopted the following approach:

1. Each notion gives rise to a lesson held entirely in Sang5 and prepared by a team. Its main phases correspond to a working card used by the student-teacher or the permanent class teacher.

2. The end of the lesson is reserved for the participation of the children. With the help of motivating models they should then in new situations, to be verbalized in Sang5, make correct use of the notions explained to them.

3. Linguistic and psycho-pedagogical treatment of the information obtained and its numeric transcription take place at the training institution in close cooperation with the National Institute of Education that participates throughout this study.
<table>
<thead>
<tr>
<th>Notions</th>
<th>Primary classes 1 and 2 (children aged 6 to 8)</th>
<th>Primary classes 3 and 4 (children aged 8 to 10)</th>
<th>Primary classes 5 and 6 (children aged 10 to 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Relations</td>
<td>mbege ti koli (a man's side= right); mbege ti wali (a woman's side= left)</td>
<td>mbege maboko ti koli (side of man's arm= right in relation to somebody else)</td>
<td>mbege maboko ti wali (side of woman's arm= left in relation to somebody else)</td>
</tr>
<tr>
<td>Time Relations: Before, After, Same Time</td>
<td>kozoni (before without reference to oneself); na pekoni (after without reference to oneself)</td>
<td>lege oko tongana mbi (simultaneity)</td>
<td>kozo ti mbi (before with reference to oneself); na pekoti mbi (after with reference to oneself)</td>
</tr>
<tr>
<td>Relative Time</td>
<td>tongana (when)</td>
<td>nilili (formerly); fade so (now); la (duration); nilili so (formerly when)</td>
<td>tongana a ndë (hypothetical if); tongana fade (hypothetical if)</td>
</tr>
<tr>
<td>Space-Time Relation (-=Speed)</td>
<td>hio; fade fade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Causality</td>
<td>nda li ti so; tone ti so; si (because)</td>
<td>ngbango ti so (because)</td>
<td>tene ti nye? (because of what?); ngbango ti nye? (for what reason?)</td>
</tr>
<tr>
<td>Cause-Effect Relation</td>
<td>nda li ni si (that is why); ngbango ti so (that is why)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison and Degrees</td>
<td>tongana (like)</td>
<td>mbi hó lo (I pass him, I am bigger than he is); lo hó mbi</td>
<td>mbi yeke kota mingi (I am big very= I am very big)</td>
</tr>
<tr>
<td>Classification</td>
<td>ala kwe (all); ni kwe (all)</td>
<td>a mboni (some); a mboni ye (some); oko, oko (every)</td>
<td></td>
</tr>
</tbody>
</table>

N.B.: Sangö has other means than those of expressing simultaneity, causality, etc. The expressions were selected by the student-teachers as starting points since the consensus was that they are frequently used by Sangöphones and by analogy lead to the use of other possibilities.
3. The child's functional utilization of the new language of instruction

Past experience shows that though the future teachers are mostly able to verbalize with great accuracy in the European language the dealings of an individual with the technological situations underlying many teaching activities such as crafts and science practicals, they are generally at a loss to use their mother tongue to describe the observed technological processes.

Verbalization attempts are very often contested by other speakers of the same language who express the why's and how's in sometimes very different ways.

This is an interesting phenomenon. It certainly does not imply the incapacity of African languages to explain physical phenomena, to describe technological processes, or to express logical-mathematical concepts. It is rather due to a characteristic language habit: that of using the language only as a means of self expression and as reference to traditional values. This phenomenon is due to the attitude of the speakers and not to any inherent absence of resources. Such lack would be inconceivable since many language is potentially capable of adjusting to all communicable human experience. When really required, languages tend automatically to fill any gaps that may appear through contacts with experience. The most divers processes are spontaneously used such as metaphores, metonymies, nominalizations, increased complexity of syntactical structures.

It has thus to be taken into account that the genuinely cognitive registers of African languages are not very much used as a rule. When they are, the topic is often related to a cosmogony or rather experimental representations of the world. This is confirmed by observation of the cognitive mutism that characterizes the pedagogical process of technique transmission in the field of traditional crafts.

That is why school children or student-teachers trained to undertake logical operations in a foreign language are much more capable of describing a technological process in the language of instruction than in their mother tongue.

Moreover the variety of culture-based associations related to the idea of "technical objects" leads to the most unexpected misunderstandings when comparing what is seen by the "western eye" and the "African eye". It refers to diversity in the analysis of technical functions, in the balance between technicity and expressive or esthetical values, etc.

(1) Though this study has not yet been completed, it is already clear that a hundred percent of the Central African Empire children of school age fluently use basic Sangöt in the town of Bangui. Only a small number of these children belong to the actual Sangöt tribe.
Teachers will sooner or later have to teach part of the programme in the new language of instruction once the official decision has been taken. To justify its use in the classroom, the chosen African language should be able to communicate technological and other required subject contents more efficiently and economically than the European language used previously. Adequate applied research should therefore prepare the ground by collecting the additional information required on local languages.

Training institutions should aim at producing descriptive lists of different technological activities represented in the environment: putting on and taking off bicycle wheels, functioning of looms, etc. Based on adequate drawings and photographs, explanations could be asked concerning the system of weights and levers in production of traps. Children could be made to discover and verbalize the different phases of the construction of the framework of a hut or a house. The children will be requested to explain in the African language how the play toys function which they make and use (little mobile vehicles, arrow guns, etc.) Each time the cause-effect relations have to be clearly specified.

Experience shows, and the reasons have been pointed out above, that it is difficult to obtain verbal explanations in the technological field. Children, like certain adults, most often express themselves from a logical viewpoint, in a fairly unarticulate way; they tend to use gestures and mimic to replace expressions of relation that they cannot think of in the African language. Turning to the European language is obviously a temptation for the school child. This solution should never be accepted except as a means to transfer the conceptualization to the African language.

B. TASKS RELATED TO THE SITUATION OF SCHOOL CHILDREN IN RESPECT OF THE NEW LANGUAGE OF INSTRUCTION

The exact nature of the problem

Considering the present situation in most African countries, the school child's situation in respect of the new language of instruction is almost always complex and diverse. The new language could be his mother tongue, if he is lucky, but could also be a second language he is acquiring at beginner's or more advanced level. That is the case for example of Serer, Baoule and Djerma children who would have to learn Wolof, Dyula and Hausa. The new language of instruction could be a language widely used in the country though not spoken by the child. He would then face problems of almost the same kind as if he had to learn English, French or Portuguese. An additional aspect of the problem is related to the continued use of a European
language in primary schools. In extreme cases the African child could therefore have no choice but to learn, simultaneously or successively, two different languages that are completely unknown to him.

It would be an error to believe that the choice of a language that is widespread in the country will automatically solve the communication problems in the classroom. One ambiguity is in the notion of a widespread communication medium quite embarrassing as far as pedagogical application is concerned when a language of this kind, due to economic, political, religious, sociological and other factors is adopted by the adult population of a country or region, children do not automatically adopt it since their needs (of a different nature) may be well satisfied by the use of their mother tongue.

When it is said that 90 percent of the population of a country or region fluently use Hausa, Sangh or Dyula (these languages are only quoted as examples not at all as references) as a medium of communication this refers almost always to the adult population and the figure may well be accurate as far as they are concerned. But what about the children? This question should be investigated since there is no knowing whether the proportion is identical among children. Experience tends to encourage scepticism in this respect.

The use of a chosen language equally leads to a problem of homogeneity. When, within a given area, it has been determined that almost all children speak Sangh, Hausa or Dyula fluently, one question remains to be answered. Which Sangh, which Hausa, which Dyula? Nothing proves that the same vocabulary is used, with the same semantic and linguistic values in all the schools of the area concerned. Distortions at either extreme end of the area may be important. Elaboration of pedagogical documents for use in class can only be undertaken on the common basis of a single language understood in the same way by all children. Whence the necessity for training institutions to ascertain not only the universal but also the homogeneous nature of the language used by the children.

The following table summarizes and systematizes the teaching situations in which an African child could find himself if a national language is introduced in the schools. The complexity of the problem will be made clear by this summary.

The following code will be used:

A lg = situation in which the teacher teaches\ the African language of instruction (various subject contents are communicated for example in Wolof, Sangh or Hausa).

A lg' = situation in which the teacher teaches the language of instruction (for example Wolof, Sangh or Hausa lessons).
\( E_{lg} = \text{situation in which the teacher teaches in the European language (various subject contents are communicated for example in English, French or Portuguese).} \)

\( E_{lg'} = \text{situation in which the teacher teaches the European language (for example English, French or Portuguese lessons).} \)

These situations intermingle and the child's case could be one of the following:

<table>
<thead>
<tr>
<th>Case 1</th>
<th>A ( lg ) (teaching in Sang( \tilde{g} ))</th>
<th>/\ /\ /\</th>
<th>/\ /\ /\</th>
<th>/\ /\ /\</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case 2</td>
<td>A ( lg ) (teaching in Sang( \tilde{g} ))</td>
<td>E ( lg ) (teaching in French)</td>
<td>/\ /\ /\</td>
<td>/\ /\ /\</td>
</tr>
<tr>
<td>Case 3</td>
<td>A ( lg' ) (teaching of Sang( \tilde{g} ))</td>
<td>E ( lg ) (teaching in French)</td>
<td>E ( lg' ) (teaching of French)</td>
<td>/\ /\ /\</td>
</tr>
<tr>
<td>Case 4</td>
<td>A ( lg ) (teaching in Sang( \tilde{g} ))</td>
<td>A ( lg' ) (teaching of Sang( \tilde{g} ))</td>
<td>E ( lg ) (teaching in French)</td>
<td>E ( lg' ) (teaching of French)</td>
</tr>
<tr>
<td>Case 5</td>
<td>A ( lg ) (teaching in Sang( \tilde{g} ))</td>
<td>A ( lg' ) (teaching of Sang( \tilde{g} ))</td>
<td>/\ /\ /\</td>
<td>/\ /\ /\</td>
</tr>
</tbody>
</table>

In respect of the African language of instruction (A \( lg + A lg' \)) the child occupies two different situations.

Situation 1: Sang\( \tilde{g} \), Hausa or Wolof are his mother tongues (case of children belonging to one of these ethnic groups).

Situation 2: Sang\( \tilde{g} \), Hausa or Wolof are not his mother tongues (case of children belonging to other ethnic groups).

Situation 1 does not present important differentiations. These are numerous on the contrary as far as Situation 2 is concerned. They are due to sociological, economical, historical, geographical and other factors.

- For certain bilingual children, Wolof, Sang\( \tilde{g} \) or Hausa are second languages known better than the mother tongue.
- For others, the second language and the mother tongue are used with very much the same accuracy.
- For yet others, the second language, as a medium of instruction, is a far less efficient working instrument than the mother tongue.
- For yet another category, Wolof, Sang\( \tilde{g} \) or Hausa are practically unknown languages.
It is only in the unlikely hypothesis of a system in which all mother tongues would have the status of a language of instruction that the situation would be uniform and could be expressed through the simple and classical equation: mother tongue = language of instruction.

Tasks to be undertaken by training institutions

1. Ascertain, in the school context, the level of universality of the chosen language

   The aim is to obtain an exact answer to the following question: To what qualitative and quantitative extent has the new language of instruction been acquired by children in Situation 2 schooled in this language?

   Student-teachers should prepare a series of game-tests to check active knowledge of basic vocabulary limited to activities of the nearest environment and to the child's interest areas. If the language of instruction is introduced in the first primary year, the questionnaires should test the children at this level and not at the level normally reached in the sixth year of primary school.

   In the analysis and the classification of the answers it is important, in this respect, to take into account the great differences between village schools and urban area schools, between small towns where a market is held and those without one. It is clear that before school age a village child has less contacts with the widely spread language than a child of the same age living in an urban area or even in a small town where there is a market attracting people from many other areas. The two categories of children are in the same situation in respect of the widely spread language that has become the language of instruction but children of the second category are clearly favoured as compared with those of the first.

   Geographical factors should equally be taken into account. A national language could make rapid progress in areas situated along navigable rivers and in savannah lands easy to cross. It would spread more slowly through forest and mountainous areas. The investigators should look particularly closely at the situation in schools located within areas where a powerful ethnic language exists that has not been chosen as the language of instruction.

   Situation 2 can consequently present important differentiations. All relevant variables within this group should be identified and inventoried. Errors could thereby be avoided in choosing experimental schools in which the first attempts to teach in the national language are to be evaluated.
Training institutions should also undertake thorough studies so as to determine the levels of utilisation according to children's age groups. It may be pointed out that the national teaching language could be unknown in the first primary year to children who have a different mother tongue while it could well be perfectly assimilated by them two years later, less so by having been taught in class than quite simply by contacts between children of different ethnic origins, by listening to national radio programmes and by mixing with adults. (1)

By what means can safe and useful information be obtained on the ability of "Situation 2" children to use their new language of instruction? The following test examples are presented in the form of particularly motivating games. These exercises have already been put to the test in a large number of African schools and future investigators could use them either as they are or as a source of inspiration.

1st test-game: Control of children's language comprehension.

How to conduct the test:

The investigators have beforehand prepared short sentences that are either false or true. Examples: cotton is an animal; the car runs on the road.

Statements have been tape recorded by children whose mother tongue is the new language of instruction ("Situation 1" children).

The investigators let the classes located in "Situation 2" areas listen to the recording.

The instructions given to the class is to raise an arm each time a false or absurd statement is played back.

The class should not react when the statement is true. Examples: the car runs in the sky (arms raised); the horse is galloping (nobody moves).

Remarks:

Student-teacher investigators should conceive the statements in such a way as to contain good samples of fundamental vocabulary and structures of the new language of instruction. The recorded statements should be spaced out enough to give the investigators time to write down the results on specially made sheets.

(1) This phenomenon has been checked on several occasions, particularly, in Central African Republic. In the region north of Bozanga rural area children speak Chaya, a well-established mother tongue, far away from the capital. The schools are located in a number of small towns throughout the region. These children who did not speak Sangö, the national language, when arriving in the first primary class, master this language well in the second class. Sangö however is not yet taught in the official schools. It is therefore in the "parallel school" consisting of the street and the school yard that they must have learnt it.
2nd test-game: Control of children's language comprehension.

How to conduct the test:

Five children go outside the class room. The others have carefully observed them beforehand.

While outside, the five children modify their clothing (one rolling up a sleeve, one unbuttoning his shirt, others exchanging part of their dresses, etc.).

The other children then have to spot and tell what has changed in the clothing of the five when they return.

Remark:

This amusing game gives the opportunity to check the acquisition in the new language of instruction of active vocabulary covering all verbs related to children's clothing, dress article nouns and adjectives connected with colour and shape of clothes, the types of materials.

3rd test-game:

How to conduct the test:

Several children go outside the class room. In their absence a "picture" is produced by laying out a number of objects on a table.

When the class has observed and "memorized" the "picture", its components are dispersed across the table.

The children outside return to the room. With the help of information received from the rest of the class they are to reconstitute the original design of the "picture" which they never saw.

Remark:

This game should make it possible to actualize most expressions of spatial relations needed to describe the position of an object without reference to oneself. When this game is applied to French, in the third and fourth primary years, more than 40 relevant expressions are often used correctly.

Many other useful tests could be mentioned but the purpose of this Guide is not to provide an exhaustive list. Personal initiative and imagination on the basis of the above principles will make it possible for the student-teacher investigators to produce specific research instruments that each type of situation requires.
2. Ascertain, in the school context, the level of homogeneity of the chosen language.

This is a complement to the activity referred to above. The new language of instruction should guarantee mutual comprehension so as to avoid unacceptable ambiguities in the vocabulary and syntax of educational documents. Textbooks could not be circulated without making sure previously that the language used in them is really the same as that of teachers and school children or expected by them in all schools of the country or region concerned.

When carrying out these studies the student-teachers should make use of games as often as possible. Such 'advice' is based less on theoretical than on psychological considerations and on the certainty that it is preferable not to give school children and their class teachers the impression that they are only study objects and guinea pigs that are being used and then immediately forgotten at the end of the experimentation. Psychologists would confirm that games are a serious matter in the eyes of children who for that purpose mobilize all their imagination, all the best of their energy, their creative power, their capacity of individual and collective self assertion. In this way if introduced into schools by means of games, the new language of instruction will arrive in a climate of serenity and confidence and in a more dynamic perspective than the participation in formal tests would give rise to.

Test-game: Control of the homogeneity of basic vocabulary and structures.

How to conduct the test:

Two children are to share a collection of objects between them. One of these objects is "precious". The child who obtains it will be the winner.

Three children including the two referred to above go outside the classroom. The teacher (or the investigator) spreads on his table a number of objects well known to the children. He then states which of the objects is to be the "precious" one.

The three children outside return to the room. One is in charge of the distribution the two others are to share the objects on the table: give me the pen! give me the shoes! etc.

When all the objects have been handed out the class decides who is the winner.
Remark:

This game should be practised in the various schools throughout the linguistic area concerned. A sufficient number and variety of the objects making up the collection would allow the investigator to check whether the denotations and connotations are the same everywhere. The student-teachers will use their imagination to invent other games varieties. Since the aim is to control comprehension of the elementary vocabulary of the new language of instruction, a suitable preparation by the working groups of the training institution would be to establish an exhaustive enough list of objects familiar to the children and within their sphere of interest.

Other types of tests: Control of the homogeneity of basic vocabulary and structures.

The following tests have also been used successfully:

1. Make children describe unambiguous drawings, posters and pictures and then compare the descriptive terms used with those recorded in other classes of the same level in different linguistic areas.

2. Elaborate, at the training institution, lists of drawings and photographs representing familiar objects related to family, school and economy contexts that are within the children's reach. Compare the terminology recorded in the different schools.

The necessity of such preliminary research should be underlined. Through the analysis of its result, serious errors will be avoided in the choice of experimental schools and the identification of pedagogical approaches. These studies will moreover provide indications as to the suitable school level at which the new language of instruction should be introduced. Perhaps this level is not everywhere the first year of primary school and perhaps another level would be preferable.

The evaluation of language competence can obviously not be made in respect of each individual child. This would be unfeasible for many reasons. That is why the tests and test-games suggested in this chapter all apply to small groups of children. They were conceived with a view to increasing the number of class surveys leading thereby to a high degree of probability if not certainty. The evaluation of the results thus supposes a certain coefficient of empirism even if, by thorough training, correct information will be obtained within a short time. But training institutions should not concentrate on the construction of sophisticated statistical systems. What future teachers need is a correct idea of school children's ability to understand and use the new language of instruction whether it is their own mother tongue or not. There is no need in this perspective to call in mathematics specialists. It
is preferable, on the contrary, that teachers and future teachers should carry out these studies themselves and become fully aware of the relations between the child and the new language of instruction. It is in this sense that the participation of student-teachers in this research is the best possible preparation for their teaching career.

The child's situation in respect of the new language of instruction is to a large extent unknown to educators. It depends in fact on political decisions taken on the choice of language. But whatever type of situation the pedagogues concerned may have to face it would be unwise to start teaching in an African language without having previously looked into the basic facts related to its universality and homogeneity, semantically and syntactically, at different school levels.

C. TASKS RELATED TO THE SITUATION OF STUDENT-TEACHERS AND TEACHERS IN RESPECT OF THE NEW LANGUAGE OF INSTRUCTION

The exact nature of the problem

The variables characterising children's language situation also concern that of African teachers and student-teachers in respect of the language of instruction to be promoted. In most African countries training institutions receive students belonging to all the ethnic and linguistic communities of the country. Moreover appointments of civil servants in general and teachers in particular are made in the best interest of ethnic integration and national unity. The natural result is the complex situation of teachers in respect of the African working language. The priority task of training institutions is to look for adequate solutions to this problem. Need it be said that such solutions do exist. The complexity of the linguistic situation of teachers and future teachers is not a fatality that has to be accepted as irremedial. Training institutions can very much improve an initially difficult situation by undertaking the following actions:

1. Clearly identify the situation of future teachers in respect of the new language of instruction.

2. Elaborate new admission requirements for training institutions, based on practical and theoretical knowledge of the national languages as well as of the cultural heritage.

3. Prepare and submit to the authorities concerned new training programmes modified in the light of the appointment of new teachers to the different linguistic areas of the country.
Tasks to be undertaken by training institutions

1. Identify the situation of future teachers in respect of the new language of instruction

a) Why undertake this task?

What is impossible in connexion with each primary school child in the country is perfectly feasible with its future teachers who are less numerous and less dispersed. Specific information on their language situations would make it possible to orient the participation of each individual in applied research according to the nature of his situation and the needs of the surveys concerned. That is why it would be necessary to possess, for each group of admitted or graduating students, precise information on the individual situations in respect of monolingualism, bilingualism or plurilingualism concerning indigenous languages and in particular the future language of instruction.

b) How to undertake this task?

What follows is an instance of interaction analysis applied to the student-teacher's relations with his mother tongue and the new language of instruction.

The code adopted is:

- lgm = student-teacher's mother tongue
- lgn = African language of instruction

Which are the situations actually found in the field?

One could find either:

lgn = lgm: language of instruction and mother tongue coincide, which is a privileged situation (Situation 1).

or:

lgn ≠ lgm: language of instruction is different from mother tongue (Situation 2).

The different variables of Situation 2 could be identified by applying to the specific context of training institutions the classification proposed by Professor Houis (I) for a more general context. With a slight adaptation this classification is summarized in the following table divided into five main categories.

1st category —— lgm : the language of instruction is unknown to the student; only the mother tongue is used.
2nd category: \( lgm \leq lgn \) : the student-teacher has little contact with the language of instruction; he mainly uses his mother tongue.

3rd category: \( lgm = lgn \) : language of instruction and mother tongue are equally well mastered.

4th category: \( lgm > lgn \) : student-teacher’s relation with language of instruction is closer than with mother tongue.

5th category: \( lgn \quad \text{------} \) : mother tongue not used any longer; language of instruction has become main language.

This table covers the most important of the situations that are possible. It gives a clear enough idea of student-teachers’ language situations in respect of the new language of instruction. However useful, this systematization is still insufficient. To establish a real typology of linguistic situations within training institutions, minimal and maximal limits have to be defined to justify the use of the symbols \( > \); = ; \( < \). Relevant criteria have to be found for measuring qualitative levels inside the five categories. There are in fact plateaux within each situation. Bilingualism and monolingualism are more or less total, more or less approximate, more or less integrated. The task of each training institution, in view of national specificities, will be to refine the above basic indicators and codifications.

Being cultural mirrors of the whole country, training institutions are characterized by diversified language situations. In certain African countries, speakers of widespread languages do not feel any need for bilingualism, while speakers of less influential languages are practically all bilingual by necessity. In Ivory Coast for example the first (—— lgm, where only the mother tongue is used) and the second (lgm < lgm, where the mother tongue is better assimilated than a second and widely spread language such as Dyula) categories prevail in training institutions. In the training institutions of the Central African Empire, on the contrary, no examples of the first category have been found whereas many cases of the fourth (lgm > lgm, where Sangö is used more often than the mother tongue) and fifth (lgm ———, where Sangö is the only language of communication) categories have been identified.
This analysis makes no allowance for the European language which is of course represented in most cases. The proposed typology should not only take situations of monolinguism and bilinguism related to the new language of instruction into account but also African plurilingualism which remains to be inventoried. Training institutions representing on a small scale the language situations of the country, are focal points of a diversified human potential highly capable of helping investigators and specialized institutes. The card indexing of all relevant data in a typological framework will provide precious information for research workers and trainers on the linguistic profile of each future teacher. Such a set of index cards will be a genuine information bank in the service of the national language patrimony and constitute an invaluable instrument for immediate research by available investigators in all the country's languages and also in the language or languages of instruction. That is why the very fact that training institutions begin work to establish this typology is in itself an important step towards national language promotion.

2. Elaborate admission requirements based on practical and theoretical knowledge of national languages

a) Why change the present admission requirements?

Once the introduction of an African language into primary teaching programmes has been decided on, it would be unreasonable not to test the aptitude of future teachers in this language. This is only common sense. Nobody would agree that the competence in English, French or Portuguese need not be examined, when teachers of these languages are concerned. Why should the same not apply to African languages? The problems connected with the introduction of a new language of instruction are preoccupying enough without adding the incompetence and lack of good will of teachers with no qualifications or no motivation.

In countries planning limited experiments of teaching in one or more indigenous languages the possibilities should be studied of modifying the entrance examination conditions and the admission requirements of training institutions. Allowance should be made, in addition to the required competence in a European language for competencies in national languages and candidates with eminent skills in this linguistic field should be given priority. The sooner entrance and final examinations reflect African language realities, the sooner competent teachers will be available in great numbers to begin the language renovation process.
Admission based on such requirements would considerably reduce or even eliminate the type of absurd but actually existing situation where teachers teach a language, they have little knowledge of themselves even to advanced students. Instances are plentiful in Europe, Asia and America of civil servants including teachers who have to prove their knowledge of the national languages that exist in their countries. Why should the same not apply to Africa at a time when the number of applicants to training institutions are on the increase and those in charge of training could consequently become more demanding in choosing criteria for selecting future teachers.

b) How to proceed?

To determine language competency levels of African bilinguism and multilingualism, the subjective evaluation by speakers, or by those who think they are, is not sufficient. More precise evaluation indicators have to be found so as to elaborate test batteries adapted to each specific case. At the same time the psychological and cultural dimensions of various multilingualisms will have to be identified.

The elaboration of relevant tests should pose no unsolvable technical problems. Though no scientific approach can be recommended that is valid for all language situations in African training institutions, some research areas could be indicated. In the Central African Empire for example, an interdisciplinary group looking into this problem has started constructing a series of tests with a view to evaluating competence in Sangô by means of an index of expression and one of correction. The former is defined as follows:

\[
\text{index of expression} = \frac{\text{total number of ideas expressed}}{\text{number of minutes used}} \cdot \text{number of information elements communicated}
\]

Example: 21 ideas expressed in 3 minutes gives an index of expression equal to 7.

The index of correction is determined as follows:

\[
\text{index of correction} = \frac{\text{number of ideas expressed correctly}}{\text{total number of ideas expressed}}
\]

The index of correction consequently varies between 0 and 1. In the above example 21 ideas were expressed in 3 minutes. 16 ideas were correctly expressed, while 5 were grammatically doubtful. The index of correction would then be 16 which gives 0.79.
This is only an indication of research areas. There is no question of making the above evaluation type operational immediately. Too many points remain to be clarified. The notion of "ideas" or "information elements" is to be considered as a sort of "minimal conceptual units", ready to be combined among themselves. The same uncertainty concerns the classification of different levels of incorrection inventoried in the language. Statistical criteria should be combined with others to define the seriousness of each mistake.

In spite of these difficulties however important in themselves, work could very well start in training institutions. What has to be identified to begin with is actually only the sort of elements that make comparison possible inside a given population but not absolute criteria. Research could therefore be extended to indexes related to written comprehension and written expression in cases where a spelling system has already been elaborated (Sang is one of them). All aspects of language competence could then be tested in the new language of instruction.

The adoption of new admission requirements based on knowledge of national languages implies that steps have to be taken to provide candidates for the teaching career with possibilities of developing their practical and theoretical knowledge of the new language of instruction, whether it is their mother tongue or not. Optional courses in one or more African languages could be organized from the first forms of secondary schools, in the same way as courses are offered in German and Spanish. Secondary students interested in the teaching career could then seriously prepare themselves for admission to training institutions. It will be remembered that what the Ten-Year Plan for the Study of Oral Tradition and the Promotion of African Languages considers as a necessary condition for implementing any language programme is "official measures aiming at reinforcing literacy in particular by introducing African languages as teaching-subjects and as a medium of instruction into elementary, secondary and higher education".

3. Study possibilities of modifying training programmes in the light of the appointment of new teachers to different linguistic areas of the country.

Even after an exhaustive typology has been established and after new admission requirements have been adopted that integrate national language realities into standardized examinations, a number of variables may remain that jeopardize the homogeneity of teacher training and complicate the work of the training staff. So as to avoid excessive multiplication of their activities which could become intolerable in the
present structure of training institutions it appears necessary to decide, whenever possible, at an early enough date on the future duty station of the student-teacher or at least its approximate location within a specific region. This would reduce the major remaining difficulties.

- Training staff could eliminate variables related to the teacher's situation in respect of the language of instruction. The training, in its pedagogical, methodological and psycho-pedagogical aspects, would be adapted to the specific language conditions that the student-teacher will actually face after graduation.

- The student-teacher could be familiarized with the socio-linguistic, ethno-linguistic and psycho-linguistic situation of the area where he is to teach. He will be able to discover beforehand the pedagogical and linguistic problems that have to be solved (various types of interference; influence of dialectal features on the language of instruction; specific situations of the children in respect of the language of instruction, etc.).

Those are the steps that training institutions can take at once. None of them, whether related to typology, to admission or to the planning of appointments, suppose major financial investments or exceed the competence of training institutions. If within the limits of their responsibilities each institution contributed to these innovations, the most serious problems would be eliminated that face student-teachers in their relations to the new language of instruction.

D. TASKS RELATED TO THE PROGRESS OF APPLIED RESEARCH

The exact nature of the problem

All the languages chosen for use in the schools are obviously not equally ready for the function assigned to them by Government. They may or may not have been submitted to analysis and some may have been analyzed more thoroughly than others. Between the descriptions that are very poor and those that are very rich there is a whole range of intermediate levels, not only possible but actually existing.

Complete and exact information on the situation of the new language of instruction is needed by those in charge of education. Based on objective and reliable data, an adequate plan can then be worked out to remedy the various deficiencies identified. The main types of situations encountered can be categorized as follows:
**First category:** The new language of instruction has not been the object of any scientific research.

These are not frequent cases though they do exist. No analysis has been undertaken to elucidate the system of the language. What remains to be done is the collection of relevant data, the identification of a unified reference language as compared with local varieties and the adaptation of the lexical and syntactical systems to a modern scientific and pedagogical context.

**Second category:** The new language of instruction has been the object of more or less scientific research.

Such approximate studies were generally carried out long ago by scholars without a rigorous training in the methods of objectively analyzing specifically African language phenomena. These investigations, from a strictly technical point of view, do not satisfy present scientific requirements and have deficiencies that are almost classical in this type of studies. The tone system, for example, as not at all analyzed or very badly. Grammar chapters were given the great headings of European languages. Phonemes were identified as being European "equivalents" and so on.

These studies, in a perspective of linguistic universality, projected on African languages the grammatical, semantical and phonological categories of the reference languages. As they are, they could not be used as the basis of pedagogical documents to be elaborated.

**Third category:** The new language of instruction is the object of incomplete scientific research.

This is the case of most African languages at present. A few doctoral theses have been written on an important aspect of the language such as its phonological structure, whereas its remaining components have only been analyzed in an amateurish way or have even not been looked into at all. Besides, some dialectal variants may have given rise to an objective study but without trying to identify and inventory, within the chosen language group, the common function areas in view of codifying a unified language that should serve as medium of instruction.

**Fourth category:** The new language of instruction has been the object of scientific research that is by and large sufficient.

This case is more and more frequent following thorough studies carried out by institutes of linguistics and individual investigators. Unfortunately, in an educational perspective, the result of such research is usually submitted in the form of university theses or communications for specialists and are not directly concerned with educational application. Comments, meant for a restricted
public, use a very particular jargon and a terminology which is often of the author's own making. Most of these studies are doctoral theses, meant to be examined by university professors and have no practical purpose. They contain descriptions of certain phenomena and rarely define possibilities of language development or application to the present educational and scientific contexts.

Fifth category: The new language of instruction has been the object of complete scientific research.

This, obviously, is a most favourable situation though exceptional. The pedagogue can then quickly avail himself of adapted educational materials: basic grammars, word lists, readers for beginners, selected reading texts, etc.

It will not be possible to examine the whole variety of situations that a national language could find itself in when adopted as a medium of instruction. Each training institution, following the above explanations, will be able to determine the deficiencies it has to make up for and orient its action accordingly.

Tasks to be undertaken by training institutions

In view of the above situation, their tasks will be the following:

1. collect missing linguistic data on the new language of instruction,

2. analyse these data with a view to identifying and codifying the language of instruction,

3. adapt and actualize the language in the perspective of its full educational utilization.

1. Collect missing linguistic data

   a) The student-teacher could be called upon actually to participate in the collection of missing linguistic data.

   Authentic data collection is the beginning of all linguistic research work, whatever its nature. Any reliable descriptive analysis must be based on the correct interpretation of linguistic data. During the long vacation the student-teacher equipped with a tape recorder could collect isolated statements and series of words according to a specific questionnaire provided by the institution that organises the research. In fact, anything should not be systematically recorded. The state of progress of linguistic research has to be taken into account. Except in special cases, the investigators know what they want to find and have pre-established models so as to limit the field of investigation. For transcription into the
working language and literal translation of collected data student-teachers are equally called upon to participate in their capacity of speakers and in view of the various linguistic and anthropological dimensions of their culture.

b) The student-teacher could be used as a source of information on the studied language. The future teacher possesses all the qualities required of a good informer. His pronunciation is good, he is not a stutterer nor a lisper, or he would never have been admitted into the training course. Moreover, his language knowledge and general knowledge level make him, more than the classical informer, often illiterate, a collaborator appreciated by the investigator who is sure to receive from him objective and well founded opinions on the studied language. Thanks to the student-teachers the linguist will find, inside the training institution, informers mastering the main dialectal variants in which the language of instruction is operating.

c) The student-teacher could be asked to choose informers inside his own linguistic community.

For a systematic investigator it is not enough to have recordings made only inside the training institution. Data collected there must be compared with other data that informers with the same background find elsewhere. Through comparison, the first results obtained can be validated or invalidated. The student-teacher may prepare the ground on the spot and help the investigator discover informers of the right caliber in his own linguistic community. If the investigator cannot be on the move, the student-teacher will be able personally to go and look for these informers and even, provided he is given a pre-established working instrument, record the required data himself.

2. Analyse collected data with a view to identifying and codifying the language of instruction.

Research on the use of an African language in teaching or literacy work mainly amounts to a synchronic study, i.e. related to its present state, of the dialectal variants that differentiate it. In a practical perspective this means – let us repeat it – identifying and inventorying common function areas within a given linguistic group with a view to codifying a unified language that can be used for educational purposes. The analytical and comparative study of dialectal variants is therefore crucial when converting a medium of communication into a medium of instruction.
a) The student-teacher could participate in the identification of similarities and differences.

With the help of adapted questionnaires they could establish parallels between linguistic data previously defined in the language system both as regards languages of the same family that have developed in different directions and differently evolving sub-groups of a common original language. Observations of this nature would enable them to elaborate certain working hypotheses. Their particular knowledge of the language, both subjectively and seen in a cultural perspective, would make them apt to do this. Those hypotheses would of course have to be validated by more thorough research work.

b) Student-teachers could help elaborate a unified basic vocabulary covering the different speech varieties within one and the same language group.

The original vocabulary material of a language is not universal but very much determined both by the environmental conditions and the economic preoccupations of its speakers. Hunters of the Savannah area have an active vocabulary sufficient for describing the activities related to their way of life, whereas they would lack vocabulary apt to describe the world of seafarers or even that of hunters living in rain forest areas. The same thing applies to life in urban areas and in the bush. Student-teacher participation will facilitate the control of all semantic areas covered by identical speech varieties and will contribute to the codification of a unified vocabulary.

3. Participate in the process of adapting and actualizing the language in view of its full educational utilization

To be able to play its role as a full time working instrument, the chosen language of instruction should be apt to express concepts and realities related to contemporary science and technology. It must therefore be developed lexically according to its potentialities and internal structure.

a) Student-teachers could be called upon to study collected data and identify the mechanisms of lexical production (research based on the lexical material of the language).

Vocabulary, which is a set of open ended series, seemingly arbitrary in their superficial structure but in fact rooted in deep structures, develops according to the needs of the speakers and to processes that are now increasingly well known: derivation, syntagmatic stabilization, transposition, metaphor, etc. With the help of working tools, the student teachers, as
competent speakers, familiar with the language needs of the schools, could play a decisive role in the discovery of the particular use that can be made of these processes. They may even discover certain models, certain neology generating matrices that are typical of the areas investigated. Scientific, technical and pedagogical vocabulary would then develop within the structures both of the language as it is today and of its inherent evolution tendencies.

b) Student teachers could be involved in identifying criteria of africanization of foreign words (loan word research). Concrete examples of this lexical assimilation process would be inventoried (confusions, disagreement, assimilation of difficult groups to mother tongue habits, e.g. thetasis, etc.). Such studies would equally concern words and expressions that have become obsolete and that could be reintroduced into the vocabulary either with a meaning they had earlier or as carriers of new information. It is unnecessary, in fact, to create new words or to integrate superfluous loan words as long as the language is capable of providing from within itself the type of vocabulary required for its transformation into a means of expression dynamic enough to adapt itself to a necessary evolution.

How to proceed?

It will not be possible here to exemplify all the tasks referred to above. A few of them however will be dealt with in a quite practical perspective. They correspond to urgent needs in almost all African languages.

Though the vocabulary of a language is a relatively closed system determined to a large extent by environmental conditions and by the economic preoccupations of its speakers, it is on the other hand, from a linguistic point of view, a set of open-ended series capable of receiving and integrating outside elements.

The student-teacher who, masters the notional and semantic contents of his mother tongue, since he speaks it, can be of great help to the linguist in identifying the various assimilation processes and their respective practical value for a controlled lexical production in the areas where the most urgent needs exist. This action will be undertaken in the framework of initial research work on loan words in the mother tongue and also on the specific lexical content of the mother tongue.

1. Research on loan words in the mother tongue

   a) Objectives of this research

   Identification of loan words (well integrated and less well integrated ones) and also of the mechanisms of neologism in the mother tongue with a view to finding an approach to educational application.
b) General remarks on how to proceed:

The participation of student-teachers should be more particularly related to the mutual influences and inter-penetration of African languages and to productive contacts between mother tongue and European languages.

African languages do certainly not have a poor vocabulary. Like any other language they elaborate and activate the vocabulary that corresponds to their needs. They possess for instance an abundant terminology to express delicate shades of social relations. It would be quite a mistake in this respect to speak of indigence and cultural poverty. A language however only refers to the reality that it emanates from. To be able to express new notions it has to rely on various mechanisms among which the most obvious one is borrowing from other languages.

In the African languages that have already been studied, most loan words used to verbalize new notions and to designate unknown objects, have been inventoried though it is of course difficult to achieve a complete inventory in a field as changing and evolutive as this one. As for incompletely described languages, systematic studies remain to be undertaken. They will be conducted by means of research schemes prepared and used in the field by the student-teachers. These schemes could be of the following type:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A)</strong></td>
<td><strong>B)</strong></td>
</tr>
<tr>
<td>Phonetical loans well assimilated by the receiving language</td>
<td>Expressions that are well integrated in the system of the receiving language and that function normally in the context of this language</td>
</tr>
<tr>
<td><strong>C)</strong></td>
<td><strong>D)</strong></td>
</tr>
<tr>
<td>Loans badly assimilated by the receiving language</td>
<td>Expressions that are not integrated in the system of the receiving language. Their function and form vary according to speaker and context, inside the same linguistic community.</td>
</tr>
<tr>
<td><strong>E)</strong></td>
<td></td>
</tr>
<tr>
<td>Loans giving rise to compound words or periphrases</td>
<td>Palliative or explanatory expressions in the receiving language that refer to concepts or objects covered by vocabulary in the donor language. They could be well or less well assimilated according to the way they function.</td>
</tr>
<tr>
<td><strong>F)</strong></td>
<td></td>
</tr>
<tr>
<td>Onomatopoeic loans</td>
<td>Formation of words from sounds that resemble those associated with the object or person to be named or suggestive of their characteristic qualities.</td>
</tr>
<tr>
<td><strong>G)</strong></td>
<td></td>
</tr>
<tr>
<td>Other mechanisms</td>
<td></td>
</tr>
</tbody>
</table>
The student teachers should be encouraged to take initiatives in enriching the table suggested above. They should also comment on the origine of loan words, their connotations in the receiving language, and the conditions of their adoption and use. The expressions aimed at by these studies would refer to new notions or new objects of foreign origin (match, electricity, abstract terms, general concepts, etc.). Questionnaires elaborated in a European language will have to be readapted to the frame work of the receiving language.

To start with, the vocabulary collected could well be classified by interest areas or even in alphabetic order. Once collected, these lexical elements would be classified according to the categories proposed in the above table with a view to analysing them in a rational way.

Insofar as the geographical, historical and cultural contexts influence this vocabulary assimilation an inter-disciplinary approach is recommended, involving the sociological, ethnomological, philosophical, economic, technologic-al and other specialists of the training institution. All activity sectors can contribute, in cooperation with the specialized institutions, to the identification of a basic vocabulary to which adequate additions have been made in view of recent reality changes. Specialists in environmental science and linguists will agree on specific areas to be investigated, and differentiate them according to local needs and language gaps to be filled. Student-teachers will not only be involved in the practical implementation of this programme but also in the preparatory phases of the research.

c) Practical methodology of loan word research

1. Elaboration of questionnaire form and content by inter-disciplinary seminars on the basis of lexical research needs defined in particular by specialized institutes.

2. Elaboration by the student-teacher of the documentation on the specific (geographical, historical, ecological, religious and other) contexts in which lexical creation from foreign language sources develops. It will consist of answers to specified questions figuring in the introduction of the questionnaire. It could also consist entirely or partly of free comments.

3. The actual research is carried out by the student-teacher in his own mother tongue area using the questionnaire he helped elaborating himself. According to his competence as a speaker of the language and to his linguistic experience in general he can add more or less to the contents of the questionnaire. Arranged as alphabetic lists or under interest area headings. Each loan word recorded should be commented on concerning connotations, origin, usage and so on.
4. Classification and systematisation by the student-teacher of the recorded elements. This supposes some previous knowledge of practical and theoretical aspects of phonology as well as of the phonological characteristics of the receiving language. **Phonological structure is one of the constraints that new words have to face.** The following is an instance of an analysis approach effective in most cases of lexical assimilation. The categories are taken from a study by P. Vogler, "French Loan Words in Baoule".

I. Phonological constraints imposed on loan words that have characteristics incompatible with the receiving language.

A. Structure assimilation

1. Vowel epenthesis

   Ex.: S.C.O.A. asikoa
        : balcon (balcony) baligu

2. Consonant epenthesis

   Ex.: montre (watch) montle
        : comptable (accountant) kontablù

3. Suffixation

   Ex.: + u : cartouche (cartridge) katusu
        : + i : garage galasì
        : + e : pneu (tyre) piné
        : + a : sucre (sugar) sukla

4. Prefixation

5. Phoneme disappearance

   This phenomenon occurs when a sequence of phonemes does not conform to the structure of the receiving language. In Baoule and in Dgoula for instance the sequence V C₁ C₂ V (vowel + consonant + consonant + vowel)² does not exist. It is frequent in French, though. Loan words containing such sequences will lose either C₁ or C₂.

   Ex.: cartouche (cartridge) katusu (C₁)
        : vaste (jacket) vusi (C₂)
B. Sound assimilation

Problematic consonants and vowels inside a word are changed into nearby sounds that exist in the receiving language or into sound sequences of higher statistical probability in the phonological system of the mother tongue.

Ex.: r ------ l : crayon (pencil) klimio
      : écrire (write) klè

      y ------ i : fusil (gun) fizi
      oe ------ e : manœuvre mandeflu

It is worth-while recalling that all these modifications which the speaker is unaware of can occur in the same loan word. In the Baoule sequence "galazi" a suffixation (in - i) has taken place as well as a consonant assimilation (l and z). The original is "garage".

II. Phonetic constraints, i.e. due to phonetical tendencies typical of the receiving language and not to interference of the phonological system of the receiving language with that of the donor language.

1. Defective perception

   Ex.: beaucoup (much) gboko

2. Assimilation

   Ex.: machine mazi

3. Metathesis

   Ex.: jardin (garden) zlade

These tendencies contribute to some loan words changing beyond recognition.

5. Classification by the student-teacher of loan words (once defined and explained as above) in the broad functional categories previously suggested. This categorization will help identify viability criteria for each of the assimilation mechanisms described above and will help define the most productive demographic tendencies in regard to word loans.

d) Pedagogical suggestions

The theoretical information of student-teachers should insist on the reasons why one language is obliged to use expressions borrowed from another language. There are many of them: need to designate objects, persons, places, techniques, new fashions, general ideas but also need to refine shades of
meaning, need for concision, expressivity and wider variation: it is more elegant in Francophone countries to go on "week-end" (English loan word) than on "fin de semaine" (French for "week-end"). It should equally be made clear that the adoption of foreign expressions implies not only phonological screening but also changes of stress and morphological features. In the latter respect, it should be pointed out that loan words are usually integrated in the most regular and most productive category. French verbs borrowed from other languages almost always belong to the first - and regular - conjugation group, for instance "shooter" (to take shots), "zoomer" (to zoom), conjugated in French as "chanter" (sing).

e) Other lines of action

The research referred to in the last paragraph but one, on practical methodology, is concerned with problematic linguistic situations. It is by no means a matter of simple school exercises but is meant to be thoroughly analyzed and widely utilized. The elements provided by these studies should be oriented towards practical application. The working groups should be asked to identify the "grammar rules" of lexical assimilation and try to define the structure of the facts identified. The following points could be elaborated on by groups of student-teachers through analysis of the examples recorded.

1. How does the speaker of one language delimitate lexical units borrowed from another language? Is the loan word used in the same way by all speakers of the region? How does the loan operate at the extreme ends of the linguistic chain and in the intermediate variants? What is the impact on the mother tongue of the existence, in a European donor language, of articles before the noun and of "affixed" prepositions? In this respect, concerning languages that use French loan words, it might be useful to distinguish:

- agglutination of the definite article, elided or not, and the imported noun,

- agglutination of the partitive article, often felt by non-speakers to be part of the noun,

- agglutination of certain clauses (ex: "en") (1).

Student-teachers should also be encouraged, during data collection, to take note of all examples of loans that present abnormal, accidental or particular characteristics likely to reveal important tendencies.

(1) Agglutination phenomena, exemplified here, can be observed not only, i.e. the area of loan words but also throughout the process of a child's acquisition of his mother tongue especially by the time the child confronts his own first general hypothesis with the functioning of the language spoken around him. This is another example of the usefulness of the "psycho-pedagogic" attitude that underlies this document.
2. How can an African language with a tone system integrate lexical units of a language without tones such as European languages?

3. How is an imported noun treated with regard to gender? What criteria decide whether it is classified as masculine or feminine in the receiving language?

4. Special attention should be paid to loan words that are in the process of africanization and more particularly those that present semantic variations and whose meaning has become very different from what it was in the language of origin. These variations could change from one region to another within the same country according to the frequency of the situation that the word refers to. The following examples are from Ivory Coast.

<table>
<thead>
<tr>
<th>Language of origin:</th>
<th>Language of adoption:</th>
<th>New meaning:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- le goudron (tar)</td>
<td>gidro or guidron</td>
<td>tarred road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(in the whole country)</td>
</tr>
<tr>
<td>- le compteur</td>
<td>koto or conté</td>
<td>taxi (in Abidjan-Bouake area)</td>
</tr>
<tr>
<td>(speedometer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- les bagages</td>
<td>bakas or bakass</td>
<td>bush equipment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(in the North)</td>
</tr>
</tbody>
</table>

Numerous terms also enter local speech varieties with different semantic values such as "camion" (truck) meaning "car", "babi" meaning "the smallest citroen car", and so on. The introduction of loan words is thus accompanied by semantic distortion, affecting the informative links between content and expression, i.e. the denotations. The same phenomenon is still more obvious in the connotations that cover all subjective and emotional aspects of a word, inside a given cultural area.

The exact present significance of each of these words should be urgently inventoried before it disappears or changes. Such information would serve as a basis for the diachronic vocabulary study that has not yet been undertaken for lack of earlier documents. It is obvious however that decisions on regularization and usage (in view of the elaboration of pedagogical dictionaries) should be envisaged only within specialized institutions sponsored by a national educational authority, in agreement with the literacy and adult education agencies that already utilize or will utilize indigenous languages.
2. Research on original mother tongue vocabulary

a) Introduction

This research will also have to be based on field-collected data. No complete enough synthesis exists as yet for the language concerned. Much remains to be done in each of them to identify the structured system that would be applicable to grammars for class teaching. This data collection supposes the previous elaboration of adequate questionnaires. Their content should by no means be universal and unadapted and should not necessarily embrace all possible human activities. A too general framework would indeed eliminate all that is specific about any given culture or ethnic group and deprive it of its most characteristic aspects. The good questionnaire will take into account the needs and realities of the environment and the psychology of the speakers when gradually approaching their most typical and deeply felt themes. The suggestions and advice of the student-teachers will be particularly valuable in this respect. They know better than anybody from outside their own language community which topics of expression and communication would be treated only with reluctance.

The student-teachers are thus to carry out taxonomic studies of the individuality of their mother tongue. There is no doubt these studies will be of great interest. They will give information not only on language factors but also on the problems of ethnologists, sociologists, and educationists. Key objects and notions for the correct interpretation of the environment will thereby be identified.

Conceptual delimitations in language are rather empirical and often differ from scientific classifications (bothony, zoology and other disciplines). There is no necessity to direct student-teachers into such specialized areas unless they show particular motivation due to educational interest. Examples will be found in the last chapter dealing with the production of teaching aids. It would certainly be a pity not to use specialized knowledge that could profitably be added to thorough familiarity with the social background.

Semantic criteria are obviously no scientific arguments in analyzing lexical productions for identification of their constituent parts. Compound words however could be authenticated by these criteria provided the delimitations they indicate are confirmed by several informers. A coherent hierarchisation could thereby become available within the vocabulary under investigation.
b) Objectives of the study conducted by the student-teachers

Assemble as many and as varied lexical data as possible so as to identify and clarify the mechanisms of lexical production inherent in the new language of instruction and thereby to define a system utilisable in educational practice.

c) Practical methodology

The questionnaires to be used for this study by the student-teachers would relate to limited semantic areas while leaving room for substantive personal initiative and intuition based empirism. Indispensable basic material will be provided by this study for linguists, whether Africanists or comparatists, for educationalists and specialists in social sciences. That is why theoretical and functional interdisciplinarity should be adopted in the preparation and the execution of this study as well as in its follow-up stages.

The following is the beginning of a lexical study carried out on Adioukrou by G. Herault, of the Institute of Applied Linguistics, University of Abidjan, in 1971.

After an introduction on the Adioukrou ethnic group and an explanation of his work plan, the investigator presents the study results in the following way (1)

I - Agriculture

(Plants)

1. rice
   saka: This term is not limited to Adioukrou. It is found in the whole center, mid-west and south of the Ivory Coast.
   
   Saka ann  ål  ål
   rice is fire on
   the rice is cooking

2. millet
   am: Millet is no more eaten or grown in Adioukrou land; it is imported though as poultry feed.

3. cassava
   nbosi (mbosi): plural: s-nbosi (smbosi)
   This is the generic term

---

(1) This study was based on the pattern proposed for vocabulary research by Professor M. Houis of the National Institute of Oriental Languages and Civilisations, Paris.
nbosi ur - em n - im
1 2 3 4 5

cassava (1) dig up (2) in (3) them (4) have gone
they have gone to dig up the cassava

(Seven other words for seven other cassava varieties are dealt with in the same way.)

8. onion
ganga madzère: red pepper of white
2 1

(A good example of lexical production based on mother tongue materials; instead of using a foreign word a compound noun has been created, a periphrase moulded upon the production system of the language. A "fixed syntago" thus provides perfect understanding of an imported notion.).

The following are the interest areas suggested by Professor Houis*: agriculture (crops, fowl, cattle), family life, activities outside agriculture, public life, space and time, body and senses, hygiene and diseases, plants and animals, family relations, spiritual life and religion, verbs (actions and states). The order of these themes is not fortuitous. It is the same order in which they develop, psychologically, during research work between the investigated and the investigator. Special attention should obviously, in our own case, be paid to traditional educational activities in an African setting, all that concerns school and classes, the needs and interests of children. The plan suggested by Professor Houis permits coverage of essential aspects of school programmes. It is therefore an excellent starting point.

Certain aspects of reality are more or less differentiated in different languages according to the needs of the users. A French speaker would be satisfied with one word for cassava whereas the above study shows that the Adioukrou speaker uses as many as eight. In rice-growing and cattle-breeding regions the same phenomena of lexical determination will have to be expected. The meshes of the "linguistic net" that G. Mounin refers to are sometimes bigger sometimes smaller when "catching" and apprehending reality. Languages, like fishermen, use nets with meshes of varying size to be able to hold on to every day reality. The country or the region can be divided into micro-regions defined by geographical criteria (forests, savannah, coast, lagoons, sub-desert), sociological criteria (big city, small town, village,

* M. Houis "Linguistic Anthropology of Black Africa" (P.U.F.)
hamlet) and economic criteria (commerce, fishing, hunting, arts and crafts). A questionnaire should be adapted to those categories within each community to be investigated. Due to the large number of student-teachers available and the wide geographical distribution that they represent it is possible to cover practically all sectors.

Through this first stage of the research the vocabulary of the language can be identified in an overall perspective. The same research tasks should be entrusted to several student-teachers so as to go beyond the simple recording of dialectal variants. By analyzing the ovo mapping and mutual interference of documents based on speakers of the same group the research result could be wider in scope; scientifically; and more reliable methodologically.

Some special aspects of the lexical study must not be neglected. Part of the research carried out by student-teachers should be directed towards toponymy and patronymics. Without studies of this type lexical research would remain incomplete. African names always communicate something. They generally express a religious, human or physical situation, originate in natural or super-natural realities, and sometimes try to define the existence of man and of intermediate beings or spirits. A foreign explorer is ill at ease in this multiple world and its implications and interdictions; but the participation of student-teachers will guarantee a rich harvest for the ethnologist, the historian, the educationalist and of course also the linguist.

d) Theoretical remark

It would seem that it is in the lexical field that the problems related to African languages have been the least systematized and where the most remains to be done. This is due among other things to the absence of ethymological dictionaries and of inventories that could inform of previous development stages of the language throughout the territory. An enormous amount of work therefore remains to be done. Because of scarce research funds so far, the ensuing impossibility of investigators to stay long enough in the field, their small number and the long distances from the capital-based University to linguistically interesting areas. Since the most exhaustively described languages, moreover, continue developing daily through contacts with rapidly evolving modernity, inventories of African vocabulary, constantly modified, need regular up-dating. This is another reason to draw the attention of investigators to the laws of the lexical evolution in Africa. Knowledge of these laws would surely facilitate the control of the increasingly numerous items of information available.
This is the changing field difficult to penetrate, where the contribution of student-teachers could be the most useful since their knowledge would be added to experience gained through their personal research. This would help dispense with the dictionaries that do not yet exist and would replace the encyclopedia of African national and regional speech varieties that today's investigators do not dispose of.

c) Practical suggestions

The study of the original mother tongue vocabulary should conform to the principles stated by P. Guiraud *:

"Lexical creation has its laws, i.e. operates inside a set of determined conditions: The identification of these laws is the most urgent task of lexicology. To this effect exhaustive inventories have to be established following the pattern used in phonetics. This is the only way to make all motivations stand out on which a specific creation modality is based ... Each being, object and notion is designated according to attributes that could be physical (shape, colour, consistency, etc.), functional (situation, utilization, etc.) or circumstantial (place of origine, producer, etc.)."

Student-teachers should therefore be made to look for the physical, functional, circumstantial characters that generate denominations.

Guided by these principles, L. Duponchel, of the Institute of Applied Linguistics, University of Abidjan, shows in his taxonomic study of fish names in Alladian **:

1. that names of persons and places are used in forming fish names,

2. that the names of numerous fish species integrate the names of other animals and that these extensions are due to physical characteristics,

3. that elements of anatomy are frequently used to form fish names (one species is called "the eyes" because of the size of its eye-balls, etc.)

This is obviously a very interesting research area for student-teachers. At a certain point they can even undertake research work until now reserved for the investigator. They will contribute to indigenous vocabulary research by providing basic, essential and diversified materials that will constitute a solid foundation. The credibility of the results can be proved by numerous cases of overlapping and interference thanks to the large number of student-teachers participating in the research.

* In "Ethymological Structures of French Vocabulary"
** Linguistic community on the coast, west of Abidjan
E. PROBLEMS CONNECTED WITH AVAILABILITY OF EDUCATIONAL MATERIALS

The exact nature of the problem

When the choice of a language of instruction has been made, those who are to prepare for the implementation of this language policy decision, have to look into the quantity and quality of educational materials available. Important variations exist in this respect from one language and country to the other. A few headings would suffice to cover the basic situations inside which of course all sorts of variants could be recorded.

First situation: The teacher disposes of educational materials well founded in theory and well adapted to the competence level of teachers and students.

"Well founded in theory" implies that the available educational materials were conceived and elaborated in conformity with results of language research and psycho-pedagogical requirements. "Well adapted" means that grammars, vocabularies, readers, text books, etc. are immediately utilisable by the teachers and at the levels concerned. Audio-visual materials, in certain exceptional cases, are available as well (records, tapes, film strips...).

Spelling, in this first category, is such that it can be understood with an acceptable level of accuracy. Written texts are decoded at normal speed and with minimal efficiency.

Beyond a certain limit, for instance, when the diacritical symbols are too many, reading stops being functional and runs the risk of being abandoned or of becoming an artificial class room exercise. This problem is particularly important in educational application and has not yet been solved in practice. Many African languages have not yet found an appropriate way to adjust the number and use of the graphic symbols to the requirements of complete communication.

This first situation is obviously the most favourable, though still rare if not exceptional.

Second situation: The teacher disposes of educational materials well founded in theory but unadapted to the competence level of teachers and students.

This is the case of a number of African languages used in several neighbouring countries where an indigenous language has been introduced in schools and the teacher, having no materials for the moment, is tempted to use without modification the set of teaching materials elaborated in the neighbouring country where the same language is used in class. Dialectal variants are often quite important from one country to another, specially among children. Moreover, imported text books contain instructions for the teacher in a language he does not know. This could apply to Ewe, for instance,
used in several countries but for which most educational materials might be produced in Ghana. In Nigeria, there is a fairly substantial quantity of teaching materials in Hausa, whereas this is not true of the neighbouring countries. This situation is not bad in itself except if it is used as a pretext for not elaborating a national stock of teaching materials.

Third situation: The teacher disposes of educational materials well adapted to the competence level of teachers and students but not well founded in theory.

This case is very frequent and an impressive number of languages are in this predicament. The danger is difficult to avoid. Reliable documents are rare and not easily accessible. Some textbooks for African schools are pedagogically speaking no more than carbon copies of books produced for European schools. The language and the denominations as well as the pedagogical contents are foreign. Such documents, the form of which is often under-developed, are generally due to isolated initiatives, promoted by private or confessional groups that practise a marginal type of education fairly unconnected with that of the public school system.

These textbooks do not respect international phonetic conventions used in recently normalized spelling systems. Spelling norms are copied from a European language. The danger is then that students (and teachers as well) tend to adopt bad habits, difficult to correct later on.

Fourth situation: The teacher disposes of no worthwhile educational materials.

In this case, the training institutions will have to work hard ...

Tasks to be undertaken by training institutions

The work of student-teachers will be to satisfy the above needs and to take part in the elaboration of basic teaching materials. Their use in class will certainly contribute to the full success of the new national language policy.

The essential aspects of such teaching materials should correspond to:

1) reader for beginners,
2) selected reading passages,
3) normalized basic vocabulary,
4) fundamental grammar
1) Reader for beginners

Experience shows and psychologists confirm that the acquisition of reading competence corresponds to an enormous effort in the student, more in fact than learning any other subject area. Though reading is taught in the first year of schooling it is by no means effortless. This fundamental acquisition constitutes an absolute prerequisite for assimilating other programme area contents. Any existing problem or trap should be relentlessly minimized and above all no additional difficulties should be created for the child without very good reasons.

Since African-European bilingualism is the only valid solution to present and future language problems in Africa, an increasing number of children and adults will be involved in school activities and reading in at least two languages: their own mother tongue and one international communication language. Students are naturally confused when after learning to read in one language they are faced with other symbols or apparently identical ones corresponding to a different articulation. It would therefore be necessary to study the possibility of minimizing the differences between the two languages as for sound-spelling associations, without violating the linguistic specificity of either. In cases of African monolingualism in the schools the spelling-writing problems would of course appear in a different light.

The latter hypothesis seems unlikely at the moment. The following paragraphs are based on the cases in which children are expected to have acquired writing and reading competency in two languages at the end of their first year of schooling.

Should these learning processes be simultaneous in the two languages or differred in one? After a first phase of initiation starting from the African language, reading competencies could be developed alternately in this language and the international language. The initial phase could last for two months and the two alternating learning processes the rest of the year.

How can training institutions produce a reader for beginners in the African language of instruction?

Solve the spelling problem

When codified by edict, spelling poses no problem. In cases where no official codification exists, when spelling is only officious and several rival system are in competition, no general rules can be established due to the wide variety of possible situations. The choice of a scientific spelling system should take all relevant factors into account. They are not only linguistic, but also psychological (the basis of education), historical (past customs and traditions), sociological (public opinion, past publications) and pedagogical (comprehension level, learning problems).
All these factors should be considered so as to make sure the spelling system will be scientific. An additional problem concerns tone transcription. The tone is an aspect and integrant part of the syllable. Many word pairs have no other distinctive feature except tone. In some cases however pedagogical considerations should be given priority. In the first year of schooling the difficulty involved in using a complete system of tone marks in the spelling might not be commensurate with the expected advantage.

This concession has already been made for many languages, some of which are important ones. It is justified when learning is contextual. Possible confusion caused by identical spelling is thereby avoided by reference to the context. A reader for beginners is on the other hand meant for children who already speak the language and are able to reconstitute the total information contained in the written texts. Even European languages tolerate numerous homonyms without sinking into confusion. Interference would inevitably occur between tone marks in the African language and accents in French. This would add numerous difficulties to those already inherent in the acquisition of reading competencies in children's first school year.

Though the final decision on normalized spelling is rarely taken by educationalists, they can exercise influence. Whenever possible, exclusively linguistic criteria should be used and tones should be marked, unless this gives rise to additional difficulties for the children. In this case marking of tones could be postponed until after graphic decoding and discrimination have been mastered.

Phase one: Solve the problem of content elaboration

In a method meant only for the acquisition of reading competencies in the African language the following criteria should be used:

- word frequency
- sound frequency

Student teachers would determine word frequency by investigations among first year school children (not among adults). Within the number of the most frequent words identified, those containing the most frequent sounds would be inventoried and taught first. In order to validate the result of the word frequency determination, a picture chart could be used. Photographs or drawings visualize the objects and notions determined by the frequency study. Students of parallel classes not covered by the previous investigation are made to verbalize these pictures. It would then be certain that the selected keywords are known and used by the children. Below is an example of such a picture chart produced by lecturers and students of the National Institute of Education, Bangui. The language is Sangôt.
<table>
<thead>
<tr>
<th>Yasi</th>
<th>Kosi</th>
<th>Mama</th>
<th>Baba</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Yassi)</td>
<td>(Kossi)</td>
<td>(mother)</td>
<td>(father)</td>
</tr>
<tr>
<td>So</td>
<td>Na</td>
<td>a bala</td>
<td>ita</td>
</tr>
<tr>
<td>(this is)</td>
<td>(with and)</td>
<td>(he greets)</td>
<td>(brother, sister)</td>
</tr>
<tr>
<td>da</td>
<td>a ba</td>
<td>ya</td>
<td>a li</td>
</tr>
<tr>
<td>(houco)</td>
<td>(he sees)</td>
<td>(stomach)</td>
<td>(he enters)</td>
</tr>
<tr>
<td>a iri</td>
<td>a ga</td>
<td>a yo</td>
<td>ta</td>
</tr>
<tr>
<td>(ho calls)</td>
<td>(he comes)</td>
<td>(he carries)</td>
<td>(pot)</td>
</tr>
<tr>
<td>bokolo</td>
<td>a zia</td>
<td>ni</td>
<td>asi</td>
</tr>
<tr>
<td>(sweet potato)</td>
<td>(he leaves)</td>
<td>(there)</td>
<td>(it is full)</td>
</tr>
<tr>
<td>a ti</td>
<td>a fa</td>
<td>a pika</td>
<td>a toto</td>
</tr>
<tr>
<td>(it falls)</td>
<td>(it is broken)</td>
<td>(he strikes)</td>
<td>(he cries)</td>
</tr>
<tr>
<td>kotara</td>
<td>tara</td>
<td>popo</td>
<td>a zi</td>
</tr>
<tr>
<td>(grand-father)</td>
<td>(grand-mother)</td>
<td>(between them)</td>
<td>(he takes away)</td>
</tr>
<tr>
<td>gala</td>
<td>kasa</td>
<td>karoko</td>
<td>a ka</td>
</tr>
<tr>
<td>(market)</td>
<td>(vegetables)</td>
<td>(ground-nut)</td>
<td>(he wants)</td>
</tr>
</tbody>
</table>
CORRESPONDING PICTURE CHART

baba  mama  kosi  yasi  tara  kotara

ita

gala  da  ta

babolo  kasa  karako

ayo  a ti  a fa  a pika  a toto
CORRESPONDING PICTURE CHART (continued)

a ba  a iri  a ga  a bala

yasina kosi  so ta  tatimama  tanii a fa  popo

m...azi kasa  m...azi kasa  tani a si  m...aka kasa
In this context (reading competency acquisition first in an African then in a European language) the word and sound frequency criteria have to be reviewed in the light of a third variable, that of similarities and differences between the two languages.

There are not only important differences between African and European phonological systems but also striking similarities that would have to be used in the best possible way in order to achieve the double language objective.

The reading material is programmed in successive stages or plateaux. Students will then progress from simple to complex, from known to unknown, from easy to difficult elements. The programming of the Sangö reading method "e manda ti diköngö übeti" (followed by "lisons en français") is as follows:

1st stage: frequent graphic symbols, used both in Sangö and in French
(a - b - d - f - etc.)

2nd stage: graphic symbols used in Sangö
(é - u - ë - ë - etc.)

3rd stage: simple graphic symbols used in French
(e - e - j - ë - etc.)

4th stage: Complex graphic symbols used in French
(ai - eau - gu - etc.)

The first stage constitutes a common area for Sangö and French. Reading exercises will be held separately in each language, of course. Identical elements in the two phonological systems facilitate the learning process. This phase of initiation is of a general nature and not so much a specific initiation in reading Sangö and French. The children learn to recognize, discriminate and decode the graphic symbols, in sequencies or isolated.

The second stage involves difficulties related to the two systems being dissociated. But then an important part of the work has been accomplished already. The child has been motivated to engage in a functional reading activity.

Phase two: Solve the problem of learning methodology

The methodology should have solid theoretical and practical foundations. Recent findings in psychology and psycho-pedagogy should be taken into account. African language readers should not be inferior, from a methods point of view, to the best European language readers.

The success of the latter is due to the articulation of the various phases within the overall learning process, those of decomposition and recomposition of graphic sequences.
The overall learning process aims at familiarizing students with the relations existing between graphic groups and reality aspects. Students should learn a set of key-words that will be analyzed in depth during a following analytical-syntactical phase. The first phase would last for about a month, provided a daily ninety minutes, divided into three separate periods, can be made available. The key-words, alone and combined in varied contexts are identified by the children. The incitement and game-like character of this global reading phase creates strong motivation for further reading. At the same time the basic elements required for decomposition-recomposition exercises are assimilated which makes them really active.

Phase three: Reading practice

Students decode short texts based on previous and new acquisitions and particularly focusing on words that contain the graphic symbol studied that day. The teachers should be familiarized with this approach and its methodological foundations during special in-service courses. The participation of student-teachers in the elaboration of a reader is the most efficient practical and theoretical training that they can be given for later use in class of such readers.

2) Selected reading passages

This textbook forms a necessary complement to the reader for beginners. Having learnt how to read one is naturally looking for something to read.

As for the elaboration of the reader, the main part of the work can be done by groups of student-teachers.

How to proceed?

The approach is simple and direct. Each member of a group is to work out short reading texts that are correct from the spelling, grammar and vocabulary points of view. A wide range of topics are possible: the tales and legends of the area, contemporary or past historical events, funny stories, instances of adapted technology, translations. These texts are eventually reviewed and discussed by the whole group and classified by themes. After a final check by specialists, this production could be used in school textbooks. Already trained teachers should be associated to the venture. Through daily contacts with school children they can give valuable advice on the adequacy of texts and illustrations in the light of the psychological reality of the classroom.

Experience shows that most of these texts are never finished, particularly when student-teachers are left without directives in the delicate moments of planning and developing
the texts. Moreover it is clear that creative writing would have to be de-my-stifled. In order to reinforce student-teachers' motivation a prize could be attributed to the most successful results, either within the institution or at the national level. Publication could equally be envisaged in an educational bulletin, if there is one in the country.

There may be a tendency to delay or neglect the development of the above reading passages which appear less urgent than a reader for beginners. It has to be remembered that they constitute a first sample of educational "literature" in national language. As a means both of making national culture more widely known, in its human and historical aspects, and of providing an educational content for a most modern learning approach, these texts would indeed serve the interests of national integration. Their influence would reach well beyond the limits of school compounds.

Their daily use in class could include oral expression, summaries of texts read, summary preparation, text analysis, and texts commented on. Based on well chosen texts, activities of this description could help develop national languages in the areas of logical-mathematical, technological, scientific and abstract terms. This would facilitate their adaptation to the modern world. The inclusion of all these potentialities in a collection of reading passages is certainly not a negligible achievement.

3) **Normalized basic vocabulary**

The aim of such a vocabulary is to provide school populations with a means to receive and convey programme contents in the first few school years. It has to be normalized in view of wide dialectal variations and can only then be used as reference for development of textbooks directly understood and ready for use in the whole country without "translation".

**How to proceed?**

The necessary studies could well be entrusted to student-teachers. The analysis of the results should however be supervised by specialists. Student-teachers would learn how to handle objectives and receive methodological guidance both for the preparation and use of research tools. It would appear necessary to accompany student-teachers in the field and watch their first attempts at data collection. Once the technique has been acquired, the student-teachers would be left entirely in charge of the operation except for periodic evaluation done conjunctively by them and the specialists.

**On what basis should questionnaires be elaborated?**
Since the objective is to inventory all vocabulary related to school programme areas the best possible preparation would be first of all to inventory these areas themselves. Headings
would be defined, categories and sub-categories identified. Such an analysis would result in themes being established within which any data collected could be easily classified.

Under each heading, many different possibilities of sub-categorizing exist. As for animals and plants, empirical classification criteria could be adopted within the limits of the child's own perception.

Animals could be classified according to:
- if they walk and with what
- if they swim and with what
- if they fly and with what

Plants could be classified as "green ones" and "not green ones" or "edible" and "not edible". Local classification criteria, utilitarian or religious, may be identified and used as well. This approach would obviously not result in the scientific categories of botanists. Nor do their objectives coincide with those of the study concerned.

What is aimed at is not exhaustive research on the exact relationship vocabulary-science but simply the identification and organization of an African language of instruction capable of conveying school programme contents.

Little is known about the African child's ability to discriminate and generalize. In doing so does he pay more attention to colour (which ones?), to shape (which ones?) or function (which ones?). African languages - like any other ones - divide the surrounding reality into portions with the help of vocabulary. Cultural habits organize and hierarchize the elements that the vocabulary refers to in categories based on needs arising from contact with the environment or on analogies, associations or mythical beliefs. The universe of traditional Africans is organized and this organization that links objects to human beings, man to his environment has to be interpreted. This explains the deep meaning of certain African taxonomies, similar in this respect to those that are expressed through everyday language in Europe and America.

It is untrue that these popular taxonomies are only interested concerning plants, in those you grow in a garden and, concerning animals, in those you shoot. A keen curiosity is omnipresent and a will to organize the universe.

This curiosity and this will are bound to contribute to school children's acquisition of programme contents and to the identification of a framework in which collected data can be easily classified. The following is an example of such a framework:
- Psiculture and breeding of fowl, ducks, works and even cattle at school will lead straight to taxonomic research related to **ZOOLOGY**.

- School garden, orchard, coffee, cotton, ground nut, vegetable citrus and crop farms give rise to research on specialized vocabulary in **BOTANY**.

- Family relations and social structures will motivate vocabulary study in the area of **SOCIOLOGY**.

- Fire, water and air; protection against sun, cold and wind; transport of objects; how to lift, fly, float, keep in balance; transmission and modification of movements; these phenomena will be the basis of vocabulary investigation in the area of **PHYSICS**.

- Religious studies, history and geography depend on the vocabulary of **SOCIAL SCIENCES** and **ANTHROPOLOGY**.

- Fine arts, music and physical education require developed vocabularies in **MATHEMATICS** and **PHYSICS**.

- Numbers and their mutual relationship, keeping of school cooperative accounts, position and measures need adequate verbalization in the area of **MATHEMATICS**.

A classification based on scheduled school activities will in a natural way cover all semantic fields that characterize children's experience and family background. The technical vocabulary to be established is meant only for educational purposes and has no encyclopedic ambitions.

The questionnaire that Professor Houis worked out for language research (i.e.: **Linguistic Anthropology of Black Africa**, P.U.F.) will no doubt prove valuable for investigators. It will allow them to identify all educational applications in an African background and to avoid omissions.

Student-teachers will nevertheless have to be guided on how to choose terms. The following criteria could be used:

- **frequency**: is the suggested word approved by the majority of the working group members?

- **distribution**: is the suggested word recognized by members originating from the various regions of the country?

When a circumlocution has to be used, consideration should be given to the criteria of:

- In many African countries, schools run cooperatives featuring a wide range of activities such as (according to climate) agriculture, arboriculture, commerce, and handicraft. The examples quoted are all authentic (Central African Republic).
- economy: it should be as short as possible,
- conceptual accuracy: it should be precise, functional and unambiguous.

The output of this classification project, once it has been completed, should be handed over to the specialized institute concerned or the national language commission (if there is one).

Below are a few examples of how this work could develop. The starting point is the object itself or the representations of it, half abstract, half concrete, of which some are already conceptualized (photographs, drawings). The exact denomination is selected for the dictionary. The teacher will use this dictionary to prepare lessons on topics ranging from fruits (mango) or animals (lizard) to technical objects (kerosene lamp) and mathematical concepts (assets and liabilities).

The examples below relate to on-going research work in cooperation with students of the Advanced Teacher Training College, Bangui.

**Botany vocabulary**

a ti keke: **MANGO**

(fruits) (mango)

<table>
<thead>
<tr>
<th>pūro ti mango</th>
<th>mi ti mango</th>
</tr>
</thead>
<tbody>
<tr>
<td>pūro ti lë ni</td>
<td></td>
</tr>
<tr>
<td>lë ti mango</td>
<td></td>
</tr>
</tbody>
</table>

**Choice of words (summary)**

1. The working group unanimously accepted the words proposed by those in charge of classifying fruits:

<table>
<thead>
<tr>
<th>mango</th>
<th>mango</th>
</tr>
</thead>
<tbody>
<tr>
<td>pūro ti mango</td>
<td>skin of mango</td>
</tr>
<tr>
<td>mi ti mango</td>
<td>pulp of mango</td>
</tr>
</tbody>
</table>
2. There is disagreement on:

lë ti mango

For part of the group "lë" is the kernel (within the nut). For the others, "lë" means the nut (enclosing the kernel). The same word therefore refers to two different realities which leads to ambiguity.

3. The following expressions are agreed on:

lë ti mango : kernel (litt.: the seed of the mango)
pōro ti lë ni : nut (litt.: the skin of the kernel)

The circumlocutions are both precise (conceptual accuracy) and economical (brevity).

4. Some members wish to adopt a second expression besides "pōro ti lë ni":

lë ti keke (litt.: the fruit of the wood)

The majority disagree with this suggestion since the expression also means "fruit" in general.

Physics-technology vocabulary: BANGO NDO NA LAMPA?
(How to light up?)

---

[Diagram of a lamp with labels for parts such as mabükë ni, da ti vërë, vërë, ? tige coufée, grille, mësi, pëcërö, ta]
Remarks

- The adequate terms for what is called "grille" (grating) and "tige coulée" (lever) in French could not be identified.

- Where French uses the idea of a hat (le chapeau de la lampe = the lamp's hat), Sangü uses a more imaginative circumlocution:

  da ti vèrè (litt.: the house of the glass)

- vèrè, mèsi, pitòrè are well assimilated loan words: "verre" (glass), "mèche" (wick), pètrole (kerosene).

These thematic word lists that make up the basic vocabulary of school programme contents should be complemented by the fundamental vocabulary of the language in general. Teaching materials produced in the new language of instruction should have the same form, i.e. the same normalized language understood by all children. The fundamental vocabulary should contain the most common words (and meanings) used by school children.

This work requires:

1. Data collection within given areas and age groups (children).

2. Determination of word frequency.

3. Alphabetic and thematic classification of the most frequent words.

4. "Translation" of these words by succinct definitions.

The fundamental vocabulary is the necessary means of conveying basic knowledge. It should therefore be used in text books. The frequency index will indicate the importance of each word or word root. The risks of not being understood in some areas will disappear.

Why establish both an alphabetic and a thematic classification?

The former will allow authors of text books to make sure no frequent words are forgotten. Such omissions would be unacceptable in a language learning method for example.

The classification by themes will allow these authors to choose the words that are to be used according to their frequency index.
The elaboration of a fundamental vocabulary is normally the task of specialized institutes. The training institutions will co-operate by supplying informers and qualified investigators and by helping treat collected data.

4. Fundamental grammar

What sort of a grammar is that?

The grammar book that the training institutions should help develop is meant for exclusively educational purposes. Students reaching their last primary year should begin looking into the way the language they use is functioning. To their subjective knowledge of the language a minimum of objective knowledge should be added. The children would then have a better understanding and mastery of the internal laws of the new language of instruction.

This grammar would necessarily be a compromise between a scientific language description and the requirements of teaching activities. As far as pedagogical application is concerned, linguistic factors are not the only relevant ones. Consideration should be given - in the interest of efficiency - to the habits and experiences already acquired by teachers and future teachers in the field of grammar.

The student-teachers usually have about ten years previous primary and secondary schooling. The grammar teaching they have witnessed is mainly of a traditional nature, i.e. non-native grammar unable to describe grammatical phenomena with accuracy.

Conjugation and grammatical analysis were practised both at beginners' and more advanced levels. No initiation in applied linguistics was ever attempted. This discipline was not included in the syllabus. In addition, the very trainees, appointed without compulsory training in linguistics, continue teaching the European language as if it were the students' mother tongue. Teachers and student-teachers therefore have grammar knowledge based only on an imported language. The mechanisms of this language are by no means universal, i.e. directly applicable to African languages.

In preparation for official examinations, grammatical knowledge was always preferred to grammatical competence. Students were trained in dividing up sentences artificially according to irrelevant criteria and not in discovering syntactical mechanisms. Great importance was attributed to the "label", i.e. the category of a word but not to its varied functions. Far too much time was spent learning and using a totally unproductive formal nomenclature. As for the "deep" factors that regulate the internal functions of the language, i.e. the very idea of a linguistic system, the students are unaware of their content, their terminology and even their existence.
This is the grammatical profile that must be taken into consideration and that makes a compromise necessary. Linguistic and pedagogical requirements do not necessarily meet but have to be adjusted towards each other. It is not easy to preserve the logic of the subject area, the psycho-pedagogic order of comprehension levels and the historical order of real acquisitions in given subjects by given student groups. The necessary effort must be made to elaborate a fundamental grammar that is rational and based on all relevant factors.

How to proceed?

Grammatical language description is the task of specialists. It aims at defining the grammatical categories of the language as they are in themselves and at identifying the way in which the system functions.

Students of training institutions will have an important role to play as informers and as the collaborators of the grammar specialist.

As informers:

To found the grammatical analysis of a language on solid facts, the investigator needs authentic linguistic documents. Pre-established questionnaires are used to this effect. They contain a number of working hypotheses for the exploration of the language. The help of competent informers is required to determine:

- the type of utterances that are possible in the language,
- the possible positions of elements within different utterances (in French, for instance, word order is not indifferent),
- the possible commutation, co-existence and mutual exclusion of these elements within a given type of utterance,
- possible combinations.

Grammar exploration consists of inventorying and verifying these various possibilities. It is considerably facilitated by the use of student-teachers' linguistic knowledge and competence. They are familiar with analysis of grammatical phenomena. The investigator they help will lose less time in checking data collected from unprofessional informers.

As collaborators:

Questionnaires are not enough to identify how the language functions. Spontaneous speech as produced without any outside constraint has to be analyzed as well. Authentic uninterrupted speech is the definite basis of grammatical analysis.
Student-teachers will help collect a sufficient number of texts: debates, tales, narratives, dialogues, etc. Children's conversation should also be looked into carefully. The abundant variety of recording situations facilitates the definition of language registers and various degrees of grammaticality.

Students of training institutions have more to give than to receive in elaborating teaching materials for children. Through their competence as speakers, their theoretical knowledge and their interest in educational problems, they have an extremely important part to play in the operation. By participating in the development of school textbooks they add a useful dimension to their professional training. The competence they acquire during the research phase will prove highly beneficial for the pedagogical application entrusted to them later as school teachers.

The participation of as many student teachers as possible in the elaboration of educational materials is in itself as important as the existence of these materials in the national language.

F. PROBLEMS CONNECTED WITH ALLOCATION OF CONTENTS

The exact nature of the problem

The entry of a new language of instruction in the schools does not require the expulsion of the language previously used. The important problem is to determine which language(s) should be used in the best interest of the child's harmonious development at each psycho-motor, affective, psychological and intellectual stage and his smooth insertion in tomorrow's society.

To this effect, the adequate approach is not first to choose one or more languages and then to define objectives for them. What should be done, is the opposite. First specify the objectives of a language of instruction and then identify the language(s) that would be most likely to permit the achievement of these objectives.

Tasks to be undertaken by training institutions

Contemporary linguists define the different functions of human language. Training institutions should inventory and classify the long term educational objectives i.e. the concrete functions of the country's language(s) of instruction. This analysis would be based on the contents of ministerial instructions, existing curricula, the general intentions of the Government and the primary student's output profile.

With the help of this analysis, it is possible to determine which language(s) can most completely and most rapidly fill the various fundamental pedagogical functions.
Specific suggestions, based on this study, would then be submitted to the decision making authorities as regards the ratio of each language at different school levels. These proposals would be supported by solid arguments.

This approach will help training institutions pose the problem in clear terms at last. Those in favour of the use of national languages and those objecting to it often confused the matter by petitions, emotional declarations and unfounded argumentation.

**How to proceed?**

The long term objectives of primary education would be laid down in the ministerial instructions and curricula of each country. It appears useless to elaborate on this point due to the variety of possible local considerations. The definition of the output profile of primary education is not only a necessity for educationalists but also a guarantee for the school populations concerned. Wherever this profile has not been defined, the problem posed by the choice of a language will provide a good opportunity to do so.

What is possible immediately, on the other hand, is to identify the basic educational functions required of an African language of instruction. **The choice of one language in preference to others depends on the extent to which it fills those functions.**

They would seem to be of the following nature in African primary education:

1. **Link between school and environment**

   The present situation is that the most effective means of communication used in the environment is totally neglected inside the school. This results in a regrettable language disruption. The school and its environment should speak the same language to facilitate convergent action. How can schools open their doors to villagers, parents, rural extension workers, and craftsmen if they cannot express themselves in a common language? The revival by the school of fundamental African values is made difficult by the use of an imported communication medium unable to express them accurately, likely rather to distort and impoverish the information. The school can hardly take part in environmental development, productivity improvement, rationalized urban and rural development without a constant dialogue with the population. National languages doubtless constitute the most effective means to channel school and community into harmonious collective development.

Only indigenous languages can provide the necessary links between school and society. Only they can truthfully convey daily realities and guarantee the formation of a coherent socio-cultural group. The new language of instruction thus becomes a weapon to fight under-development.
2. Vehicle for initial knowledge acquisition

The ability through language to interiorize which is necessary for logic reasoning is only operative, in the first stages of child development, by means of the mother tongue, so far the only available medium of verbalization. Deprived suddenly of his usual linguistic support, faced with a new and confusing instrument, the child is reduced to the acquisition of a few rudiments. The incoherent way in which they are bound to function will limit his development of logic reasoning. Without the verbal tools required for self-expression and creativity, the development and fulfillment of the child's intelligence and personality are impeded. He becomes inhibited and passive. His ability to understand decreases as well as his natural tendency to exteriorize feelings and interests. It is through the mother tongue that the psyche of the child is built up and brought to maturation. Abstract reasoning is not initially concomitant with a second language. Activity pedagogics where operation is achieved through action, are founded only on mother tongues. Operational thinking can only be transferred to another language after it has broken away from the concrete.

Smooth acquisition of initial knowledge can only take place in a familiar language. The assimilation level of a foreign language is too limited in the first school years.

3. Medium for school communication and social exchange

This is the language that conveys teaching contents. Its use should model a mind so that it is open to the outside world and integrated in the child's original culture. The smooth insertion into family and national life should be made possible. The child at the same time ought to be familiarized with modern techniques that have to be mastered for the economic and cultural development of the country. This function could be exercised both by a national and an international language.

Indigenous languages are unable for the time being to express imported technical realities. It is equally impossible for foreign languages accurately to reflect traditional African approaches to agriculture or crafts. A balance has to be struck in school bilingualism. The European language is likely to keep a large share, at least for some time.

4. Vehicle for inter-cultural exchange

The expression of a specifically African culture should be made possible by the language. Ability to express the aesthetical, philosophical and moral values shared by the ethnic groups of the country is required. It should facilitate the world wide spread of the national culture thus inspiring other cultures and receiving impulses from them in return. Quite a few African languages could assume the "internal" function even today. Very few, on the other hand, would be able to function in a world wide cultural context. This rôle is played at present by the international communication languages. It is a paradox that foreign languages should convey knowledge of African literature, culture and civilization to other parts of the world.
What seems more essential than the actual classification categories suggested above, is the fact that the criteria used are functions. This functional approach would facilitate the delimitation of zones of influence, the determination of school bilingualism ratios for optimal complementarity and the submission to decision-making authorities of clear cut proposals.

5. Other functions:

A language of instruction often assumes other functions than those connected with education:

- reinforcement of national unity,
- acceleration of economic development,
- provision of equal chances to all children irrespective of socio-economic background,
- recovery of cultural authenticity.

The allocation of teaching contents to the old language of instruction and to the new one is connected with the political, economic, social, scientific and cultural realities of each African country.

The training institutions will undertake the development of the pedagogical functions of the new language of instruction. This is part of their responsibilities within the educational system.
III. CONDITIONS OF IMPLEMENTATION

A. CO-OPERATION WITH SPECIALIZED INSTITUTES

The co-operation between training institutions and specialized institutes such as national institutes of education, institutes of applied linguistics, institutes of ethno-sociology, should be close and constant in view of the particular character of the research undertaken by student-teachers. The areas investigated concern the whole future of the country and not only the new language of instruction. The research personnel of the specialized institutes are aware, more than anybody, of the progress accomplished in the study of national languages. They know the distance separating it from educational application and are informed of the strengths and weaknesses of previous research.

The particular role of the specialized institutes has to be determined through discussions of the language situation within each country. The following general modalities of cooperation, complementarity and mutual help could however be suggested concerning the contribution of the specialized institutes.

1. Before the operation

- They lead working sessions to inform and improve the techniques of team leaders in the training institutions.

- They provide the training institutions with adequate documentation on the language situation in the country and on their own research work.

- They suggest the areas and objectives of the applied research to be undertaken by training institutions and take into account the linguistic aspects of the country's economic and cultural development.

- They take part in the elaboration of questionnaire frameworks, data collection forms and other working tools needed by the student-teachers.

2. During the operation

- They take part at regular intervals in student-teachers' group work and give advice.

- They help run the field operation and make sure the research is of a scientific nature.

- They help each training institution, when requested, to hierarchize the limited or conjunctural objectives of each specific operation.
3. After the operation

- They offer advice and leadership for the analysis of data collected and treated by the student-teachers.

- They co-operate with the training institution in the systematic research on pedagogical applications in school and out-of-school contexts.

These in fact are generalities. A real co-operation charter would have to be elaborated between training and specialized institutions. Consideration should be given to variables such as financial implications (investigators' travel and stay in the field), administrative implications (training colleges and specialized institutions are not under the same ministry), professional implications (long term research programmes of specialized institutes have to be harmonized with projects of training institutions). In case the country has no institute of applied linguistics, the training institution could rely on support offered by specialists based abroad.

B. MODIFICATION OF TRAINING PROGRAMMES

The participation of T.T.C. students in the introduction of African languages into teaching supposes a modification of the spirit and content of the academic and professional training programmes in vigour at present.

1. Programme spirit

In the traditional teaching situation, the teacher is "the one who knows" in front of the student who is "the one who does not know" or not yet. The teacher reinforces his own knowledge by explaining it and proposing it as a model. The student becomes aware of his inferiority and lack of experience. New and dynamic programmes would imply that the teacher must abandon this cheap self-assertion and allow the student to be a research partner and co-author of solutions to shared language and teaching problems. In this way, the teams of teachers and students would be in an optimal productivity situation, intellectually and affectively mobilized for the common task.

2. Programme content

The function of student-teachers is to take initiatives during field work. They have then to be given the means to do so. The new training programme should improve the theoretical knowledge, practical skills and aptitudes required for the operation. This is training in its most accomplished form.

a) Theoretical knowledge

Even if students are not involved in language descriptions, which require a degree of specialization that they lack, their participation supposes a minimum of theoretical
knowledge. Their training should include the elements of phonetics and phonology, of intonation and tonology, of morpho-syntact, of lexical production and of metalinguistic representation.

b) Practical skills

Students should be well prepared in the use of field research techniques and of the materials required. These include tape-recorders, questionnaires, phonetic transcription systems, summarizing tables, etc. High-quality recording techniques must be mastered, as well as those of apparatus maintenance. The use of questionnaires supposes skills in analysis, classification, codification and hierarchization. These aspects would be given priority in the activities carried out within the training institutions. Phonetic transcription would be practised frequently and based on authentic recordings in the form of dictation exercises.

c) Personal aptitudes.

Training programmes should develop attitudes compatible with team work and research. Ability to cooperate and discuss in groups could be developed by replacing traditional end-of-year monographs by group-oriented work.

3. Professional training

The common education syllabus will include the usual information on teaching-learning problems, child development, environmental influences, functional education principles and methods, activity approaches, preparation and use of individual files. The physiological and psychological aspects of the reading and writing learning process should be specially focused on as well as the functions of a language of instruction.

If the anticipated appointment of students can be obtained, the training programme that follows the initial common syllabus will be differentiated according to the language situation in each of the future appointment areas. Will the teaching be in African language? Will the African language(s) be taught? Will these two possibilities be considered together?

a) Teachers will teach in the African language(s)

Individual student-teachers' knowledge is then to be improved and reinforced. It would be difficult to imagine a teacher using a language of instruction he does not himself master. Stress should be laid on the availability and use of functional vocabulary areas facilitating precise and unequivocal knowledge transfer. The teacher's pronunciation must be understood by all students so as to avoid incomplete classroom communication in a teaching context that is oral to a large extent.
Audio-oral learning laboratories could be instrumental thanks to its systematic and varied exercises, in unifying and normalizing the speech of future teachers in the new language.

Even if the African language is not explicitly taught, with a view to creating awareness of its mechanisms, the very fact that it is used to teach in, results in the permanent involvement of implicit grammar and a systematic conditioning of students. The teacher must then be able to tell correct from incorrect grammar. Training programmes should therefore include at least an elementary grammatical description of the new language of instruction.

Student-teachers should also be familiarized with language learning phenomena both at beginners' and more advanced levels and also with the communication process at various stages of child development. The great differences between children's language functions and those of adults should be stressed. They relate to different mental structures and different needs. This teaching approaches used in training institutions should therefore not be assimilated to those of literacy work.

b) Teachers will teach the African language

Not only perfect practical knowledge of the new language of instruction is required but also good knowledge of theory and grammar. The teacher should make students observe and analyze the mechanisms of the language within its system. His preparation for this task would be the research work he takes part in.

A few particular training aspects should not be forgotten as for special methods of African language teaching.

i) Spelling and sound representation

Different spelling systems sometimes exist inside the same language. This is of course unacceptable to the pedagogue. Student-teachers will have to be acquainted with the general principles of African language transcription. These should be discussed and the future teachers made to realize their justification. Graphic sound symbolization could be specially studied in working group sessions. That is where the research phase ends and the new phase of classroom application begins. The reasons why the various graphic symbols were chosen will be looked into and the historical and practical factors involved as well.

ii) Segmentation and reading methodology

Codifying an alphabet does not solve the problems related to reading and writing. The child should be able to recognize different groups of words
(nominal and verbal groups for instance) and relate
then to the sound sequences they symbolize. This
expected recognition poses the problem of word
segmentation and its criteria. The student-teachers
would hardly be involved in the choice of an alphabet
but it is necessary for them to understand, to approve
and to apply it.

To establish an appropriate learning rhythm, the shape
of the new letters should be taken into account.
The basic letters should therefore be redefined
from which the process of learning to write develops.
Training institutions should suggest a new learning
rhythm based on the gradual introduction of increasingly
complex graphic symbols.

Both general and professional training programmes
are in fact closely linked to whatever decision is
taken on the introduction into primary education of an
African language. Each country will of course
found its own programmes on the specific problems
it encounters.

The participation of student-teachers in language
research constitutes the best possible preparation
for the teaching in and of the African language.

iii) The new teacher trainer profile

Though the shortage of linguists may be regretted
as well as that of institutes specialized in African
linguistics, great progress has been made in the
last five years both in Africa and Europe. Research
has multiplied and it becomes increasingly difficult
to find an African language of some numeric importance
that has not given rise to an analytical description
that is either already terminated or still on-going.
The success obtained in integrating an increasing
number of African languages into primary programmes
has to be viewed in the light of the enormous lack
of trained teachers. This is doubtless the weak
point that causes difficulties in all cases where
language renovation has been undertaken.

The teacher trainer is the necessary link between
the linguist who describes the language and the
teacher who teaches it or teaches in it. His task
is to look into the results obtained by the research
and, after analyzing them thoroughly, to draw
conclusions about how to apply them to teaching.
He is also a popularizer who should rewrite for
example a worth-while morpho-syntactical description
to make it accessible both to teachers and students.
Without betraying their factual contents, he should translate the results supplied by the investigator into a register that is acceptable in the classroom. Their presentation, within a specifically educational framework, should favour the learning processes and make them as easy and at the same time as effective as possible.

The profile of a new type of teacher trainer is that of a real learning specialist capable of forming a link between research on the new language of instruction and teacher training. Language renovation can be successful only when it is supported by well trained personnel. Recruitment of teacher trainers should therefore be adapted to the new conditions created by the promotion of national languages and cultures. Competence, experience and skills should certainly be required from the beginning, but would not be enough. What is needed in addition is a new conception of the relations between teachers and students, a new motivation for team work, a new preparedness for inter-disciplinary action. The traditional specialist was too much inclined for narrow subject area identifications. The new specialist should have an open mind for self-training, for peer teaching, and all the new forms of action that will not fail to materialize when the dynamic movement has gained speed and become irreversible.
IV. CONCLUSION

From thesis to textbook ... 

When looking at the problems posed by the integration of African languages into school programmes one is struck by the absence of text-books and teaching aids. While scientific studies have been undertaken of the African languages likely to be involved, it has to be admitted that in the field of educational application almost everything remains to be done.

The situation prevailing in the educational system of various African States is characterized by very great differences. In certain countries one or more indigenous languages have been used for a long time in teaching programmes but without having solved the problems related to teacher training and adapted materials production. Other countries have introduced national languages in primary education in the hope that the internal dynamism of the operation will make up for insufficient previous research, for the absence of teaching materials, for the lack of qualified trainers. Some countries have undertaken applied research in favour of their national languages and are providing their teachers with acceptable teaching materials before starting the actual teaching in class.

The absence of adapted text-books and the insufficiency of teacher training constitute major obstacles to the concrete phase of language renovation. Text book preparation is no easy task. The thesis of the investigator is based on purely scientific criteria whereas a textbook would be totally useless if elaborated only according to such criteria. Educational effectiveness is conditioned by many factors. Some of them are related to linguistic analysis but many others concern psycho-pedagogy, sociology, history, psychology, etc. A number of choices have to be made concerning nomenclature and progression in particular. These choices often have to constitute compromises that take the various factors into consideration. This necessity of determining the right proportions makes the elaboration of textbooks a very difficult and very delicate task.

The participation of training institutions is absolutely necessary in research and preparation of the educational documentation needed for the new language of instruction. This participation adds to language renovation the essential dimension that education constitutes, and guarantees that all relevant factors are taken into consideration. If the co-operation of future teachers was not solicited, and the work had to be done exclusively by specialists, both the development of the children and of the country's culture and economy would be jeopardized. Who dare assume such a responsibility?