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Final Report and Recommendations from THE EVALUATION OF TEACHING MATERIALS FOR LOWER PRIMARY EDUCATION IN MOZAMBIQUE

II. LANGUAGE ISSUES

Kenneth Hyltenstam & Christopher Stroud

SEC/ILU, Uppsala University
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Final Report and Recommendations
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THE EVALUATION OF TEACHING MATERIALS
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II. LANGUAGE ISSUES

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PREFACE

This report is a presentation and summary of investigations on linguistic issues carried out within the project *Evaluation of Teaching Materials for Lower Primary Education.* The project was initiated by the Mozambican Ministry of Education and financed by the Swedish International Development Authority (SIDA). The main responsibility for the project lay with the National Institute for Education Development (INDE), Mozambique, and the Department for Educational Research, Stockholm Institute of Education. (For a comprehensive overview of the full project, see Palme, 1992.) The studies on language questions were conducted over a two year period (1990-1991) and took the form of a collaboration between personnel from INDE in Maputo, Mozambique, and the Centre for Research on Bilingualism at Stockholm University, Sweden. In the first year of the evaluation, the group from INDE comprised Frouke Draisma, Maria Rita Gomes Ribeiro, Ângelo Jorge, and Maria Helena Timbana. The linguistic consultant from Stockholm University was Kenneth Hyltenstam. Teresa Järdemar, a native teacher of Portuguese in Gothenburg, Sweden, was also affiliated during this year. In the second year, Mateus Luís, INDE, functioned as coordinator for the Mozambican group, which, in addition to him, also comprised António Tuzine, Lourenço Lindonde, Marta Bazima and Plínio Menete. Kenneth Hyltenstam and Christopher Stroud from the Centre for Research on Bilingualism functioned as senior consultant researchers.

The way in which we have gone about our brief of analyzing materials has been largely dictated by the assumptions we hold about language. As linguists with a professional and lay bias towards language as a unique instrument for human development, we are committed to the idea that multilingual societies have a true potential of accommodating various ways of "being in the world". Our experience of working in Mozambique has strengthened us in our opionion. With its rich linguistic ecology, Mozambique contains within its borders ideal conditions for the cultivation of a "diversity in unity" - of encouraging among its people different ways of making sense of the world. To nurture such a linguistic resource, in order that all may profit from equal development of thought and expression, must surely be one of the major priorities of a nation's language planning policies.

Regrettably, few developing countries to date have been in a position to seriously address the challanges posed by such a task. The reasons for this are, of course, both numerous and diverse, ranging from particular historical conditions to the specifics of the country's contemporary political and economic situation. Mozambique is no exception.

We present this text as a contribution to a Mozambican language policy for education, and hope that it will be accepted as such. We believe that this report shows that the present teaching materials are scantily adapted to the multilingual reality in which the children are born and socialized - although *per se* they represent a major and admirable achievement considering the limited time and difficult conditions generally in which they were produced. Our orientation has been precisely to point to what a language policy for education needs to recognize in order to design materials and teaching practices that can best serve the needs of a multilingual population.

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1. INTRODUCTION

The task that we were confronted with at the outset of this investigation was to provide a linguistic assessment of the teaching materials and curricula employed in the Mozambican school system. The easiest way of fulfilling this brief would have been to do a paper and pen analysis of the materials, comparing their structure and content against standards set up for such assessments in educational linguistics and to formulate a set of recommendations based on this. However, we believe that analyses of this type generate results of limited value. In our opinion evaluations must be explicitly related to a detailed description of the school context in which the materials are to be used and interpreted in relation to an understanding of the out-of-school realities that frame educational activities. We have therefore chosen to take a wide perspective on the Mozambican educational situation in order to be able to understand what qualities the materials have and to suggest future improvements.

One set of contextual factors that we have considered relate to the individual pupil's language situation. Mozambique is a multilingual country and the majority of the school children are not proficient speakers - if speakers at all - of the language of instruction, when they start school. In concrete terms, this meant that we required empirical data on the proficiency levels in Portuguese generally attained among Mozambican schoolchildren, their levels of reading and writing proficiency, and how classroom practices were structured. Other contextual factors that we have considered concern the nature of the wider linguistic environment at the societal level. With this information as a background, we analyzed the materials in terms of how they articulated with the contextual factors.

Aim

The overarching aim of the current investigation was therefore to provide an interpretation of *to what extent* and *in what ways* school materials, curriculum design and teaching methodologies incorporate and adapt to the Mozambican multilingual reality. More specifically, we wanted to focus on whether the subject materials were written with an awareness in mind that they were to be used by non-native speakers (and how this awareness was manifested); whether the Portuguese materials were constructed on principles that accord with what is known about second language acquisition; and whether teachers in their classroom methodologies incorporated "bilingual" teaching strategies and culturally adapted didactic techniques.

The structure of the present report

Following these introductory remarks, this concluding summary report continues with a brief statement on the role of the vernacular in initial schooling and a review of some general principles of bilingual education (section 2). In section 3 we present a synopsis of language policies and education in Sub-Saharan Africa focusing on two case studies, Nigeria and Zaire. This section allows the contours of the Mozambican situation to appear in a sharper light. In the next section, section 4, the linguistic situation of Mozambique is detailed, and the educational structures in the country are discussed against the background of this information.

The remainder of the report comprises two main sections. In the first of these (section 5), the individual linguistic investigations are reviewed in some detail and the main

findings of each highlighted. The results have previously been presented at a conference in Maputo in April 1992, and in written reports on specific aspects of the evaluation. These reports are referred to bibliographically here in footnotes. In the second of these sections (section 6), we present some important theoretical considerations, which together with the empirical results summarized in section 5, constitute the basis for our recommendations (section 7).

2. THE ROLE OF THE VERNACULAR IN INITIAL SCHOOLING AND THE ISSUE OF BILINGUAL EDUCATION

Our basic orientation to education in multilingual societies is that the use of vernaculars as instructional media, at least at initial stages, is a more viable alternative than an immediate education through the medium of an official language, known by only a small fraction of the children at school entrance. This is the self evident assumption behind the influential UNESCO recommendation from 1953, that every child should receive initial education in his/her mother tongue (Unesco, 1953:68ff). The recommendation is based on both a common sense understanding of how communication works, how information is exchanged via language, and on a theoretical understanding of the relationship between language acquisition, language proficiency and learning. The common sense understanding is well expressed in the following passage: "It is beyond dispute that the educational process in any society ought to be conducted through a language that both the learner and the teacher command well. This is a minimum requirement for any communication to take place in the teaching/learning situation" (Rugemalira, Rubagumya, Kapinga, Lwaitama & Tetlow, 1990:28).

At the individual level, the failure to understand the language of instruction has devastating effects on the child's progress at school. This is not only because the information contained in the teaching materials or in the teachers' instructions is not getting across to the child, which is of course most serious in itself. In addition, it is because language is used not only as a tool for the transfer of information, but also as a medium for self-expression and as a tool for cognitive operations. Therefore, the child's relations with his/her teacher and in some cases with his/her fellow students will be impoverished, and s/he will risk being at a potential intellectual disadvantage (cf. Trappes-Lomax, 1990:97).

The negative societal consequences of the fact that children do not understand the medium of instruction are formulated by Trappes-Lomax in the following points:

- the objectives of education will not be acheived
- those who, through home environment etc, may have privileged access to the foreign language will be at an unfair advantage in relation to the majority[1]
- the cost of failure will be felt in every domain, economic, social and political, as well as in the waste of time and money (ibid.)

Alternatively, seen from the opposite perspective, the positive outcomes of vernacular education for both individuals and society are formulated by Akinnaso (1991:42) in the following manner; "possible long-term effects on the development of local languages, reduction of illiteracy, better use of educational opportunities and better access to life chances". This formulation sums up positive outcomes for both the society and the individual as well as for the vernacular languages themselves, and thus ultimately also for cultural preservation.

It is obviously the case that the costs for changing to mother tongue programmes are considerable, particularly for countries where all resources are extremely scarce. Two

[1] It should be added, maybe, that the injustice mentioned in this point should not be solved by forcing children who are speakers of a dominating language to be educated in a dominated language; rather, all children should have the right, as stated in the UNESCO declaration, to be educated, initially at least, in their mother tongue, or, more generally, in a language they understand and can express themselves in. From a cultural perspective, however, it might be profitable for monolingual children who are speakers of the dominating language only to learn one or more of the indigenous languages of their area (cf. the Nigerian policy).

issues are of specific importance in this context, namely the relationship between economic development of a country and its choice of language and education on the one hand, and the actual costs for administering education in a variety of languages on the other. It is certainly true that any country, as mentioned above, needs qualified competence in metropolitan languages, i.e. languages of wider communication. This is necessary to avoid economic isolation and to handle international afairs generally. It is also true that the immediate costs of providing education through the means of a variety of languages are higher than those for giving education in one language only (at least the short term costs). With regard to the first issue one might remark that there is no logical correspondence between a high and broad proficiency level in a language of wider communication and the exclusive use of this language as a means of instruction. It is quite probable that higher and more widely spread levels of proficiency in the metropolitan language could be gained through vernacular education. To the second issue one might say that even if the *immediate* costs for a single language policy are comparatively lower, it is necessary to quantify the "real" or total costs for education through a metropolitan language in terms of "such factors as poor performance, drop-out rate, ... and the use of materials ill adapted to the local situation" (Bamgbose, 1991:74f) and compare that to the costs for vernacular education. Bamgbose further states that

> the economic argument when used against mother tongue education tends to ignore the important role of education in development which should be concerned with the liberation of the human potential for the welfare of the community. As some commentators have observed, existing school systems in Third World countries have served only to train elites to tun a bureaucracy and the modern sector of the economy while neglecting the training of human resources capable of stimulating production in areas essential to the welfare of the majority of the population [Raymaekers & Bacqueline, 1985: 455]. For this situation to change, grass-roots education will be needed, and the use of several vernacular languages in such education would seem to be inevitable. (ibid.:75)

Thus, compared to the enormous long term waste that is an effect of not providing the children with instruction in a language they understand, the costs for mother tongue instruction may be saved in the long run.

However, it is clear that in order to implement mother tongue programmes it is necessary to see these programmes as part of the society's language policy. The question of which language or languages to select for education in a country cannot be detached from the general language planning policy of that country, since the school is - or can be considered to be - one of the most forceful instruments for carrying through such policies.

Language planning and policy inevitably touches upon sensitive social issues. It is also a highly ideological activity; the determination of different societal functions for languages, and the decision as to what languages should be used in education influence the amount of economic expenditure on languages, contributes to their development and increases or decreases their economic and symbolic value. The attitudes towards different languages that individuals hold are in actual fact expressions of how individuals conceive of the social value of these languages. Furthermore, choosing languages for official, cultural and educational purposes determines the direction and extent of their speakers' social development. A situation where only a small elite can avail themselves of an education system because the language of instruction is initially unknown by the majority of the population is, explicitly or not, a social policy. In the final instance, a social policy

for development and welfare and a country's educational policy intersect and are worked out in the language policy of a country.

3. LANGUAGE POLICY AND EDUCATION IN SUB-SAHARAN AFRICA

Being linguistically and culturally extremely diversified - with approximately a thousand languages being spoken on the continent (Thomason, 1988) - Africa is "naturally" multilingual. Therefore questions of language are obvious concerns for the majority of African countries, Mozambique included. But the current linguistic situation has also been engineered in other, less natural ways, in that the colonial past of almost the entire continent has had an enormous impact on at least two fronts. Firstly, the former colonies, and consequently the present independent states, have been created with little attention being paid to ethnolinguistic realities. As a result of this, many of the countries include a large variety of ethnic groups, and many ethnic groups have been divided by political frontiers. Secondly, the languages of the European colonizers, traders and missionaries, notably English, French and Portuguese, became solidly grounded in African administration and official life. This has given these languages their very salient position in the linguistic landscape of the majority of the present states.

Even today post-colonial language policies in most countries echo their past (see below for a more exact analysis of Mozambique). It is generally acknowledged that present-day policies for language in education reflect the differences that once existed in different colonial powers. This is often referred to in terms of an inheritance situation: "African countries remain prisoners of the past" (Bamgbose, 1991:71). Table 3.1 shows clearly that the current use of African languages at the initial primary grade level is highly correlated with the former colonial status of the countries. The assimilationist ideology of France and Portugal is currently reflected in that it is only a very small minority of the former French and in no former Portuguese ex-colonies that African languages are used in instruction, i.e. the children get instruction in an unfamiliar language from the first day in school, while the contrary holds true for the former Belgian and British colonies. In the majority of these countries, African languages are used in primary education.

Table 3.1: Language of instruction in the first year of primary school, by former colonial status (number of countries).

Former colonial status	*Metropolitan language only*	*One or more African languages*
Belgian	1	2
British	2	13
French	11	4
Portuguese	3	0

Source: World Bank (1988:44)

Among the countries that have opted for more "complex" solutions to the multilingual situation, Nigeria and Zaire can be put forth as two interesting examples. In Nigeria, various languages are given some sort of formal public role. They thus have their specific position in a status hierarchy among languages. The status of each language is dependent on the fact that the formal role of any language is a response to specific ideological trends that exist side by side, even if these are sometimes, at least superficially, in contradiction with each other (Afolayan, 1988; Akinnaso, 1989; 1991). The Nigerian example is referred to here specifically in order to illustrate this interrelationship between ideologies and

language policies for education. Zaire is a good example of those countries where vernacular languages have played a role in education for a long time, but where the experiences of this solution have not been as favourable as expected (Ndoma, 1984; Mukeba, 1988). This example illustrates that it is not enough just to provide education through the mother tongue, and makes it obvious that the implementation of a mother tongue policy needs serious support and back-up from the authorities.

3.1. Nigeria

The multilingual situation of Nigeria is extremely complex. The number of vernacular languages spoken in the country is estimated at 400 (Akinnaso, 1989). The majority of these, or 70%, belong to the Niger-Kordofanian phylum of languages, while the remaining 30%, except three languages, derive from the Afro-Asiatic phylum. In addition to these, the exogenous languages, English, French and Arabic have a role to play in their respective formal domains. Pidgin English, which Akinnaso calls a neutral language in this origin based typology, is used as a lingua franca in informal settings. The population of Nigeria is now approaching 100 million (Bamgbose, 1991:2).

Seen from the perspective of status, English has the "highest" rank as the official language of the country. The large indigenous languages Hausa, Igbo and Yoruba have the status of national languages. These languages together have approximately 60 million speakers; they are spoken by 53% of the population. The national languages are used in addition to English in the National House of Assembly, but they also have other official functions, especially in education, as we will see below. There is a large literature in some languages, for example in Yoruba. At the local level, each "state" can select one or more of these national languages for administrative purposes. At the next step down in the hierarchy, we find the regional languages. These in fact include the three national languages, which thus have a double classification, and nine other languages. The nine additional languages with regional status are spoken by approximately 27% of the population. They are used as regional lingua francas, and have a role to play in the media and in education. At the lowest level in the hierarchy the remaining 380 local minority languages are found. These are spoken as mother tongues by the rest of the population, i.e. by approximately 20%.

The national languages, especially Hausa which has long traditions as a trade language, play a role as the lingua franca in their respective parts of the country. In the south, one of the regional languages, Efik, has the function of a lingua franca, essentially in two of the states.

The so-called neutral language Pidgin English is competing with both the national languages and with English as the most widely spread lingua franca. Arabic, which has traditions as a trade language, is currently restricted to its Islamic religious use, including Koranic education. French is limited to diplomatic functions and is used particularly for border communication with Francophone neighbours. Both Arabic and French can be said to be languages for special purposes.

Language in Nigerian education

What is most interesting in our context is how the different degrees of official status of a large number of languages is reflected in the educational system. The general policy is that the whole population should be bi- or multilingual. Thus, both indigenous and exogenous languages play important roles in education. In addition to his/her mother tongue, each child is required to learn English, and if s/he continues school up to secondary level, also one of the three national languages. This means that the school aims at facilitating proficiency in at least two, but sometimes three or even more languages.

The National Policy of Education documents, which were published in 1977, prescribe that the medium of instruction at the pre-primary level be the mother tongue or the language of the immediate community. This is also the strategy for early primary education. After the first years of primary education, a shift to English as the medium of education is the norm where English is subsequently used as the medium of instruction at all higher levels. Throughout primary education, two languages are taught, English and the mother tongue (or the language of the immediate community). At the junior secondary level, two Nigerian languages are taught in addition to English, and at senior secondary level, one Nigerian language. Arabic and French can also be studied in the secondary school.

This extensive use of Nigerian languages in education and in other official areas has certainly had an enormous impact on the standardization and elaboration of these languages. Education, in this respect, is an instrument for the maintenance of the indigenous languages, and, as far as language is an inherent feature of culture, also of traditional cultural traits.

As mentioned above, Nigeria is interesting for its language policy generally and for the provisions made for the various languages in the educational system. In Akinnaso's (1991) discussion of the policy, he inteprets it as being derived from different, sometimes conflicting, ideologies. The ideology of *linguistic pluralism* coexists with *linguistic assimilation*, and both *vernacularization* and *internationalization* are embraced in this practice. In other words, Nigeria recognizes the use of many of the country's languages, both in formal and informal contexts and can thus be said to favor linguistic pluralism. On the other hand, every member of the Nigerian society, irrespective of language background, is also required to learn and function well in the dominating language of the country, English. This is a typical feature of linguistic assimilation. The elaboration of Nigerian languages that is necessary for their specified official use is typical of the ideology of vernacularization, which indeed implies the elevation of one or more indigenous vernaculars to a status where it is - or can be - used for political, educational, commercial and scientific purposes. Internationalism in the area of language policy or language planning entails the adoption of an exogenous "world" language as an official language with functions in all spheres of official life. Nigeria's selection of English as its official language is then seen as a result of the ideology of internationalism.

A reflection may be relevant on Akinnaso's point that the ideologies are in conflict with each other. Certainly these ideologies are in conflict with each other as formulated in Akinnaso's presentation and they do have opposing consequences in countries that have found it necessary to opt for one ideological pole in each pair. Mozambique is a case in point. The language policy that has been adopted for the country since independence is derived from the ideologies of assimilation (in the name of national unity) and internationalism (the selection of an exogenous language). But as the Nigerian example indeed shows, opposing ideologies can coexist in practice without any paradox. Everyone would probably agree that any modern complex society needs its links to history and

tradition so that its present development can occur without dramatic interruptions of its cultural conditions. Therefore if a society is inherently multilingual and multicultural, linguistic pluralism is a prerequisite for a harmonious development. Vernacularization is also a necessary ideology for these same reasons, given that the indigenous languages of a society have not traditionally been used for administrative and other official functions. Similarly, everyone who is in favour of the permanence of a certain politico-administrative unit would probably agree that a common means of communication is necessary at some level within that unit. This leads to the view that all citizens of a country are required to know at least one common language, the dominating language (or in the case of officially bilingual or multilingual societies, two or more languages). Hence assimilation. Also for purposes of international contacts, proficiency in an exogenous language, or a world language, is required by modern populations. This idea is based on internationalism.

The ideologies we are discussing certainly each play a role - although in differential proportions - even in the so called developed countries. Assimilation is a strong force in that all members of a society are expected to know the dominating language. The impact of pluralism varies greatly between countries, and historically there has been large fluctuations within certain countries. At present, pluralism is officially praised in many countries, but the concrete outcomes of such an ideology vary according to the practical recognition in terms of resources that are given other languages than the dominating one(s). As regards the pair vernacularization and internationalism, in most of the developed countries, one vernacular language language or dialect has been elevated to the status of official language, and internationalism is solved through the introduction of a world language, most notably English, as a foreign language subject at school. Nowhere is it seen as a paradox to acheive both a recognition of the indigenous language of a country and an openess for proficiency in an international language.

3.2. Zaire

Zaire is another country of a multitude of languages. Among a population of nearly 30 million, 206 languages are spoken (Bamgbose, 1991:2). A handful of these languages can be seen as predominant. Lingala is the mother tongue of 28% of the population and is spoken as a second language by 41%. The corresponding proportions for Kongo are 12% and 18% respectively, and for Swahili 36% and 13%. Luba is spoken as a mother tongue by 17% of the population (World Bank, 1988). A majority of the languages in Zaire belong to the large Bantu language group.

Language in Zairean education

Being a former Belgian colony, the country has long pre-independence traditions of utilizing vernacular languages in education. However, as early as the 1950s, before independence, a transition to all French education was underway (Ndoma, 1984). This policy became enforced after independence and was in effect until the early seventies. At that time, as a result of discontent with meagre educational outcomes of the approximately 15 years of French-only education, the idea of initial education through vernacular languages was taken up again, and a new verncular language policy was introduced. As will become clear from the following, this was done in a fairly spectacular manner.

The urgency of reintroducing vernacular languages in primary education was pointed out at a congress of Zairean linguists in 1974. As a response to this, the new policy was introduced the following year, in 1975. This involved the use of mother tongues as media of instruction in the lower grades, and a shift to French in the upper grades. At this level, mother tongues were to be maintained as subjects. The policy was carried out immediately in the entire educational system with few exceptions. This had the effect that the policy was qualitatively implemented in quite varying ways, depending on such factors as what vernacular language was concerned, the availability of teachers and teaching materials, and the characteristics of the syllabus.

The high expectations educational planners and policy makers had on this solution were not fulfilled over the following years, however. Among the reasons for the failure of the policy, Ndoma (1984) reports flaws in both the planning process and in the implementation of the policy, the primary argument being that it was introduced too rapidly into the Zairean schools. But Ndoma also discusses other factors in Zairean society that led to the negative outcomes. Specifically, attitudes and beliefs that he perceives to be prevalent among the general Zairean public - and which can be recognized in many other countries - are given an important role. The following points are mentioned:

1. A steady increase of negative attidudes toward the use of local languages in schools, especially among educated parents.
2. People do not accept the teaching of local languages because their own language would not be taught.
3. Only one language must be used in order to shape national unity.
4. Native languages can not be used for communication outside the regional or national borders.

It would appear as though criticism directed towards vernacular education often emanate from an elite that are clear proponents of an all French educational policy. Ndoma refutes their criticism in the following points:

1. Learning in/of the native language does not preclude the learning of foreign languages at school.
2. National unity is not necessarily dependent on linguistic unity.
3. Ethnic conflicts can not be solved through the use of a single official language.
4. The use of only one (exogenous) language can not be the long-term solution. The time devoted to the teaching of this language makes all other subjects in the curriculum suffer from lack of time. The side effects are that this causes decreasing national pride and self-esteem.
5. The use of an exogenous language as initial medium of instruction is the cause of school failure for a substantial number of pupils who do not learn to master this language.

In spite of all the debate on vernacular education and the analyses of why it failed, instead of trying to amend the failures, Zaire has, during the late eighties, moved towards a second phase of all French education (Bamgbose, 1991). The lesson to be learned from the Zairean experiences is that the choice of one model or another is not a simple matter. It is clear that none of the models that have been tried out in Zaire seem to have worked very well. From a theoretical understanding of the matters involved, it is equally clear that the reasons for this are totally different in each case. The all French model does not succeed because large proportions of the children do not understand what is being taught at school.

The vernacular model does not have this problem, but fails instead because of lack of appropriate materials, appropriate teacher training, and maybe most importantly, because of lack of attitudinal support from the general public and from portions of the educational establishment. The reasons behind the failure of the all French model can not be removed. Children can not - overnight, as it were - be made to understand a language they actually do not understand. In fact, this process takes years, as we will see below. The reasons behind the failure of vernacular models, on the other hand, can be remedied. In a later section, we will come back to the conditions that need to be at hand for vernacular education to succeed.

4. LANGUAGE AND EDUCATION IN MOZAMBIQUE

Language situation

Portuguese is the official language of Mozambique, although only a mere 1.2% of the Mozambican population of approximately 15 million people (Martins, 1990:24) has Portuguese as its first language - ranging between slightly over 2% in Maputo city to 0.2% in Cabo Delgado - (Danielsson 1988:17). Thus, the majority of Mozambicans who speak Portuguese at all, slightly less than 25% of the population (ibid.), speak it as a second language.

The vernacular languages spoken in Mozambique all belong to the Bantu language group. The following chart comprises the most important languages, their number of speakers and their geographical extension (source: NELIMO, 1989, citing 1980 census figures).

Language	*Number of speakers*	*Geographical extension*
Kimwani	50.000	Cabo Delgado
Shimakonde	300.000	Cabo Delgado
Ciyao	1.000.000	Niassa, Cabo Delgado
Cinyanja	385.000	Niassa, Zambézia, Tete
Emakhuwa	3.232.000	Nampula,Cabo Delgado, Niassa, Zambézia
Echuwabo	664.000	Zambézia, Sofala (Beira)
Cinyungwe	262.000	Tete, Manica
Cisena	1.086.000	Sofala, Manica, Zambézia, Tete
Cibalke	7.200	Manica
Cishona	760.000	Sofala, Manica, Inhambane
Gitonga	223.000	Inhambane
Cicopi	333.000	Inhambane, Gaza
Xironga	500.000	Maputo
Language	*Number of speakers*	*Geographical extension*
Xitswa	250.000	Inhambane, Maputo
Xichangana	1.150.000	Gaza, Maputo

Other languages spoken are Swahili in the north of Mozambique, and Swazi and Zulu in the south.

The fact that the language of the former colonizer, Portuguese, was chosen as the official language of Mozambique at independence in 1975 may seem surprising to some foreign observers. However, although the independent Mozambican administration recognized the cultural importance of the indigenous languages of the country (Ministério da educação e cultura, 1979), the choice was dictated by practical considerations related to the linguistic diversity of the country. One consideration was the extensive spread of Portuguese prior to independence. Portuguese had traditionally functioned as the language of wider communication within Mozambique, and it was also the language used for external or international communication. Another consideration was the dominating popular attitudes that saw Portuguese as "a language" as opposed to the vernacular languages that were called "dialects", reflecting the fact that literacy, formality etc. were the

sole prerogative of Portuguese[2]. Such attitudes were and are of course based on a perception of the social priviledge attached to knowledge of Portuguese. A third important consideration was the practical availability of Portuguese for literate functions in administration, science and education. Compared to the standardization status of any of the indigenous languages, Portuguese was obviously the only language that could function immediately in all official domains of use. Thus, faced with this complex of historical, social, attitudinal and educational considerations, policy makers seem to have considered the selection of Portuguese as the only possible choice.

Even if the decision to choose Portuguese as the official language in these respects was out of necessity, there were certainly also ideological and purposeful reasons behind the choice. The equity between regions and ethnic groups, and, most importantly, the concern with national unity within the country quite likely precluded the choice of any single vernacular language. In addition, Mozambique, as opposed to some other countries such as Tanzania, does not host any obvious candidate African language with a wide enough demographic or geographical base.

In conclusion, the Mozambican language policy can be characterized as simple and traditional. The solution is *simple* in that just two levels are represented in the status hierarchy that exists among the languages of the country: Portuguese has the prestige of having been selected for *all* official functions, including education, while the indigeneous languages have the status of local "minority" languages, i.e. they do not play any formal role at all. The solution is *traditional* in that the choice of the former colonizer's language is shared by the majority of the Sub-Saharan countries. In 32 of the 45 Sub-Saharan countries, enumerated in Bamgbose (1991:30), a European language is the only official language. Nine countries use a European language in addition to an African language as official languages, and only four countries have chosen African languages solely, namely Ethiopia, Mauritania, Somalia and Sudan. (Tanzania, where Swahili is the official language even though English plays a dominating role in secondary and tertiary education and in other official spheres should be included among these latter countries.) About half, or a mere 20, of the 39 countries mentioned in a World Bank report on education in Sub-Saharan Africa (1988) used African languages as media of instruction in formal education. In most cases, this use of African languages is restricted to the lower primary education level: Only six countries use African languages as media of instruction at upper primary level and three countries, Somalia, Sudan, and, to some extent, Tanzania, use them at the secondary level.

At the present time, Mozambique is in the process of implementing bilingual Portuguese-Vernacular language programmes under the auspices of the World Bank. Materials and methods are currently under development in two indigenous languages - Cinyanja and Xitsonga (covering Xironga, Xitswa and Xishangana) - and a one year course to train teachers in bilingual methodogies was planned to commence during 1992. The design of the programme is transitional, in that Portuguese will replace the vernacular as the sole language of instruction from grade 3 onwards. Prior to this, Portuguese will be taught as a subject from grade 1. By 1993, the first vernacular programme will be launched, and its progress monitored in a five-year evaluation project.

[2] Except for bible translations and some religious texts in certain languages.

Structure of education.

Portuguese is thus the language of Mozambican schooling. The fact that the medium of instruction is *not* the mother-tongue of the vast majority of pupils is indeed one of the most salient features of the Mozambican school context, a situation, as we have seen, that Mozambique shares with many developing countries. Educational policy in Mozambique requires that all children learn Portuguese - if not before, then at least by the time they start school - to a level that allows them to benefit from education through this language. This situation certainly has a decisive impact on the appropriateness of specific materials, and it is precisely the aim of this report to explore the implications of such an educational reality in Mozambique.

Since 1983, Mozambique has had a 7 year compulsory primary school system that the child has been able to attend free of charge. There is a lower primary level (grades 1-5) and a higher primary level (grades 6-7). The educational system continues with a lower secondary (3 years) and a higher secondary (2 years) level. These 12 years of education comprise the basis for university studies.

Although in principle the primary school system is compulsory, the devastating economical and political situation - largely the consequence of seventeen years of civil war - has not permitted the full provision of schooling for all school-age children. In fact, after a steep increase in gross enrolment rates[3] to almost 100% during the early years of independence, one may note a successive decline in gross enrolment to 57.4% in 1989 (Martins, 1990:50). The wastage is also extremely high. At each grade level only approximatly 50% of the children are promoted to the next grade. One fourth drop out each year, and another fourth repeat the same grade level (ibid.:95). To illustrate with numbers, in the cohort of 1000 pupils starting school in 1976/1977 only 102 survived fifth grade (ibid.:55). The school system is therefore also greatly asymmetric as concerns the enrolment at its different levels. Of all pupils, 97.3% are enrolled at the primary level. 2,6% at the secondary level, and 0.1% at the university level. As is clear from the figures of survival at the primary school level, very few children attend school beyond grade 5 (ibid.:29).

As we will discuss in depth later on, it is our view that the exclusive use of a second language as the medium of instruction is one of the most important factors in the complex of reasons behind the high wastage rates at the primary school level.

[3] Calculated by dividing the actual enrolment at school level 1 by the population figure for the corresponding age group and then multiplying by 100.

5. EMPIRICAL BACKGROUND FOR RECOMMENDATIONS; SUMMARY OF STUDIES

Above we have provided a general framing background on the role of the school in multilingual societies. Through specific examples from Sub-Saharan Africa we have illustrated the problems educational systems encounter in adapting structurally to a multilingual society. We have also touched upon the role of a society's language policies in the implementation of multilingual schooling. Given this framework, we have chosen to approach the task of evaluation from four perspectives.

1. The children's proficiency in the language of instruction
2. The children's proficiency in reading and writing
3. Analysis of materials
4. The role of the classroom

Only the first three of these perspectives have been empirically addressed in the linguistic part of the evaluation project. Although the role of the classroom has not been specifically treated from a linguistic point of view, the issue has been addressed through empirical research whithin the project (see Palme & Xerinda, 1993, for the full presentation of this study, and Palme, 1992, for an extensive summary). We will provide only a brief review of the results of this study in the current report.

What then do the four perspectives entail? The first and second perspectives comprise on the one hand the children's level of proficiency in the language of instruction, Portuguese, and on the other hand their abilities in reading and writing, i.e. their literacy skills. These are important contexts for the materials in the sense that all materials presuppose, albeit usually implicitly, certain proficiency levels among the pupils who are going to use them. It is a truism that what has been presented by the teacher and covered in the materials may quite often be very different from what the child has learnt or acquired. Therefore, in order to be able to assess whether the materials are appropriate, it is necessary to know what the pupils in actual fact *have* learnt, rather than what they *are assumed* to have learnt.

The third perspective is on the analyses of the materials themselves. Such an analysis comprises two facets. The first of these is how content materials (natural sciences, geography, history, Portuguese) are structured linguistically and the demands that this puts on the children's language proficiency. The second facet is how the Portuguese materials conceive of their role in guiding the second language learner through stages of language acquisition to a mastery of Portuguese sufficient for academic use.

The fourth and final perspective comprises a focus on the role of the classroom. Materials used in a school context are always only one of the classroom components that support learning. Teaching materials interact among other things with the teaching practices employed in the specific school context. In the language classroom especially, the types of verbal interaction that take place can also be more or less supportive of the child's language acquisition. To put it bluntly, materials can have very many good qualities without contributing to the children's progress in language (or their learning of content), if they are used in a communicatively unsupportive classroom, and *vice versa.*

Methodological considerations

The methodologies and instruments used, and the considerations behind the choice of each of them, will be presented below in more detail when the individual studies are reviewed. There are, however, methodological considerations that cut across and were common to all empirical studies that were conducted, and that are therefore appropriate to be dealt with at this juncture.

One such consideration is the question of representativity. Because of time limits and funding constraints, the present investigations could never hope to obtain statistically representative accounts of such issues as second language proficiency or proficiency in reading and writing for the entire school population. On the other hand, neither do we believe that the goal of strict statistical representativity is feasible or attainable when working with linguistic data. Rather, our investigations have involved small scale studies of individual schools and groups of children, the sampling of which was theoretically motivated according to the principles presented below. (For a general discussion about the rationale behind this kind of methodology, see e.g. Milroy, 1987).

One principled theoretical decision made at the outset was that a major dimension of interest would be the distinction between speakers of Portuguese as a first and a second language respectively. Therefore, both these categories of informants were included in the sampling, and the *linguistic dimensions* chosen for analysis were picked on the assumption that they would distinguish between these two categories of speakers. The *societal dimensions* covered relate to the urban-rural distinction in that rural schools in the provinces of Nampula and Inhambane and urban schools in Maputo were chosen. Furthermore, the schools chosen in the area of greater Maputo were selected so as to represent urban, suburban and semirural districts.

As we did, however, aim at representativeness for each school district that we worked with, it was important that the detailed sampling of children included in the various studies was random. Therefore, the children were drawn mechanically from the class lists where their names appeared in alphabetic order.

These considerations about sampling are relevant particularly for the studies where the children's proficiency in Portuguese and in reading and writing has been studied. As mentioned above, other considerations that are relevant only for particular studies, will be commented on in conjunction with the summaries of the studies.

Limitations

It should be apparent from the above that there are some obvious limitations in the studies. In addition to the narrow geographical coverage, there is the fact that linguistic and social factors tend to be interrelated. In reality, the linguistic and societal dimensions covered, as well as the dimension of socio-economic background of the children, go hand in hand: Children tend to be distributed along a continuum where they are first language speakers of Portuguese, urban dwellers, and from higher socio-economic layers at the one pole and second language speakers of Portuguese, rural and low socio-economic background children at the other. Therefore, the sampling metodology was restricted and these factors must be taken into account when judging the results and their interpretations.

However, these limitations were not the only ones. Additional restrictions on the actual choice of research instruments consisted of practical framing constraints which have in large measure dictated what methods were judged feasable and workable. For example, project supervision and the mutual sharing of expertise were made difficult by the fact that

Mozambican and Swedish personnel only periodically could work at the same location simultanuously. Another problem was the unavailability of sufficient Mozambican personnel trained for the kinds of tasks that were required within the project, for example field methodology with tape recording of speech samples, transcribing techniques, and linguistic analyses. In the majority of cases the solution we chose was to design less ambitious studies and to give the personnel a step by step training on each phase required by the studies while in service. Other problems concerned practical details such as arranging transport outside the urban areas and for traveling between schools in the data collection phases, the lack of resources for servicing equipment and the non-existent library and reference facilities. These very contingent hurdles - and many others - in carrying out the investigations have also resulted in a less than satisfactory data set. Despite these limitations, we believe that the analyses and results are sufficiently well grounded to warrant reporting.

In the remainder of this chapter, we give a summary of each of the investigations carried out within the project.

5.1. Mozambican children's second language proficiency

The studies of the children's proficiency in Portuguese are presented in two reports, one concerning grade levels 2 and 3[4] and the other grade levels 4 through 6[5].

Schools and informants

The study was carried out in primary schools in greater Maputo and, for grades 4-6, also in one school in Vilanculos, Inhambane province. Maputo was represented by three school districts, Albasine/9 de Agosto/Laulane (semi-rural; hereafter called Albasine for short), Bagamoyo (suburban) and Maxaquene (urban). In the latter school, the majority of the children have Portuguese as their first language, while for the children in the other schools Portuguese is a second language with a few exceptions in the case of Bagamoyo. The Vilanculos children are all second language speakers of Portuguese.

In grades 2 and 3, 14 children from each class in each school were studied, in total 84 children. In grades 4-6, 10 children from each class and school were selected, in the case of Maxaquene though, only from grade 4. For various reasons detailed in Luís (1992:8), out of the 70 subjects initially selected, only 62 remained in the final analysis. As mentioned above, in order to assure randomness in the choice of subjects for the investigation, the children were drawn mechanically from the class lists.

[4] See K. Hyltenstam: *The language issue in Mozambican schools. Some data on language proficiency and writing proficiency in grades 2 and 3*. Projecto de avaliação pedagógica do livro escolar. INDE, Maputo: 1992.

[5] See M. Luís: *O português e a criança bilíngue no ensino primário em Moçambique*. Projecto de avaliação pedagógica do livro escolar. INDE, Maputo: 1992.

Task type

Samples of Portuguese speech were elicited using a global measure of proficiency, namely a retelling task. Retelling involves language processing at all levels (phonology, morphology, syntax, semantics, discourse and lexicon) and both receptive and productive oral skills are exercised. The task also comprises a memory component. Being multifaceted in this way, the kind of language processing involved is parallel to that required in normal conversational language use. For this reason, and also because the results from retelling tasks and other proficiency measures are highly correlated statistically, retelling is considered to give a reliable measure of global language proficiency (Oller, 1979).

The degree of proficiency reached by a learner is reflected in various ways in how s/he accomplishes the task. As the bases for analysis we chose three indices that can be taken to reflect proficiency. The first indice was the *amount of prompting* that was needed in order for the learner to complete the task. At a low proficiency level, substantial prompting may be needed, while little or no prompting should be necessary at more advanced proficiency levels. The second indice was the *amount of content* from the input story each learner retold. At a low level of proficiency, only fractions of the input text can be reproduced, often with omissions of important parts such as the main point or conclusion of the text, or it's main line of reasoning. The third measure chosen was simply the *number of formal* (especially second language) *errors* that were made.

Data

The material retold consisted either of a short fable or a Mozambican story. In 2nd and 3rd grade, two different fables were used, *O sapo e o boi* ('The frog and the oxe'), which in its written form was 76 words long, and *O sol e o vento* ('The sun and the wind'), comprising 142 words. These stories were thought to be unknown to the children and exciting and motivating. They have a structure and a gallery of actors that resembles what can be found in stories that are traditionally recounted in Mozambican cultures. In grades 4-6, a traditional Mozambican story of 216 words was used, *O caçador e os cães* ('The hunter and his dogs'). Although the use of different materials for the different grade levels implies that it is more difficult to make a direct comparison of the results, we chose this procedure so that the texts selected would be appropriate for the linguistic level and interest of each age group. Furthermore, the focus of this study was weighted towards comparing different schools and their pupils at each grade level and not so much on a comparison across grades.

Procedure

The procedure used was the following: Each child was taken out of the classroom and the elicitation was carried out individually. After a brief introductory conversation with the double purpose of making the child feel more relaxed and to extract information about background factors, the child was given instructions on the task. Then the story was told or read to the child and the child was encouraged to retell it. If no retelling was forthcoming, the investigator tried to prompt the retelling with a few questions on the fable. If the child still did not tell the story, the investigator told it a second time, after which the child was again encouraged to retell the story. The whole session was taped.

Analysis

The child's production was transcribed in normal orthography, while retaining the exact morpho-phonological form in cases of deviations. All the data were analyzed along the four parameters mentioned below. However, the amount of content retold (parameter 3) was treated differently in the data from grades 2 and 3 on the one hand and from grades 4-6 on the other, as will be seen from the following description of the parameters.[6]

1. Number of words produced.
2. The point in the procedure at which the child's retelling was forthcoming, i.e.whether after having heard the story only once (1st step), after having heard the story once and received prompting questions (2nd step), or after having heard the story once, received questions and then heard it a second time (3rd step)
3. The amount of the input story retold. In the data from grades 2 and 3 this was analyzed in terms of the three main parts of the story, its introduction, plot/complication and resolusion. (These analytical categories are admittedly gross, but the analysis nonetheless gives a rough picture of the children's abilities.) In the data from grades 4-6 an alternative, propositionally based, content analysis was used, where the logical ordering of propositions was studied and the number of propositions contained in the retellings tallied.
4. Number of grammatical errors produced. (As far as possible, we attempted to exclude errors that could be traced to a Mozambican socio-regional variety of Portuguese which was used as the norm in the identification of these errors.)

Parameters 1 and 4 were used to calculate the proportion of errors for each child.

Results

The results will first be presented for grades 2 and 3, and then for grades 4-6, since the two sets of results are taken from different studies.

Grades 2 and 3

The results on the second parameter above, i.e. the degree of prompting that was needed for the completion of the task, are displayed in table 5.1.1.

[6] The more detailed type of analysis carried out in the latter case was actually planned for all the data, but could not be completed in the data from 2nd and 3rd grade due to the lack of linguistic training among the analysts.

Table 5.1.1: Number of pupils retelling the story with various amounts of prompting

Steps	*1*	*2*	*3*	-
grade 2				
Albasine	8	0	5	1
Bagamoyo	3	3	6	2
Maxaquene	13	1	0	0
sum	24	4	11	3
grade 3				
Albasine	9	3	2	0
Bagamoyo	6	3	4	1
Maxaquene	12	1	1	0
sum	27	7	7	1

As can be seen from this table, the children of Maxaquene need less prompting to accomplish the task than the children from the other schools. In these latter schools, we actually find a small number of children who do not produce anything at all. The great majority of the Maxaquene children comply with the task after having heard the story once only. This is also the case for more than half of the Albasine children, but only for a minority of the Bagamoyo children. As expected, the children in grade 3 retell the story with less prompting than do those of grade 2.

Table 5.1.2 gives a picture of how much of the content of the input story was carried over to the retold version.

Table 5.1.2: Number of pupils retelling various portions of the input story

	all	*2 parts*	*1 part*	*none*
Grade 2				
Albasine	8	2	1	3
Bagamoyo	4	5	2	3
Maxaquene	9	2	1	2
sum	21	9	4	8
grade 3				
Albasine	7	4	2	1
Bagamoyo	7	3	3	1
Maxaquene	12	1	0	1
sum	26	8	5	3

As this table shows, in grade 2 the difference between the Maxaquene children and the others is not so evident. Indeed, the result of the Albasine children and the Maxaquene children are more or less identical, while the Bagamoyo children are less successful in reproducing the stories. In grade 3 however, the advantage held by the Maxaquene children again surfaces clearly. Further, grade 3 children reproduce more of the content of the input story than do grade 2 children.

Table 5.1.3 displays the degree of correctness of the language reproduced by the children in the three schools.

Table 5.1.3: Number of pupils with various proportions of errors

%	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*/23*
grade 2																
Albasine	2		1	1	2	2	3		1					1	1	
Bagamoyo	3			2	2		2					1	1		1	1
Maxaquene	12		1	1												
grade 3																
Albasine	7		2	1	2		1		1							
Bagamoyo	4		4	1		3	1					1				
Maxaquene	14															

Table 5.1.3 shows that the clearest difference between the Maxaquene children and the children of the other schools is in the area of correctness. The Maxaquene children make practically no errors in their spoken Portuguese, while the children in Albasine and Bagamoyo exhibit various proportions of errors, in one case as much as 23%. This is of course a difference that could be predicted, since Portuguese is the mother tongue of most of the children in Maxaquene and a second language for the vast majority of the others. There is no discernible difference between the schools of Albasine and Bagamoyo in this respect. However, we do find that the children in grades 2 and 3 perform differently. In congruence with the results of the earlier dimensions of analysis, children in grade 3, as expected, exhibit proportions of errors that are smaller than those of children in grade 2.

Grades 4-6

The average number of words produced by the pupils from each grade is displayed in table 5.1.4. A larger number of words can be taken as indicative of better fluency in Portuguese, even if this is not, of course, a pure measure of language proficiency.

Table 5.1.4: Average number of words produced by pupils in grades 4-6

	Vilanculos	*Albasine*	*Maxaquene*
grade 4	94	74	109
grade 5	89	100	
grade 6	108	110	

On the second measure, all the grade 4-6 children except one retold the story without having to be prompted. This indicates that the children in these grades have increased their receptive skills considerably; almost all of them understood the story, at least to some degree. They also embarked upon the task of retelling with a lot less hesitation than many of the younger children.

Table 5.1.5 displays how much of the content that the children´s retellings comprised.

Table 5.1.5: Proportion of propositions retold

	Vilanculos	*Albasine*	*Maxaquene*
grade 4	54%	48%	65%
grade 5	58%	71%	
grade 6	59%	58%	

As these results show, none of the groups managed to retell all the details, an outcome in accordance with what we had expected. It is clear, however, that the grade 4 Maxaquene children carry over more of the content of the input story than the L2 speakers from the other schools. Indeed, generally speaking, even at later grades the L2 speakers do not reach the level of detail in their retellings that the L1 children exhibited as early as in grade 4. Moreover, a result that does not come through in this table is that the first part in two pairs of key propositions was mentioned to a lesser degree among the L2 speakers than among the L1 speakers (48% vs 88% and 41% vs 63% respectively; Luís, 1992:13). This can be taken as indicative of the fact that the L1 speakers were able to organize their retellings in a more efficient way than the L2 speakers. This interpretation is also supported by another result, namely that about 30% of the L2 children retold the various parts of the input story in reverse order, i.e. in a "non-logical" order with respect to time sequencing or cause-effect sequencing (Luís, 1992:10). None of the L1 children did this.

Finally, in table 5.1.6, the number of pupils who display various proportions of errors per words produced is given.

Table 5.1.6: Number of pupils with various proportions of errors

%	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
grade 4											
Vilanculos				1	3	1	2	2		1	
Albasine	2		1		1			1	1	1	1
Maxaquene	1	1	2	1	2			1			
grade 5											
Vilanculos		2	3	1		1			1		
Albasine			1		2	2	2		1		1
grade 6											
Vilanculos		1	1	2	1	1	2	2			
Albasine		1	2	1	2	1	1		1		

As before, the Maxaquene children generally have a result that is indicative of a higher level of proficiency in that they have fewer errors than the children from the other schools. Compared to the results of the lower grades, however, the children in grades 4-6 have increased their level of correctness considerably.

The pattern of the data is such that it can be interpreted as a gradual but very slow improvement of proficiency over the grade levels. Judging from the present results, it seems as if the Maxaquene children reach the level in grade 4 that is reached only at grade 6 in the other schools (but see our initial mitigation on comparing grade levels).

Discussion of the retelling results

Before discussing the results of the retelling task, it is useful to consider a number of problems that are linked to their interpretation. These problems comprise the issues of how results are influenced by the data elicitation procedure and the relationship between the type of task and cultural context.

We do not want to claim that what the children produce in the task is determined solely by their proficiency in Portuguese. For example, some children showed clear signs of shyness and a general reluctance to speak in front of the stranger/investigator, in spite of the fact that efforts were made to create a relaxed environment for the task. Furthermore, for many children the type of task was probably unfamiliar. This, and the artificiality of telling a story back to someone who has just told this story to you, may well account for some of the children's lack of success. On the other hand, it is clear from the results that the majority of the children did actually understand what was required of them and tried to comply with the task to the best of their ability.

Another problem that was not possible to solve within this study due to lack of non-anecdotal documentation was the problem of the appropriateness of the task in the cultural context. Even though stories are told and retold among the population and even though this activity also engages children, the extent to which children are accustomed to take an active role as narrators is nevertheless unclear to us.

With these uncertainties in mind, what do the results tell us? It is obvious that a large portion of the children have difficulties in successfully complying with the task. Children who need massive prompting and who can reproduce only small fractions of the input story or nothing at all, and who furthermore make many formal errors can, on the whole, be regarded as having a low proficiency in Portuguese. On the other hand, those who are able to retell the story after having heard it only once, who are able to reproduce its entire content, and who make few errors can be considered to have a high proficiency in the language.

If we use three of our analytical/descriptive characteristics as criteria to single out low proficiency children, namely 1) retelling only after prompting at step 3 or below, 2) only one fraction or less of the input story retold, and 3) an error proportion of 5% or more, we get the results displayed in table 5.1.7 for L1 and L2 speakers of Portuguese at the different grade levels.

Table 5.1.7: Proportions of pupils with low proficiency in Portuguese

	L2 children	*L1 children*
Prompting		
grade 2	50%	0%
grade 3	25%	7%
grade 4	0%	0%
grade 5	0%	
grade 6	0%	
Content		
grade 2	32%	21%
grade 3	25%	7%
grade 4	0%	0%
grade 5	0%	
grade 6	0%	
Errors		
grade 2	39%	0%
grade 3	25%	0%
grade 4	56%	(13% (N=1))
grade 5	47%	
grade 6	42%	

In summary, what the results in table 5.1.7 seem to show is that there are practically no L1 children within the group we are considering here, i.e. children who have large difficulties in complying with the task. Large portions of the L2 children, however, do belong to this group, especially those in the lowest grade levels. It is interesting to see that after grade 3, the L2 children also succeed well in the pragmatic aspects of Portuguese, i.e. they can use the language more effectively to convey the information required. However, with respect to correctness, a large proportion of the L2 children still have difficulties.

Different interpretations are possible here. One plausible interpretation is that the L2 children we see in grades 4-6 are those children that were also able to pragmatically cope with the situation at lower grade levels. The children who have large difficulties in these respects at grade levels 2 and 3 are probably exactly those children who are not promoted to higher levels; they have probably had great difficulties in understanding most of the content of the instruction because of language difficulties. Because of this we do not find this category of children beyond grade 3. As regards correctness, however, it is quite possible that difficulties in this respect do not hinder comprehension severely, so the children can indeed continue learning in spite of flaws in their own production. On the other hand, the result is also consistent with what is known from second language acquisition generally, that a native-like degree of correctness is not reached among second language learners, not even among children, unless they are involved in massive interaction in the new language with native interlocutors with whom they can identify affectively (cf. Harley, 1986).

5.2. Aspects of reading in Mozambican primary schools

The report, in which the results on reading are presented[7], was concerned with the primary school child's acquisition of literacy skills. Our desire was to attempt to elucidate the nature of the reading problems found among a sample of primary school pupils, and to discuss how the fact of learning to read in a second language affects the acquisition of literacy, specifically the acquisition of reading abilities.

Questions on the consequences of learning literacy in a second language cannot, of course, be divorced from issues and problems associated with teaching techniques, underlying theories held by teachers and curriculum planners on the nature of reading and how reading skills are accomplished, or the demands put on a reader by different types of text. Clearly, the problems encountered and the solutions chosen by the L2 reader will be the result of an interaction between all these variables (and others, such as the pupils personal, psychological learning strategies, for example). There is no simple answer to how a second language context influences reading skills. In other words, and ideally, at least all of these factors need to be considered in order to avoid proposing too simple, and often, unworkable, pedagogical solutions. This study was an exploratory attempt to untangle some of the many factors impinging upon the acquisition of reading in Mozambican schools.

The specific questions in focus in this study were the following:

1. What differences exist in reading ability between L1 and L2 speakers of Portuguese as measured in the quantity and quality of reading errors in oral reading?
2. Are there any differences between poor L1 and L2 readers on the one hand, and good L1 and L2 readers on the other?
3. What interactions can we find between text-types and reading proficiency in the different groups?
4. In what ways can reading instruction variables be assumed to have an impact on reading strategies and reading proficiencies?
5. Is it possible to distinguish between those problems that are primarily L2 problems and problems that have their source in reading techniques, or in the combination of the two?
6. How are comprehension tasks accomplished?
7. Is it possible to distinguish between types of errors that influence comprehension from types of errors that do not?

A set of interesting questions concern whether the nature of the reading problems differ at earlier stages in the child's school career from those found later. For example, is it the case that linguistic problems might account for the overwhelming majority of problems for young children, or do such problems also typify older readers? Among those children who do not drop out in early grades, what accounts for their "survival", i.e. what type of coping strategies do they exhibit?

[7] See M. Luís & C. Stroud: *Aspects of reading in Mozambican primary schools.* Projecto de avaliação pedagógica do livro escolar. INDE, Maputo: 1992

Schools and informants

Pupils from grade levels 3, 4, 5, and 6 from the schools of Maxaquene, Bagamoyo and Albasine/Laulane took part in the study. All in all the number of pupils was 71, evenly distributed between schools and grades. Information on the pupils' age, school situation, language situation and the profession and level of education of the parents was collected by means of a questionnaire given orally to the child before the reading task was administered.

Task type

A reading aloud task combined with comprehension questions posed after the reading was used in this study. The rationale for the choice of a reading aloud task was that we wanted to investigate reading strategies that are reflected in the readers production. The comprehension questions were used to get an idea of the amount of content that was understood by the readers.

Data

In the oral reading task, texts taken from the materials at the relevant grade levels of the pupils were used. All texts were selected from parts of the materials that had not already been treated in class, in order that the texts should not be familiar to the pupils. Each pupil was required to read two texts, one taken from the materials in Portuguese, the other from natural sciences (for grade 3), history (for grade 4) and geography (grades 5 and 6) respectively. Three comprehension questions were constructed for each text.

Procedure

The subjects met individually with the researcher in a separate room or outdoors. In presenting the reading task, the investigator explained to the child that s/he was required to read aloud two unfamilar texts and answer a few questions on their content after each of them. It was made clear to the subjects that the investigator would not correct or help the child in reading the text. They were also told, however, not to feel discouraged if they found words that were difficult to read.

The oral reading, as well as the questions and answers around comprehension, were audiotaped for subsequent analysis.

Analysis

In the initial phase of the analysis, all "misreadings" were classified as either the probable result of the Mozambican childrens' non-standard variety of Portuguese or as misreadings proper. The former category were not included in the analysis, as they do not reflect reading proficiency or language proficiency as such as much as they do the nature of Mozambican Portuguese. The reader data elicited was subsequently analysed with respect to the number and type of "oral misreadings" produced by the pupil, and an analysis of what comprehension questions provided the greatest difficulty for L1 and L2 speakers of Portuguese. In the first step, misreadings were categorized as *deletions*, *additions*,

substitutions and *alterations*. In the second step, the category of *alterations* (misreadings proper) were classified as either *form-based*, *grammatical* or *semantic* misreadings. The latter two categories were then classified as to whether they a) *retained or altered the appropriate grammatical structure of the phrase/clause*, or b) *resulted in a semantically appropriate or inappropriate or nonsensical word, phrase or clause*.

The answers of the comprehension questions were judged as either right or wrong. Each right was give one point. With three questions on each text and six pupils per class/school, the maximum score for a particular class on a particular text was 18.

Results

From the analysis, we found that the number of errors in proportion to the number of words read were considerably higher for L2 readers than for L1 readers in each of the grades 3 through 5 for readings of both Portuguese and Expository texts. Grade 6 readers were an exception to this pattern: for Portuguese texts, the number of errors for L1 and L2 readers were equivalent, and for Expository texts, the number of errors for the L1 readers exceeded that of the L2 readers. The general trend for L2 readers to exhibit greater error quantities is also reflected in the patterns of individual variation within groups (table 5.2.1).

Table 5.2.1: Ranges of misreadings.

	Portuguese	Sciences
Maxaquene 3	2-14	3-18
Albasine 3	5-24	5-32
	Portuguese	History
Maxaquene 4	1-6	2-16
Albasine 4	2-32	5-27
	Portuguese	Geography
Maxaquene 5	0-6	0-8
Albasine 5	2-15	2-15
	Portuguese	Geography
Maxaquene 6	6-17	8-26
Laulane 6	6-15	7-15
Bagamoyo 6	1-35	1-19

From this table, we can observe that whereas good L2 readers approach the error frequency of good L1 readers, non-proficient L2 readers display an error frequency that is 2 to 5 times greater than non-proficient L1 readers.

From table 5.2.2, we also see that there are generally more deletions, substitutions and additions among L2 readers than L1 readers, and that the amount of these categories corrrelates with the number of misreadings in general.

Table 5.2.2: Number of deleted and added words in reading (all texts).

Maxaquene 3	9
Albasine 3	42
Maxaquene 4	23 (among which 2 lines)
Albasine 4	67 (among which 3 lines)
Maxaquene 5	26
Albasine 5	48 (among which 3 lines)
Mazaquene 6	32 (among which 1 line)
Laulane 6	39 (among which 2 lines)
Bagamoyo 6	65 (among which 3 lines)

The results of the comprehension questions part are displayed in table 5.2.3.

Table 5.2.3: Scores on comprehension questions (max 18 in each cell).

	Portuguese	Science
Maxaquene 3	18	9
Albasine 3	13	6
	Portuguese	History
Maxaquene 4	11	7
Albasine 4	10	2
	Portuguese	Geography
Maxaquene 5	15	2
Albasine 5	8	0
	Portuguese	Geography
Maxaquene 6	15	0
Albasine 6	13	2
Bagamoyo 6	13	3

As can be seen from table 5.2.3, the L1 children generally have somewhat better results also in the realm of the comprehension questions, except in grade 6, where the differences are especially small and to the advantage of the L2 children in the subject of Geography. It seems as though the differences have been leveled out among the children who remain in school at this level. It is also clear that the comprehension questions on the texts in Portuguese have generally been easier to answer for the children. Compare the degree of difficulty of texts in each subject in 5.4 below!

With respect to the quality of the errors, it would appear that there is little to differentiate L1 and L2 readers. Both groups employ relatively similar amounts of all error types. Even though the different groups therefore can be assumed to use the same types of reading strategies, there is nevertheless a slight difference in how the error types

characteristic of good and poor readers respectively distribute across readers from the L1 and L2 groups. (Good errors are understood in this context as those that are grammatically and semantically acceptable in the context. In order to produce such an error, the reader must possess the ability to monitor both the semantic and syntactic structure of the passage being read). Good reading errors are displayed almost exclusively by L1 readers as displayed in figure 5.2.1.

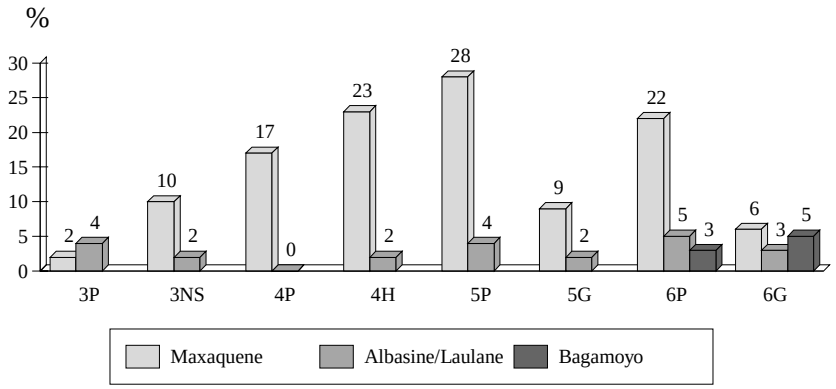

Figure 5.2.1: Proportion of all errors reflecting "good" reading strategies, grades 3-6. P = Portuguese, NS = Natural Sciences, H = History, G = Geography.

We also note a difference between L1 and L2 speakers with respect to different types of "bad" reading error. L1 readers produce fewer errors that result in semantically inappropriate structures. One interpretation of this, is that bad errors that are the effect of ignoring the global structure of the text, i.e. the reader employs a bottom-up strategy of reading, result in more serious lexical/semantic deviations when the lexical competence of the reader is so deficient that it does not allow the more "qualified" guesses found for L1 speakers.

L1 speakers also monitor and correct their reading more often than L2 readers, as seen in figure 5.2.2.

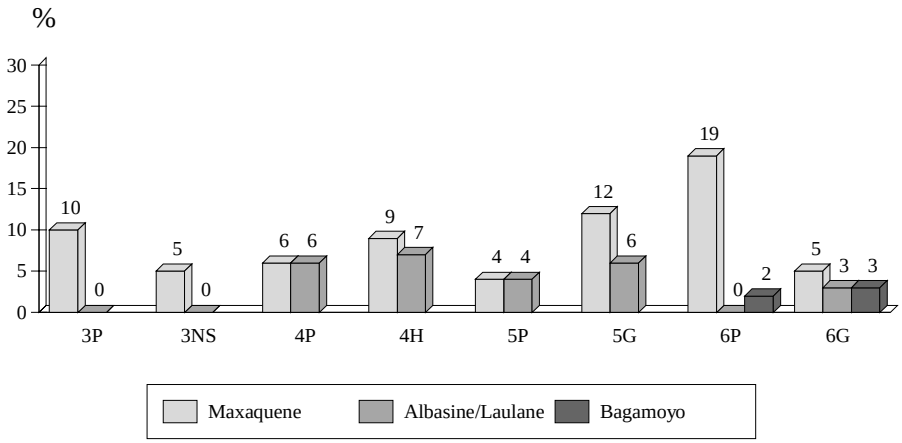

Figure 5.2.2: Proportion of reading errors monitored by the readers, grades 3-6. P=Portuguese, NS = Natural Sciences, H = History, G = Geography.

To summarize these results, it would appear as though L2 readers produce more errors of all types and more errors overall than L1 readers, and that the errors they display are more often misreadings that do not make sense in the context. They also monitor their misreadings less often than L1 readers. Non-proficient L2 readers also have a much larger number of errors than the non-proficient L1 readers.

Discussion of reading results

A large proportion of the misreadings among L2 readers can without doubt be claimed to be a result of their lower level of Portuguese language proficiency. These readers have a lexical competence that is insufficient to enable them to recognize and infer word meanings as they occur in texts, and their less extensive and automated syntactic, semantic and pragmatic abilities in Portugese hinder them in their attempts to predict the meanings of words from the linguistic context. Consequently, these readers are forced to rely on superficial decoding skills, which in the absence of guiding semantic and discourse cues give rise to a pattern of misreadings characterized by massive semantic inappropriateness.

As the content and the linguistic difficulty of the texts increase, readers with initial low levels of language proficiency will find themselves at an even greater disadvantage. Unable to use world knowledge to comprehend unfamiliar content, and lacking the higher order linguistic skills necessary to reconstruct meaning from what they read, they will fall back on lower level decoding skills or avoidance strategies, such as deletion, to an even greater extent. This is exactly what we find in the data. Texts that are expository, abstract and informative and demand a "decontextualized" approach from the reader are exactly those types of materials that L2 readers find most difficult.

There are, however, other factors implicated in the reading difficulties that interact with language proficiency in Portuguese. It is clear from the analysis that L1 readers also employ the same sorts of strategies. Although L1 readers are somewhat better at using syntactic and semantic cues to monitor their reading, they still fall back on superficial and unguided decoding strategies when confronted with difficult text items. Clearly, also L1

readers place emphasis on a low level phonics approach to reading, an approach that is taught and used in reading in primary schools in Mozambique.

Finally, L2 readers' problems with language proficiency are compounded by teaching practices that emphasize bottom-up strategies for reading.

5.3. Aspects of writing skills of Mozambican primary school children

In order to elicit data on writing skills and their relation to general linguistic proficiency, a dictation task was chosen which allowed not only a global measure of language proficiency, but also provided a specific focus on spelling abilities. The results are presented in two reports, one for grade levels 2 and 3[8] and another for grade levels 4-6[9].

Schools and informants

The task was administered in four primary schools in greater Maputo, namely Maxaquene (urban), 21 de Outubre (suburban), Bagamoyo (suburban) and Albasine/9 de Agosto (semi-rural), in three primary schools in the province of Nampula, namely Matibane (rural), Naholoco (rural), and 16 de Junho (urban at Ilha de Mocambique[10]), and in one primary school in Vilanculos, Inhambane province. Data were obtained from grade 2 children in all the Maputo and Nampula schools, from grade 3 children in the Maputo schools and from one of the Nampula schools, namely the school of Naholoco. From grade 4 and 5 children, data were obtained in the schools of Maxaquene, Albasine and Vilanculos. From grade 6 children, finally, data were collected only in two schools, those of Laulane (same district as Albasine) and Vilanculos. The children in the primary school of Maxaquene, some of those in the school of 16 de Junho, and possibly some grade 2 and 3 children in Bagamoyo, have Portuguese as their first language.

Thirty pupils were drawn from one class in each school. They were selected from the class list in the same mechanical way as was done for the retelling task, explained above. In this way a randomness of selection was assured. In one school (Naholoco), the 2nd grade class contained only 24 pupils; the results from this class were normalized to accord with a 30 pupils group.

Task type

Dictation, like retelling, involves language processing at all linguistic levels and implicates perception as well as production. In contradistinction to retelling, dictation requires that oral language be represented in written form. In order to be able to write what is being said (or read), it is necessary that the writer has internalized a linguistic system that allows an interpretation and internal representation of the spoken word, utterance or text. However, to

[8] See K. Hyltenstam: *The language issue in Mozambican schools. Some data on language proficiency and writing proficiency in grades 2 and 3*. Projecto de avaliação pedagógica do livro escolar. INDE, Maputo: 1992.

[9] See K. Hyltenstam & M. Luís: *Aspects of writing in Mozambican primary schools*. Projecto de avaliação pedagógica do livro escolar. INDE, Maputo: 1992.

[10] Ilha de Moçambique, having traditions as Mozambique's ancient administrative centre (until 1898), still has a quite mixed population. A number of the pupils studied are children of administrative clerks and merchants. Most of these have Portuguese as their mother tongue.

some extent, a successful completion of a dictation task may be carried out on the basis of a mere phonological interpretation of a word or utterance, i.e. without any understanding of the meaning of the unit. This is the case when there is a one-to-one correspondence between a phonological and orthographic form in a language. Such correspondence is limited to "regularly" spelled words. The proportion of regularly spelled words, of course, differs greatly between languages depending on their orthographic principles.

Dictation is often used in pedagogical practice to exercise and assess the learner's knowledge of the orthographic system of the language. As a research tool, this instrument has wider applications. On the one hand, since dictation presupposes processing at all linguistic levels, it gives a global measure of language proficiency (Oller, 1971; Johansson, 1973). On the other hand, dictation also gives a measure of the learner's ability to represent the language in written form. In this respect, dictation provides a measure of one aspect of "literacy".

In the present investigation, a dictation task was used with the double purpose of eliciting general information on global language proficiency and specific information on writing ability.

Data

The design of the task was the same for all grade levels, although the linguistic content was different for grade 2 on the one hand and the rest of the grade levels on the other. 20 target words were chosen, and short sentences were created to make up a context for each word. The words were taken from the Portuguese materials at each grade level, and care was taken that only words that had been covered in the curriculum were included. Furthermore, the words were systematically chosen to represent a variety of aspects of Portuguese phonology, as well as orthographical principles. Thus for the second grade, the list included the following words:

> *amassa* (kneads), *balão* (balloon), *banco* (bench), *bebe* (drinks, Vb), *beijo* (kiss), *cabeça* (head), *cantando* (singing), *corre* (runs), *falta* (is missing), *lápis* (pencil), *laranja* (orange), *leite* (milk), *mano* (brother), *manteiga* (butter), *mesa* (table), *pato* (duck), *pequeno* (small), *vela* (candle), *verde* (green), *vestido* (dress)

The words included in the dictation task for grade levels 3-6 were as follows:

> *aleijou* (disable, PAST), *baratas* (cheap, PL), *bola* (ball), *caderno* (note book), *calção* (shorts), *cedo* (early), *enxada* (hoe), *fuma* (smokes), *gente* (people), *guia* (drives, Vb), *hoje* (today), *ilha* (island), *limpeza* (cleaning), *lixeira* (refuse heap), *peito* (breast, arms), *pensando* (thinking), *quando* (when), *tempo* (time), *terra* (soil)

The principle for constructing the sentences in which the words were to be embedded was that they should be supportive, i.e. the sentences should not contain words that might be difficult for the children; they should represent a natural and unmarked context for the target word.

Procedure

The children were first told that they would hear the investigator read a sentence, and then, the investigator would name one of the words in the sentence for the children to write

down. Two examples were given by the investigator: She read the sentence, named which word was to be written and wrote it herself on the blackboard. At this point the pupils were requested to sit as far as possible away from each other, to avoid any temptation to copy. A sheet of paper with slots numbered from 1 to 20 was distributed to the children. After this, the indicated procedure was followed through all 20 sentences/words. It should be noted that the sentences and words were read only once, but at a relatively slow pace. The children were given ample time to fill out the slots.

Analysis

The data were analyzed according to a system of 6 categories in the following manner:

Category 1: the word is correctly written
Category 2: the phonological form is correct, but the word contains an orthographic error (ex: *amasa* instead of *amassa*)
Category 3: it is unclear whether the phonological form is incorrect or whether it is an orthographic error (ex: *mantega* instead of *manteiga*)
Category 4: the phonological form is incorrect but clearly related to the target form (ex: *calição* instread of *calção*)
Category 5: the form has no relation to the target form (ex: *olo* istead of *limpeza*)
Category 6: nothing is written

This system of analysis makes it possible not just to quantify the errors, but also to describe what kinds of processes most likely underlie each error. Typical orthographic errors (category 2) are distinguished from errors reflecting a deviant phonological form in the writer's competence (category 4) and from errors that reflect more severe and general problems with writing (category 5).

Results

The presentation of results will be given in diagrammatic form. The diagrams are constructed according to the following principle. Since 30 pupils were tested on 20 words in each class, there were 600 words to be characterized according to the six categories described above for each class. Thus, each of the diagrams shows how many of the 600 words fall into each category. Figure 5.3.1 presents the results from grade 2.

If we first look at the categories in which the words have been classified, we see that in grade 2, the categories of 1 through 4 all have fairly low frequencies. The most prevalent category in all schools is category 5, i.e. forms that have nio relation whatsoever to the target form. Very few children leave blanks (category 6).

Comparing the schools, the most obvious difference is between the rural schools in the Nampula province and the urban/suburban/semi-rural schools of greater Maputo and Ilha de Moçambique. In the schools of Matibane and, to a lesser extent, Naholoco, the first four categories are represented in the material to a very small extent: for example, in Matibane only 5 (of the 600) words were correctly written among all 30 pupils, and only in 21 additional words (category 2-4) could the phonological form of the target be recognized. It is likely that the children in Nampula have even greater problems with Portuguese and with writing than do the children of Maputo.

In 3rd grade (see figure 5.3.2) the picture has generally changed towards a more target like behaviour, even though very many problems remain. In two schools, Albasine and Naholoco, category 5 errors still predominate in 3rd grade.

The difference between rural and urban schools found in grade 2 also exists in grade 3, even though the basis for comparison is very small with only one school representing the Nampula province.

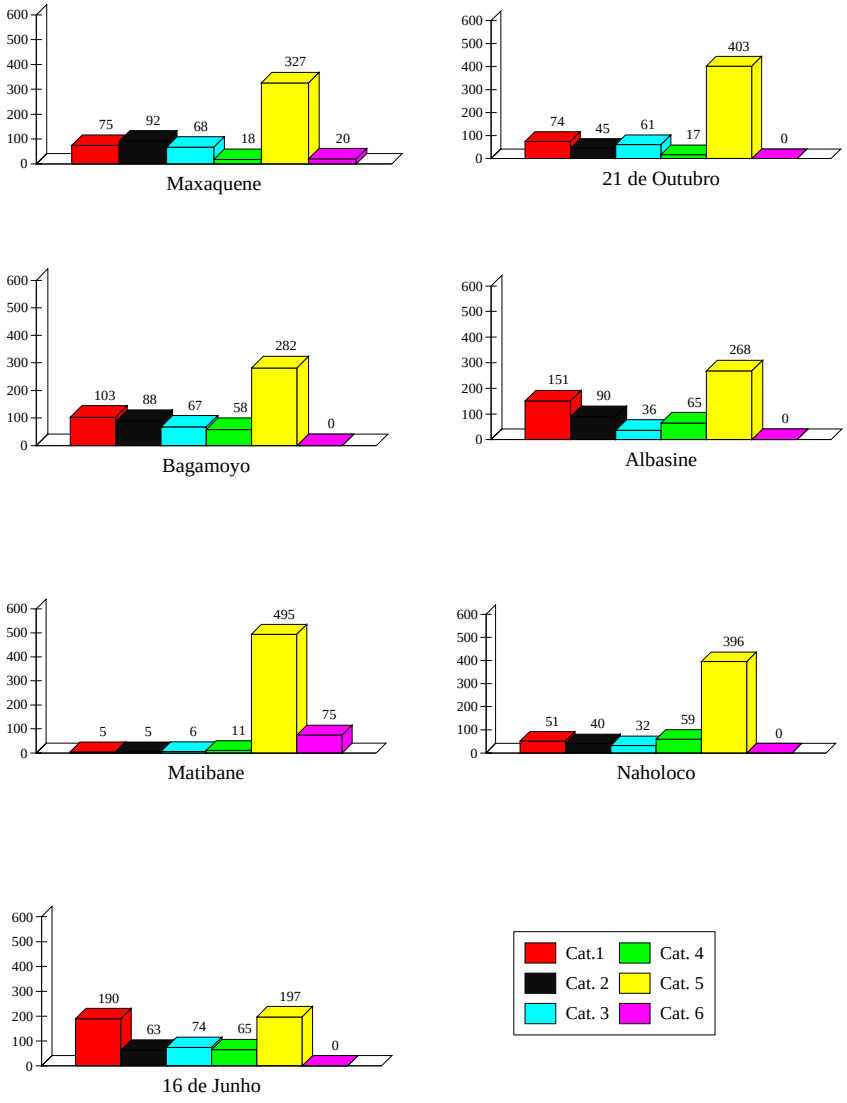

Figure 5.3.1. Results from the dictation task, grade 2

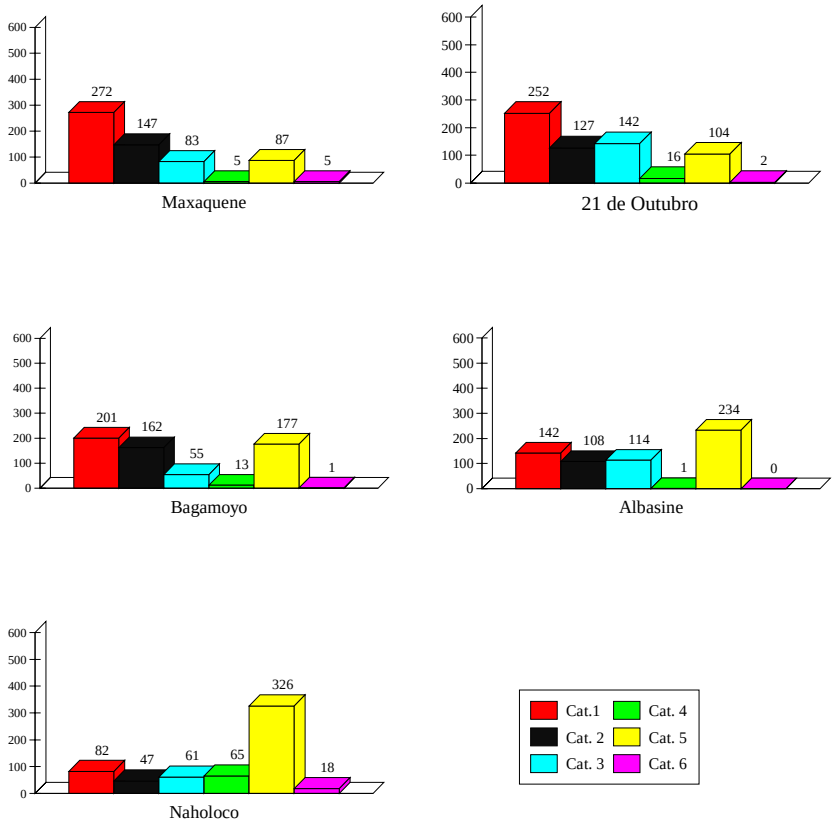

Figure 5.3.2. Results from the dictation task, grade 3

The results from grades 4-6 (see figure 5.3.3) do not support the view that the differences between first and second language writers and children with urban and rural background respectively remain. As can be seen, the results of the Vilanculos children (rural) exceed those of the Maxaquene and Albasine children (urban). The difference in results between the latter two is, however, as expected, with the Maxaquene first language writers exceeding the Albasine second language writers. Again, it should be noted, the Vilanculos second language writers have better results than the Maxaquene first language writers.

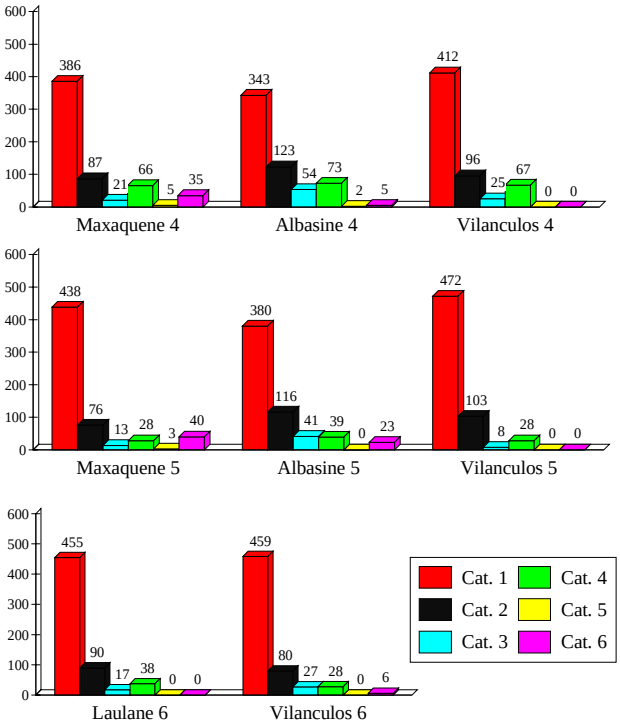

Figure 5.3.3. Results from the dictation task, grades 4-6

The overiding picture emerging from these diagrams is that the task has caused large difficulties for many children. Our interpretation is that the difficulties are a combined effect of an insufficient level of proficiency in Portuguese and a low level of proficiency in writing. This is in accord with the claim above that the dictation instrument measures both global language proficiency and aspects of proficiency in writing. The relative importance of these two components can not be determined here. The writing difficulties are not solely problems of an orthographic nature as is often the case among monolingual children. Rather, they reflect severe problems with the phonological forms of the Portuguese words, or with the principle of the written word altogether.

Looking qualitatively at the error categories, we see that the orthographic errors of category 2 are similar to what is found among Portuguese speaking children generally: *cabesa* for *cabeça*, *meza* for *mesa*, *verdi* for *verde*, *beiju* for *beijo*. Category 3 is a mixed category where it is imposssible to be conclusive about the reason for the error, whether it is an orthographic error or whether the child has integrated an erroneous phonological form, which is thus "correctly" reflected in his/her writing. An example as *pecueno* for *pequeno* can be interpreted either as an orthographic error, or as an error of phonological representation (see category 4). If it is an orthographic error, there is simply a confusion about the spelling of /k/ in this word. <cu> has been chosen instead of <qu>. If it is a phonological error, the subject believes that this word is pronounced something like /peku'enu/ rather than /pe'kenu/. Category 4 comprises examples where the interpretation is clear that they represent deviant phonological forms, in many cases typical of second language learners. The structure of many of these forms has an obvious influence from Bantu phonology as in the following examples: *mateca* for *manteiga*, where the nasality of the first vowel is not reflected in this subject's writing, i.e. we have <a> instead of <an>, where the dipthong /ei/ is represented as a monophtong <e> and where /g/ is represented as <c> rather than <g>, reflecting difficulties with the voiced/non-voiced opposition in stops, a distinction not found in Makua, the first language of the present subject. There are many

examples of this type: *panco* or *bangu* for *banco*, *capessa* or *gabesa* for *cabeça*, *labissi* for *lápis*. Compare also the results in Machungo & Ngunga (1991). The error category of 5, which is the most frequent one in grade 2 and still large in grade 3 but practically absent at the higher grade levels, comprises non-existent "words", i.e. sequences of letters of different types. The following examples represent some of the solutions found: *ejitalmmonio* for *banco*, *cotali* for *vestido*.

Among the schools of Maputo, it is interesting to note that the school of Maxaquene, where the children generally have Portuguese as their mother tongue, does not differ greatly from the schools of Albasine, 21 de Outubro and Bagamoyo in the grade 2 results. In 3rd grade there is a slight advantage for the Maxaquene school but it is still fairly small. In grades 4 and 5 there is a definite advantage for the Maxaquene children, but here, as we saw above, the Vilanculos second language speaking children are in the lead. Since especially the 2nd grade result came as a surprise to us, we considered whether it could be due to some arbitrary factor. Therefore we gave the same task to another group of children in second grade several months later. The results of this second test is given in figure 5.3.4, where the result of the first test is repeated to make comparisons easier.

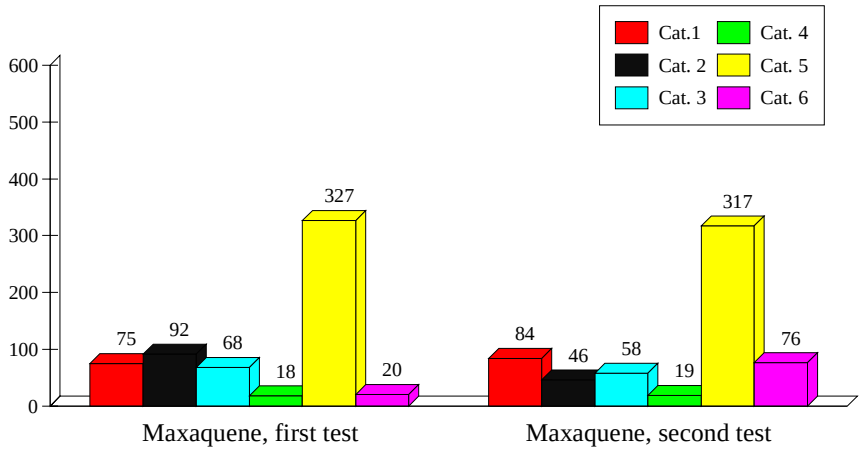

Figure 5.3.4: Dictation test, Maxaquene, grade 2. Comparison between first and second occasion

It is clear from the diagrams in figure 5.3.4 that the results of the first and second time the task was administered at Maxaquene are very similar. We therefore must conclude that, at grade 2, spelling and writing still causes large problems also for the children who have Portuguese as their mother tongue.

Discussion of writing results

There are, of course, a number of difficulties in interpreting the results of this study, similar to those mentioned in discussing the results of the retelling study above. For example, there is the possibility that some children did not quite understand the task itself. However, this ought not to have been a major problem, since the children were said to be familiar with the task type. An experiment was also conducted in the Nampula province, where instructions were given in Makua, the children's first language. The results were parallel to those obtained when the instructions were in Portuguese (see Hyltenstam, 1992:19).

There are two salient features in the results that need to be discussed. One concerns the fact that category 5 errors, i.e. errors where the written form is not at all related to the target form, are so frequent in the material. The other issue concerns the unexpected results from the Maxaquene children, who, although they are L1 speakers of Portuguese, also exhibit definite difficulties in writing. This is especially obvious in grade 2, but also comes out when we compare their results to those of the second language speakers at the higher grade levels. It should also be kept in mind that the words chosen for the dictation task were all fairly easy words that could be expected to be mastered at grade level 3.

Thus, why is it the case that many children write "words" such as *ainai* when the investigator reads *banco*, and how can we explain that this pattern is so prevalent at grade levels 2 and 3? In our opinion, there would seem to be specific reasons behind this behaviour. One such reason would be that the child has not yet fully grasped the principles of the written word. Such principles include the regular correspondence between sound and letter, i.e. the phonemic principle, and the principle of conventionalization, i.e. that a specific word is spelled the same way each time. It is indeed the case that the tension between these seemingly contradictory principles may be difficult for some children to appreciate (see e.g. Wald, 1987:158). We believe that this reason can account for some children's behaviour, but among school age children the difficulty should not normally be as wide-spread as in this study. Therefore, other possible explanations must be sought.

Another reason for the prevalence ot this error category might be that the children have developed a strategy to solve tasks they can not cope with adequately. As it is arguably very common for the children to find themselves in a situation where their capacity does not allow adequate responses, instead of doing nothing, they act superficially as if they did what was required. For example, given a writing task the content of which is to hard for them, instead of doing nothing or claiming that they do not know how to do it, children write whatever. Using this strategy they have at least complied with one of the the component requirements in a writing task, namely to formally write, even if they have not been able to fulfil the requirement to write a specific word.

If this interpretation is correct, a further question is how this strategy has developed. The answer might be found in the pedagogical practice and general conditions of the classroom, where there is a strong pressure on children to act in formalized or ritualized ways; it is very often the case that children can get along by producing memorized responses in given situations, but it is also very frequently the case that this strategy fails. We have observed several times how children suggest "answers" to questions that have no discernible, not even a remote, relation to the question. Such strategies are, of course, not encouraged only in school contexts such as that of Mozambique. In foreign language learning contexts, where language exercises are practiced in a decontextualized manner, children have been observed to to apply similar strategies (Felix, 1982:139; Weinert, 1991).

Another factor that might contribute to the development of the strategy is that the size of classes and the teaching traditions do not favour interactions initiated by the pupils on problems of understanding or learning. This makes the children refrain from claiming they do not understand. Also, since not understanding is the "default" situation for many children for long periods of time, it is not reasonable for them to voice this problem each time it occurs; it may even be difficult for them to identify when they have understood and when not.

Now, on the second issue of why the children of Maxaquene in fact also have great problems in writing and make many category 5 errors, in spite of the fact that the majority of them have Portuguese as their first language, we would like to suggest the following account. We have already seen in the results of the retelling task that the children of Maxaquene are generally not found among those who have a very low proficiency in the

Portuguese language as expressed in their understanding and oral production of speech. Since the dictation task includes components of both global language proficiency and of writing proficieny, we have two types of ability that can be differently developed, although this can not be distinguished in the results. That is, theoretically, we can have a well developed general linguistic proficiency level without having a well developed writing proficiency level. (The opposite is not true, since the level of writing proficiency is dependent on the level of general linguistic proficiency.) We would suggest that this is exactly the situation we find for children in the school of Maxaquene. The reason why this should be the case may be linked to the fact that the pedagogical practice and teaching traditions are inherenty similar in the school of Maxaquene and in the other schools investigated here. This would lead these children to develop the same kinds of learning strategies - and coping strategies - that are found among children in other schools.

5.4 On the information structure of Mozambican primary school texts

One of the more central questions for the present evaluation project was to gain an understanding on the degree and types of difficulty that beset the L2 speaker of Portuguese in his encounter with the school textbooks[11]. The range of expected difficulties comprise both purely linguistic hurdles to comprehension, more or less specific to the L2 speaker, as well as problems that have their origin in how content is encoded linguistically that may be experienced by both L2 and L1 speakers.

Theoretical background

Whether texts are readable or not, and what makes them so, has occupied researchers from different disciplines for many years within the field of readability studies. A typical readability study selects a number of written texts, determines reader availability in accordance with some operationalized definition of difficulty, and then proceeds to scan the text for linguistic characteristics that will predict its tenor. In the majority of cases, texts are found difficult if they contain long words or infrequent words (traits of the lexicon that tend to co-occur) and/or because they contain complex, many-worded syntactic constructions with multiple types of embeddings. More recently, researchers have turned their attentions to the effects of the rhetorical structures of texts, and examined how the presentation of complex ideas and complexity in the ordering of ideas influence readers' comprehension and recall.

There are three sets of related problems that have beset much of the earlier work on readability (see Biber, 1991). One difficulty is that whereas many studies find that the predictions on text difficulty on the basis of variables such as sentence length and word frequency actually do work, other studies provide evidence that simplifying texts along these parameters does not always result in better reading performance. This suggests that the variables studied are *indices* of difficulty rather than the direct *causes* of difficulty. Clearly the situation is more complex than what the instruments of readability studies can capture.

[11] See K. Hyltenstam, M. Luís & C. Stroud: *An evaluation of teaching materials texts in the Mozambican primary school in terms of the oral/written genres.*Projecto de avaliação pedagógica do livro escolar. INDE, Maputo: 1992

Following Biber (1986, 1991), we claim that one prime reason for the uneven success of readability studies is the somewhat simplistic understanding of text linguistics that they base their analyses upon. By dealing seperately with one or two salient structural variables (e.g. word frequency and complex embeddings), classical readability studies capture only part of what makes a text difficult from a linguistic perspective. Such an approach cannot take account of the fact that texts are complex, multidimensional constructs, where the composite contribution of linguistic dimensions may be more important to pupils' reading experiences than any single or pair of variables on their own. In general, one could claim that readability studies do not sufficiently delve into the linguistic structure in the variables they study.

Another difficulty with readability studies that constrain their usefulness for our present purposes is that they seldom compare different genres with respect to difficulty. Most work compares texts within the same genre for difficulty at different levels (for example, natural science readers in grades 3-6), but few studies go beyond this, and evaluate texts from different subject areas or genres of writing. Clearly, texts from different subject areas are constructed in different ways, and it would be a profitable exercise to obtain a comprehensive picture of the range of text types existing in a specific school context with their attendant difficulties.

The second set of problems revolve around how to define and operationalize notions of difficulty. Studies have frequently employed scores on multiple choice or cloze tests, reading speed or the amount and quality of recall. Even though these methods do bear some relation to important components of the reading process, comprehension and understanding are complex constructs, and there is no guarantee that these measures bear any immediate relation to what we consider to be reading for understanding.

A third group of problems comprise questions on how to theoretically conceive of, and methodologically cope with, difficulty and readability from the perspective of second language acquirers. Here, there is a definite need to develop an adequate theory of the second language speaker in order that we might find the relevant variables to study in texts. For the time being, we need to rely upon a theory along the lines of Cummin's on different types of language proficiency (contextualized and decontextualized language skills) and their consequences for coping with different types of text.

The main approach employed in the current study has been to examine the texts used in Mozambican schools in terms of how oral or literate they are. A common conception is that written materials are per definition literate and that spoken "texts"are oral. However, as Douglas Biber among others has argued, different written and oral genres can be more or less literate in their composition. Biber (1988:128) presents the following example, which is a result of an empirical investigation along one of the dimensions that distinguish texts (see below) (o = oral; w = written):

	LESS LITERATE
o	telephone conversation
o	face-to-face interaction
w	personal letters
o	spontaneous speeches
o	interviews
w	romantic fiction
o	prepared speeches
w	mystery and adventure fiction
w	professional letters
o	broad cast
w	science fiction
w	press editorials
w	academic prose
w	official documents
	MORE LITERATE

We see that oral texts are typically less literate than written texts, but also that there is no clear dividing line between oral texts on the one hand and written on the other. Rather, it is other aspects than the oral/written distinction that make texts more or less literate.

In other words, the terms oral and written denote opposite poles on a continuum of more or less literate. Some linguistic characteristics that can be viewed as more or less literate are displayed here.

more literate	*less literate*
passives	2nd pers. pronouns
participial constructions	dem. pronouns
many types of subordination	causative subord
	many time/place advb.

Different types of text and different genres can be given a comprehensive description in terms of how the various sets of linguistic indices cluster and co-occur. Another important fact, especially for our analysis, is that different texts can also be more or less literate along different dimensions. The three dimensions along which texts can vary singly or together are a) *abstract/non-abstract*, b) *elaborated/situated* and c) *informational/involved*. In general, texts that exhibit higher degrees of abstractness, elaboration and amount of information are typical of written and highly literate language. Different sets of co-occuring variables contribute to each dimension. For example, what makes a text more elaborated is, among other variables, a high frequency of relative clauses, coordination and nominalizations. A text is more situated if it, for example, is composed of a high frequency of time and place adverbials and pronouns and other expressions that refer to the immediate context.

Present investigation

In the current study, we have been concerned with gaining an overall impression of the level of linguistic difficulty and availability of both Portuguese readers and expository texts used in the Mozambican primary school system. Our prime interest was to attempt to determine the *literate* characteristics of the texts, and, by so doing obtain a more complete picture of their overall degree of availability than that afforded by traditional readability studies. The underlying motivation for conducting this type of analysis is the hypothesis, often discussed in the second language literature, that texts characterized by more literate features place greater demands on the reader's language proficiency than less literate texts. This is the case because the forms of lingusitic processing involved in reading more literate texts require the ability to employ language in a number of decontextualized functions. It is precisely this ability that Cummins (1981) has claimed takes second language learners an average of five to seven years to master at a level on a par with native speakers.

Data and analysis

Three representative text segments, comprising 350 words each, were selected from each text book included in the investigation. The books studied were the Portuguese readers (grades 3-6), natural science (grades 3-5), history (grades 4-6) and geography (grades 5-6). Each passage was analysed in detail and comprised a frequency count of a select number of variables. The variables were chosen from among those in Biber's investigations that were the most characteristic of their particular dimensions. Thus, in order to see how the texts would situate themselves in the dimension *involved vs. informational,* the following categories were analyzed: present verb forms, 1st and 2nd person verb forms, 1st and 2nd personal pronouns, "private" verbs (e.g. *assumir*, 'assume', *crer*, 'believe', *provar*, 'try'), non-derived nouns, prepositions, number of letters of the words. For the dimension *elaborate vs. situated,* we looked at frequencies for relative clauses, co-ordinated words and phrases, nominalizations; time and place adverbials. For the dimension *abstract vs. non-abstract*, finally, passives, gerunds and participial forms, and subordinate clauses (except causatives) were analyzed. Averages of frequency values for each dimension were calculated, and these averages were compared to the normative results obtained for different genres in Biber's work.

Results

The results obtained for the different text-books and a comparison with values for equivalent genres presented by Biber (1991) are displayed in the following three tables (tables 5.4.1 - 5.4.3), where the frequency values for each one of three dimensions is presented seperately.

Table 5.4.1: Degree of literacy in textbooks according to the dimension *involved vs. informational*. P=Portuguese, CN=Science, H=History, G=Geography. Numbers refer to grade levels.

MORE LITERATE				
	CN4	H4, H5, H6	G5, G6	
P6				
P5				
	CN5			science 4, 6; reader 4, 6
	CN3			
P4				
				reader 2
P3				
				science 2
LESS LITERATE				

Table 5.4.2: Degree of literacy in text-books according to the dimension *elaborated vs. situated*. P=Portuguese, CN=Science, H=History, G=Geography. Numbers refer to grade levels.

MORE LITERATE				
P6	CN5	H5	G5	
		H6		
P5				
		H4		
P3			G6	
P4				
	CN4			
	CN3			science 4 and 6
				science 2
				reader 4 and 6
				reader 2
LESS LITERATE				

Table 5.4.3: Degree of literacy of text-books according to dimension of *abstract vs. non-abstract*. P=Portuguese, CN=Science, H=History, G=Geography. Numbers refer to grade levels.

MORE LITERATE				
P3, P5		CN5	G5, G6	
	H6			
	H4	CN3		
		CN4		
P4				
				science 4 and 6
	H5			
P6				
				science 2
				readers 2, 4 and 6
LESS LITERATE				

In general, as can be seen from the tables, all the texts examined were strongly "literate" on all dimensions, and the values they showed characterized them as "adult" informational texts. In fact, the expository texts obtain values that are a great deal higher than equivalent texts designed for native speakers of English in the USA. There are some tendencies for geography texts and history texts to be more literate than than the science and Portuguese texts. In general, we found no evidence of any clear progression in "difficulty" for higher grades.

Discussion of text structure results

We believe that the dimensions of literateness that we have examined are, in actual fact, symptoms of the authors' orientation to their subject matter. In other words, and simply put, a text that is highly informative is so because the author is comprising large amounts of complex content into a short textual space. Likewise, an elaborated text is not anchoring its presentation of content in the experiences of the reader. The problem could be said to be very much one of defining appropriate learning needs, learning objectives, and dialogical

pedagogical strategies that take account of the pupils' own experiences and realities. If such factors could be specified, and a more appropriate set of pedagogical principles be developed, we would argue that a large number of the linguistic obstacles could be removed from the texts.

However, a number of other problems remain. Foremost among them is that even the teachers do not find the texts easy to deal with. This is partly because they do not themselves understand many of the concepts and structures that are used in the textbooks, and partly because the books, (and especially the manuals), do not provide the teachers with enough means (or pedagogical/linguistic methods) of transmitting the content to pupils.

5.5. Portuguese materials analysis

It is clear from what has been said so far that the language learning situation of Mozambican school children is particularly complex. In the majority of cases, children have to learn a second language simultaneously as they learn to read and write in this language, and quite soon in their schooling are required to use this language as a tool for subject matter learning. The subject of Portuguese and the teaching materials used to teach this subject in the Mozambican schools carry a specific responsibility for the children's successful acquisition of the official language of Mozambique, even though language learning to a large extent also takes place in the teaching of other subjects in school and in out of school contexts.

The questions we have used as a point of departure in our analysis of the Portuguese materials are in what ways and to what extent these materials fulfil their important and difficult role of simultaneously providing appropriate support for the school children's language acquisition and for their acquisition of literacy skills. Furthermore, we have been concerned with the question of how the materials cope with the fact that children have different kinds of pre-school experiences that they bring with them to the classroom. In this case, what we have particularly had in mind is that some children already know the language that is the medium of instruction, while others have varying degrees of familiarity with Portuguese, a common situation being not having had any experience of Portuguese whatsoever. In order to answer these questions, we have analyzed the materials along the following dimensions:

1. In what ways do the materials accommodate the needs of first and second language speaking children?
2. What qualities do the materials have with respect to how they support second language learning?
   i. What theoretical view of language is reflected in the materials?
   ii. What theoretical view of learning is reflected in the materials?
3. What qualities do the materials have in their role as mother tongue materials?
4. What qualities do the materials have in their role of support for reading and writing acquisition?

First or second language materials

In the first grade materials, the first set of units are intended to teach the children basic vocabulary and grammatical structures for oral use of Portuguese. In this phase, the materials are constructed purely for second language learning; children who have Portuguese as their mother tongue would already be familiar with the language content of these parts.

As soon as reading and writing is introduced, it could be said that the presentation develops into a first language primary reader. The choice of syllables and words used to present the written language bears no explicit traces of taking a second language perspective into account. In other words, the Portuguese sound-letter correspondences chosen and the progression between them, as far as we can see, have not been determined on the basis of the fact that the majority of the schoolchildren are speakers of a variety of Bantu languages.

The linguistic content presented in the various units beyond the initial oral phase does, however, seem to be chosen on the basis of a second language perspective. In the teachers' manuals, where the goals of each unit are specified, specific structural aspects of Portuguese are mentioned, as well as specific themes as to content, such as "the family", "in the home" etc. Both structures and content areas seem to be chosen in order to present Portuguese to learners of the language in a reasonable way.

Again, when we come to the materials for second and third grade, they turn into normal first language readers to a greater extent. The rationale for this might be that the children are supposed to be able to function on a par with children who have Portuguese as their first language at this point in time. But in the Portuguese materials, as well as in the materials for other subjects, although the main purpose is to present subject matter, we also find some features that are more characteristic of language learning materials; the constant presentation of vocabulary is quite salient in the materials and especially in the way in which these materials are used in teaching. To a lesser extent this is of course something that is also found in first language materials. After all, one of the prime purposes of formal education is to develop the pupils' language, particularly with respect to extending vocabulary in connection with the learning of subject matter. However, vocabulary teaching plays a very major role in how texts are taught in Mozambican classrooms.

Qualities as second language texts

Language view

From an assessment of the actual books and the teachers' manuals we conclude that the views of the authors with respect to language is in essence one where language is seen as consisting of a number of grammatical structures and a vocabulary. In the early phases, we also find a "tourist parleur" view, in that the learning objectives in many cases are ready-made phrases to be used in specific contexts. It is clear that the prime aspect of language that determines the content and progression of the text is that of language structure. Among linguistic structures, morphological aspects, i.e. the various forms of verbs, nouns and adjectives, are given precedence, while syntactic structures appear to be included in a less systematic way. We never see word order, subordination, or the use of contracted preposition-article forms, for example, as a teaching objective in the teachers' manuals, even though these aspects of Portuguese syntax certainly are difficult for Bantu speakers.

As mentioned above, the presentation of sound-letter correspondences and the choice of syllables and words for the first reading and writing instruction are not specifically designed to accommodate the problems that first language speakers of Bantu languages might have with the Portuguese phonological system. The choice that could have been made here is to use only phonemes that are similar in both Portuguese and Bantu languages in the initial instruction and introduce those phonemes that would be difficult for Bantu speakers only when it can be expected that the new phonological distinctions the children have to acquire really have been internalized. Also, a systematic way of introducing more or less transparent spelling conventions would have been desirable. Especially maybe, one would have wished to find details of orthography as one of the successive objectives of particular units.

View of learning

It is clear from how language is presented in the materials and from the suggestions given in the teachers' manuals that the learning theory that the materials are based upon is of a type in which rote learning plays a major role, and in which language use is seen as a result of applying ready-made utterances in "dialogues". The way in which the materials have been constructed is reminiscent of the behaviouristic framework current in North America and Europe until the 60s (and its equivalent in Eastern Europe much longer; see McLaughlin, 1985). This means that there is very little room for creative language use in how the materials are conceived. This is particularly obvious if one looks at the teachers' manuals, where every step in the linguistic behaviour of the classroom has been laid out. The utterances to be produced by teachers and pupils in dialogue are already written down and formalized in the materials. To a limited extent, the teachers are advised to encourage the children to produce new utterances from the models that they have learnt by heart.

As the materials prescribe so much of the linguistic behaviour that is going to take place in the classroom, the materials have a heavy influence on teaching methodology in general. Therefore, and certainly also for other reasons such as teaching traditions in Mozambique, even the teaching itself is carried out in a way that can be theoretically defined as mechanistic. The learning of Portuguese is thought to come about from frequent repetition, in chorus or individually, of the correctly memorized structures of the language.

In a cognitively based learning theory, it is believed that repetition is only a minor aspect of language learning. Instead the learner is encouraged to construct new utterances expressing his/her own ideas and thoughts. Through using the language, the learner is believed to make inferences about the structural characteristics, as it were, through implicit or incidental learning. Also presentation of the structural regularities to the learners in a metalanguage they can understand is considered to be a valid basis for their language development. The form and amount of the metalanguage that can be used is determined, among other things, by the age of the learners.

Qualities as mother tongue materials

For the first period of teaching, the materials can hardly be said to be meaningful for children who speak Portuguese as their mother tongue. The reading and writing parts of the materials, as mentioned above, do not seem to be different from what is generally presented for first language speakers. Therefore, these aspects of the materials seem to be at least commensurate with the abilities of first language speaking children.

Qualities as reading and writing materials

The materials suggest a method of combined synthesis-analysis to be used in the initial reading and writing instruction. This is as reasonable as any other suggestion for intitial instruction. As mentioned earlier, there is no specific reference made to the fact that Portuguese is a second language for the majority of the pupils. This fact suggests a methodology be used where there is feedback in the actual instruction of teaching providing a basis for the teachers decision to proceed. More concretely, a methodology needs to be used where the teaching of a specific sound-symbol correspondence is based on an assessment of whether children have already acquired the actual sound orally, since this should be a condition for the presentation of a specific sound of the target language.

The materials thus lack a consideration of what phonemes are potentially new to the children. This is particularly clear from a careful assessment of the teachers' manuals.

Another problem with the materials, which seems to have a direct effect on the pupils' reading strategies as we have shown above, is that the systematic reading and writing instruction seems to stop after the technical aspects of reading have been mastered. The support for the pupils' further development into proficient readers is left to the individual teacher without any specific instructions or exercises to this aim in the materials.

5.6. Classroom interaction

As mentioned above, empirical studies of classrooms were also carried out within the evaluation project (Palme et al. 1993; Palme 1992), although not in its linguistic subsection. The results of these studies are important as a background for our own interpretations and recommendations. Therefore, they will be briefly summarized at this point.

One of the two studies investigated by means of an observational scheme, among other things, how time was shared between teacher and pupil verbal activities in the classroom and what kinds of activities the pupils spent most of their time on. The result showed that the teacher used as much as 90% of the time, while the remaining 10% were shared among the pupils for their verbal participation. This pattern is the same as that found in European and American schools where a proportion of 2/3 or 3/4 of the time has usually been observed to be consumed by the teacher (Bellack, Kliebard, Hyman & Smith, 1966). However, the Mozambican result is certainly at one extreme of this unbalance.

As a consequence, the children spend a large amount of time listening to the teacher. Listening actually ranks first in a comparison of what activities take up most time for the pupils. Second in rank is the activity of waiting - waiting for the lesson to start, waiting for other pupils to complete exercises, waiting for the teacher to finish writing the name of the school, date etc on the blackbord. Third in rank was the activity of copying written materials. The conclusion that can be drawn from this study is that there is extremely little room for active/creative pupil participation in Mozambican classrooms.

The second study was designed to focus on this question empirically, i.e. to what extent pupils engage in "creative" activities as opposed to "reproductive" activities. The theoretical interest in this question derives from the area of current second language acquisition and teaching research where it is an axiom that the individual child's language development is dependent on and supported by creative communicative involvement on the part of the learner.

Activities are called creative if they are generated "anew" as original responses to a specific situation at hand. In most non-educational settings, a large amount of both the verbal and non-verbal activities people are engaged in are creative. Reproductive activities on the other hand are such activities that are totally predictable. Among verbal activities they can be exemplified by ritual responses in for example greetings and other memorized larger chunks of verbal productions that are used in response to certain situational cues such as lines in a play. Reproductive verbal activities focus more on form than on the content of what is produced.

The results of this study showed that the classroom activities both on the teacher's side and on the side of the pupils can be characterized as mainly reproductive, although, as it is cautioned, there may be differences between areas, schools and classrooms. Generally speaking, there is little room for creative activities: For example, as the pupils are in most cases obliged to answer questions with full sentences, they produce utterances that are either memorized from earlier occasions or copied from the teacher's previous utterance. Pupils also learn the classroom rituals which among other things involve being sensitive to what other pupils produce in chorus and filling in missing last words or word endings in teacher utterances. There seems to be no room for pupils to indicate for example problems of understanding. On the contrary, when teachers ask if everyone has understood, the pupils ritual chorus answer is "Sim!" (Yes!). Teachers often introduce new subject area with the words of the textbook or the teacher's manual. There is little individualization, including time for explaining individual mistakes. Responses are therefore generally assessed solely in terms of right or wrong.

Considering the real interactional problems in Mozambican classrooms, where there is often no common effective means of communication, Palme et al. (1993) interpret the situation in terms of survival strategies on the pupils' part and in terms of teaching management strategies on the part of the teachers. In order to survive in the much too demanding classroom, pupils must focus on form, learn the ritual and memorize what to say in specific situations. The teachers, from their perspective, must see to it that the teaching can be carried through at all. As it is impossible to develop well functioning educational processes in the classroom because of fraiming limitations (big classes, lack of equipment, lack of a common language to mention just a few), they have to develop strategies that make the situation look *as if* it was functioning all right. This is where ritualization and focus on form rather than on content comes in as a reasonable way out.

It should be clear from these comments about the classroom that it is not simply the lack of motivation, ability or knowledge among the teachers, nor among the pupils, that result in the limited success of the Mozambican educational system. It is rather the limitations imposed on the teaching such as the lack of tangible assets and the lack of a well functioning medium of instruction that put restrictions on what activities are possible in the classroom. In order to develop room for more creativity in the classroom, these limitations have to be removed.

The teaching in second language Portuguese classrooms

With this background we would like to discuss more specifically the question of why teachers use Portuguese the way they do, and why they employ the teaching routines mentioned above.

Our contention is that teachers in general experience a great deal of anxiety and linguistic insecurity in their encounter with the Portuguese used in schools. This insecurity can undoubtedly be traced to a combination of factors. Firstly, it is our opinion that the

variety of Portuguese (and the proficiency in Portuguese, although this latter point has not been examined in the present evaluation) employed by the majority of the teachers is different from that found in the textbooks which is generally regarded as the norm to be taught. We have been able to observe when teachers work on the blackboard copying large portions of text from the textbook, that their written Portuguese sometimes exhibits grammatical and orthographical deviations from normative Portuguese. In other words, teachers feel commited to instructing in and through a form of Portuguese that has no support in the outside community, and they are being forced to perform as literate role models in a manner that they are not comfortable with. In this sense, we could say that teachers are providing "models of inconsistency" for their pupils. Furthermore, it has come to our attention on numerous occasions that the teachers themselves do not understand some of the words and phrases they come across in their textbooks. Because they do not in general have access to appropriate dictionaries and grammars of Portuguese, they are unable to resolve such ambiguities and uncertainties that arise from a lack of competence in, what we could call, "normative Portuguese".

A second point contributing to linguistic insecurity is quite likely the instructional situation the teacher finds himself in. The teacher is heavily bound to follow the instructional procedures laid down in the teacher's manual. These manuals provide very little opportunity for the use of meaningful comprehension checks on behalf of the teacher, either on a group or individual pupil basis. In other words, the teacher is faced with a situation where s/he is transmitting content in a language that most of the pupils do not master well, and is unable to effectively and flexibly monitor and adapt his/her communications with the class.

Related to this point are problems that arise from the conflation of problems due to the type of content taught and language difficulties. Firstly, it is not always clear whether or not instructional problems in a subject such as, for example, natural sciences, are due to the conceptual difficulties the Mozambican child experiences in understanding a culturally unfamiliar phenomenon (or, alternatively, ways of conceiving a phenomenon, see Linha, Palme & Xerinda, 1993) or linguistic difficulties in understanding explanations of the phenomena given in Portuguese. It is clear that such an ambiguity can contribute to feelings of linguistic insecurity on behalf of teachers, especially if they are not provided with models on how alternative types of Portuguese language explanation, paraphrase and definition could be employed and experimented with.

A third factor of importance in this context is the limited understanding the teacher must inevitably have of the enormous complexity of the task facing a second language learner in the Mozambican school. Without a sound basis in what second language acquisition involves (in the most optimal of learning situations), coupled to the high evaluation of Portuguese as the "language of letters" that teachers inevitably entertain, it is close to hand that teachers develop feelings of insufficiency and insecurity in their role.

A fourth and final point that we would like to mention in this context is the demands of the examination system (specifically for Portuguese) and the consequences this has for how teachers perceive and carry out their teaching role. The evaluation project has unfortunately not been able to investigate the linguistic values of the examination system. However, it is our impression, once again, that the examination system requires a form of Portuguese that is not congruent with the varieties spoken in Mozambique, nor realistic or "moderate" enough with regard to the fact that Portuguese is a second language for the majority of the children.

5.7. Integrative summary of empirical studies

Although the individual empirical studies can not - and neither have they been designed to - provide statistically significant generalizations about distinguisting characteristics of first and second language speakers of Portuguese, they nevertheless indicate that there are important differences between these two groups. The differences we have observed are all congruent with those theories that predict that second language speakers experience greater difficulties in school than the native speakers of the language of instruction. In fact, the studies taken together give massive evidence for this claim: The second language pupils are less proficient in Portuguese in that they are less verbose, need more communicative support (prompting) to fulfil a verbal task, have greater difficulties in organizing their productions, and exhibit substantially more non-native forms, i.e. errors, in their speech. They are less proficient in reading in that they produce more misreadings, use fewer "good" reading strategies, monitor their reading less, and have a more fragmented understanding of what they have read. They are less proficient in writing than first language speakers - even though also the latter group have problems - in that they utilize strategies of reading that are more oriented towards a superficial and formalistic completing of the writing task.

In what way then do the pupils' proficiencies impact on the abilities to make use of the materials? This question depends on the general level of linguistc difficulty and/or availability of the school materials, the way in which they consider their ursers' linguistic background and capabilities and the manner in which they are used in the classroom.

If the language capabilities of the second language children are thus more restricted than what materials for their chronological age generally presuppose, the texts in the current materials are on average more complex than could reasonably be expected of materials for this age group. In general all the texts assessed were strongly literate on all dimensions studied. In fact the values they exhibit characterized them as "adult" informational texts. There were no general tendencies for any specific genre to be more literate than others and we found little evidence that there was any built-in progression of literate features for different grade levels. Such texts place greater demands on the reader's proficiency in a language, as well as his or her reading and writing than less literate texts, as the linguistic features that comprise the highly literate texts presuppose the ability to use language in a number of decontextualized functions. In other words, the materials can not be said to have been systematically constructed with the requirement in mind that they are to be used by non-native speakers.

With respect to whether the materials in the subject of Portuguese are designed for the needs of second language speakers, we noticed that they have not been consistently built up along principles that accord with what is known about second language acquisition, and they do not address the fact that their readers are first langauge speakers of Bantu languages.

Finally there is no evidence from classroom observations and questionnaires conducted in the project that teachers employ bilingual or culturally familiar instructional routines in the classroom.

We believe that these results show clearly that the role Portuguese plays in the educational system is not appropriate. The children's abilities in Portuguese are grossly overestimated, and there is little conscious effort to incorporate a second language perspective in the materials or provide support for the non-native speaker in instructional practice.

Our belief is that the pattern of results we have observed in our materials point quite clearly to the fact that the multilingual realities of the children and their teachers is not sufficiently accounted for in the present educational structure.

In order to see what concrete implications these findings hold for future revision of teaching materials and educational practices, we must first relate them to a wider set of theoretical knowledge. For exampel, given that our data show a limited proficiency of Portuguese among schoolchildren the question then becomes one of deciding how the situation can be improved. Here we need to turn to second language acquisition theory in order to find solutions that are sensitive to the situation at hand. Various theoretical frameworks that will help us in this endeavour are presented in the next section.

6. THEORETICAL BACKGROUND FOR RECOMMENDATIONS

The recommendations that will be presented in chapter 7 are based not only on the results of the empirical investigations carried out within this project, but also on general knowledge about several research areas such as that of language policy, programmes for language teaching, language acquisition etc. Thus, in order to shed further light on the language issues that are relevant to, and confront, education in Mozambique, we will - in some depth - review the scientific literature on language planning and education in multilingual settings, bilingual programmes, language acquisition and literacy acquisition.

6.1. Bilingual education theory

At this point, it might be desirable to spell out some general theoretical issues involved in vernacular versus second language medium education. Today there is a general agreement among researchers and pedagogs that *appropriately* constructed bilingual education services are not only effective in ensuring that children attain a more felicitious development of each of their languages, but that they also contribute significantly to pupils' socio-affective development and acquisition of academic content.

In what follows, we will develop some ideas and extend some observations around the notion of bilingual education in order to provide further background for our suggestions and more specific recommendations on how a bilingual programme suitable for Mozambique should be designed and implemented. We will accomplish this by first reviewing what the concept of bilingual education can entail and how programme design needs to harmonize with contextual realities. We will then list some of the instructional characteristics of bilingual programmes that have been shown to enhance pupils' scholastic achievement, and comment on how teacher training needs to be revised. We will conclude this section with a discussion on the requirements that evaluation work needs to fulfil and discuss some of the problems in trying to get a picture of the efficiency of bilingual programmes.

Programme design

The concept of bilingual education is a multifarious and hetereogeneous one. Probably the most common type of instructional programme for bilingual children is what has been termed *submersion models*, where no provision whatsoever is made for the fact that a child speaks a mother tongue that is different to the language used in the school (cf. the current situation in Mozambique). These models can of course not be considered to be bilingual programmes *per se*, but they are often reviewed in the literature about such programmes on the grounds that they involve bilingual, or potentially bilingual, children. Other instructional types are *second language models*, where the child in a submersion programme is acknowledged as a non-native speaker and offered limited special assistance in the second language; *transitional programmes*, where the initial years of schooling are conducted primarily or exclusively in the child's mother tongue, later to be replaced by the second language (which is often taught as a subject and only occasionally used in early content instruction) - transitional programmes may be further categorized as early or late transitional depending on when the second language takes over as the major instrument of

instruction; *maintenance programmes*, where the mother tongue is used throughout the school years as a language of instruction in parallel with the second language and in roughly equal proportions; and *structured second language immersion*, where the major part of instruction is in the second language, but within a context that clearly recognizes and nurtures the child's bilingualism. All these programmes differ essentially with respect to what weight they assign each language (i.e. sequencing and time allotment) and with respect to how they view the interplay between language instruction and content instruction.

As pointed out by Ramirez & Merino (1991), however, the programme labels are best understood as administrative terms rather than descriptive concepts, since none of the models actually provide specific operational guidelines on how each language should be used in the classroom. In order then for the bilingual programmes planned for the Mozambican context to be carried through and to attain the goals that they set themselves, it is imperative that they be optimally adapted to the specific conditions that characterize this context.

It is also true, however, that in practice, there may be little that differentiates these types of models, and studies have in fact shown that the use of the second language tends to predominate and it may be used in roughly equal ways and proportions across different models, despite the different intentions of each model. One reason for this state of affairs is that many factors impinge upon how programme goals become translated into instructional variables such as classroom discourse and teaching strategies. Not least important among them are factors such as, on the one hand, the language attitudes held by parents and the community and the language use patterns found outside the school, and perceptions on the function of education and the role of the school, on the other. External "sociolinguistic pressures" such as these, and the way they are codified by the school in examination requirements and administrative pressures, and acted out in the classroom in the preferences teachers display in linguistic behavior significantly affect what a programme can attain, irrespective of its formulated goals. This is probably why much international work has pointed to difficulties in transferring the construction of bilingual programmes from one societal context to another, emphasizing that the success of any bilingual programme is heavily dependent on a number of societally specific factors that all programme design and implementation must consider. These factors are wide ranging, and comprise the educational, linguistic, social, economic and political context of the programmes. We will continue by looking more closely at some of the motives for initial vernacular schooling in multilingual settings.

Conditions for success of mother tongue education

Looking at the Nigerian and Zairean situations as examples of solutions where the mother tongues of children play a greater role in education than in the Mozambican schools, and also as examples of countries that have experienced a number of the problems that are inherent in such solutions, one might ask what a harmonious implementation of mother tongue programmes would entail. Akinnaso (1991:43) contends that such programmes can hardly succeed unless there is sufficient funding, research personnel and facilities to provide the possibilities for their serious planning, implementation and evaluation. For each language, it is claimed, what is needed is

- linguistic analysis of the phonology and grammar
- a practical orthography

- preparation of a dictionary and practical grammar
- preparation and testing of primers and supplementary readers
- development of appropriate metalanguage for various subjects
- preparation of textbooks in various subjects
- preparation and testing of teachers' notes and manuals
- development of written material to provide leisure reading materials
- training of teachers and provision of necessary teaching facilities

Obviously, these requirements demand a substantial commitment of time, money and expertise. Essential as they are, however, they address only the technical and material necessities without which a programme cannot function. In line with the points we made above, we would like to add two further requirements that must be taken seriously for a mother tongue policy for teaching to work. The first additional requirement is the necessary diffusion of information that must be the basis for an understanding of the assumptions behind mother tongue programmes, and, in fact, the altering of attitudes. An understanding of how children and parents view language and language acquisition and conceive of the role of the school in this endeavour is a necessary prerequisite for shaping a profitable system or language policy for the schools. The second is the availability of knowledge about the sociocultural specifics of the learning context. This involves among other things seriously considering a set of issues that relate to the nature of the linguistic realities that the child encounters at school. For example, research from many different societies provides evidence that the consideration and adaptation in the classroom of how "out-of school" sociolinguistic and epistemological realities are structured can enhance the child's language, literacy and cognitive content acquisition by creating a socially and linguistically supportive environment for learning new skills (e.g. with respect to the sociocultural routines that the teacher can use to impart information, or to interactionally manage classroom activities).

In this context, it is necessary to stress that funding agencies must realize the entire complexity of changing a school system linguistically. Insufficient funding will only do harm to the development of new programmes. If funding is sufficient for carrying through only some of the components of the programme - for example, the development of teaching materials, but not the training of teachers that is needed in order that they may be able to use the materials - it will result in new wastes, and, what is more serious, will contribute to demonstrating that these programmes do not work either. The critique will be addressed towards the programme as such, while it is in actual fact the implementation of the programme that was flawed. The effect of this is that the particular school system has deprived itself of a forceful instrument for educating children for a long time - until the drawbacks of the second language policy make themselves obvious the next time.

The lesson to gain from this discussion is that the design of a bilingual school programme must carefully consider the very specific and local context in which it will have to function.

Transition to another language of instruction

From what will be reviewed in the next section, it should be clear that the acquisition of a second language to a level where it can be used in cognitive functions takes many years (5-7) (see Cummins, 1981). The question therefore arises when a planned transition to mainly Portuguese medium instruction should appropriately be carried out in an intitial mother tongue programme. In discussing the transition from Swahili to English as media of

instruction in Tanzanian schools, Rugemalira et al. (1990) propose that many students have not yet reached an appropriate level of proficiency in English when they are required to shift to this language at the start of secondary school. The authors base their claim on various studies that show that English is indeed not an effective medium of instruction for large proportions of the students. Citing a study by Criper & Dodd (1984), they state that "throughout their secondary school career little or no subject information is getting across to about 50% of the pupils" (p. 28). The proficiency levels of English remain low also at the university level: "less than 20% of the (University) sample tested were at a level where they would find it easy to read even the simpler books required for their academic studies" (p. 29). It is thus important to make serious provisions for the transition phase and reassure that the pupils' level of proficiency and the linguistic demands in the new language match.

The question of transition cannot be answered until research on different programme alternatives (early/late transition, etc.) has been conducted in the Mozambican context. Neither is it possible at this point to make any suggestions (over and above those that have already been made for the teaching of Portuguese as a second language) of how this transition should be methodically accomplished and planned for.

6.2. Second language acquisition

In practice, the language learning task is necessarily conflated with the task of learning to read and write, but we will leave a discussion of the interaction between the two tasks until later in the presentation. Here, we would like to discuss a few general issues related to the problem of language acquisition in order to sketch a framework for an understanding of the pupils' situation in this respect. An understanding of the children's language learning task is a necessary precondition for the evaluation of the teaching materials and classroom methodologies; these elements play an important part in supporting the language learning of the children and they ought clearly to reflect and accommodate the fact that the majority of Mozambican pupils speak Portuguese as a second language. It is of no use for the materials to pretend that they are addressing other, more language proficient, learners than they actually do.

There is a vast scientific literarure on the topic of second language learning or language acqusition (for overviews, see McLaughlin, 1984, 1985; Larsen-Freeman & Long, 1991). The research that is reported in this literature has been carried out in various types of contexts, although second language acquisition among immigrant and minority children and adults in Western industrialized countries prevail. As many results are basically relevant for an understanding of the relationship between contextual parameters and acquisitional outcomes at a very general level, they are indeed applicable also to concrete situations other than those where they have been derived.

First of all, as mentioned above, it should be understood that a language has a number of functions for its speakers. One important such function - that has often been focused upon at the cost of other functions - is that of being an *instrument for the transfer of information* between speakers. This function is sometimes called simply *communication*. But language is also used for *self-expression* and *group identification* purposes, and not least as a *support for conceptualization and cognition* generally. For an individual to be able to use a language in these various functions, s/he must have internalized an abstract and complex system of phonological, grammatical and semantic regularities as well as a lexicon in which the units - basically the words - reflect these system regularities.

When children learn their mother tongue, they do so from the environment in which this language is spoken - by the parents, sisters and brothers, friends, grandparents, neighbors etc. Thereby, they learn both the language system and the functions for which this system is used as an inseperable whole. They realize very early that pronouncing specific sequences of sounds can be used to get things done, i.e. they use the phonological system to pronounce a word and that, in turn, functions as a directive to another person. It should be noted that there is an interaction between language development and cognitive and social development; language is used as a support for thinking and intellectual reasoning, and, according to the view of many linguists and cognitive psychologists, cognition is important in the development of language. The group identification function of language also becomes very important in the child's choice of variety of its own language. Children have a special ability to adapt to the way of speaking that is current in their environment, and if there is a tension between different ways of speaking in the immediate environment, for example, if the parents and playmates speak different dialects, or even different languages, the variety of the playmates often wins.

When children acquire a second language in an environment where this language is spoken naturally, they go about the task in much the same way as they acquire their first language. Children seem to benefit most from situations in which they can develop the second language systems along with the functions in which it is used as an inseperable whole. It is obvious, however, that the child cannot immediately use the new language in all the functions familiar from his/her first language. For some functions, notably those that have taken long for the child to develop in his/her first language, the linguistic systems and the lexicon must be fairly elaborated, while others require much less.

Children generally have a good ability to acquire the pronounciation of a new language and the basic grammatical system. Coupled with this specific sensitivity to the environment, this ability allows the child who acquires a second language in a natural communicative context quickly to harmonize linguistically with that environment. Hence, the general observation that children acquire a second language very quickly. What is less obvious to the observer is the difference between this aspect of language proficiency and the child's ability to use the new language in its cognitive function, i.e. in conceptualization and as a support for thinking. On the basis of a variety of studies, Cummins (1981) concluded that while it took immigrant children in Canada approximately two years to function on a par with native children in face-to-face interaction, it took them as much as five to seven years on the average to reach a level where they could handle academically complex matters in the second language at the native speaker norm. The fact that it takes a long time to reach a proficiency level in a second language which is in all respects equal to that of ones first language is probably something that has been experienced by any second language speaker. The difficulties are quite obvious, for example, in calculation operations where most second lamguage speakers would resort to their first language for support.

Up until now we have been talking of second language acquisition under conditions that are especially favorable for children, namely acquistion in situations where the target language is spoken in the child's environment. As mentioned above, children seem to be especially sensitive to the meaningfulness of the communication they take part in for their language aquisition ability to be activated. The younger the learner the more important it is for him/her to meet the new language in naturally occurring situations. One may speak of the meaningfulness of the input as a necessary but not sufficient condition for language acquisition to take place. Experience has shown that also fairly young children, and certainly older children and adults, often need a rather structured training as a support for their acqusition of a second language, even if it occurs mainly in natural settings.

What is of particular interest in the Mozambican situation is the insight that most children have great difficulties in acquiring a language in a formal and decontextualized setting. In such settings, it is often the case that children learn to pronounce examples of the target language without understanding what functions could be expressed through these utterances - or even what they mean. Many examples can be cited from the literature where learners in formal settings may have difficulties in linking an utterance to an information content and using it for transfer of content. The following example from Felix (1982:139) illustrates this point:

Are you a girl?
No, I am in Kiel

Many children do not proceed at all from this level in a formal decontextualized situation. Since the learning of the language in such a context is an intellectual task, only children who are otherwise academically successful at school can at all cope with the situation. It has been shown that measures of intelligence correlate highly with success in learning in formal settings, but not with language acquisition in informal natural settings (McLaughlin, 1985:171). Since the conditions are not favorable for the children to use the target language for meaningful communication during the period of acquisition, it is difficult for them to develop the range of functions that occur in such natural settings. Even the intellectually successful pupils, who do in fact proceed, take very long to develop the language to such a level where it also can function in cognitively demanding situations. This unfavorable condition for language development is certainly one important reason - although not the only one - for the high waste rates in Mozambican schools (for figures, see Martins, 1990, and Palme, 1991).

The strategy of using a language in school that the children can not speak or understand also hinders the children from self-expression. A person expresses who s/he is to a large extent through language. It is through language s/he expresses his/her personality and can inform others about his/her earlier experiences. For a person, child or adult, not having the language at one's disposal for these functions implies a severe reduction in identity, and also, through this, in self-esteem. Affective functions of language are also integrally tied to cognitive and social acquisition. Clearly, such a situation can never be beneficial for the children's development. It also prevents the teachers from relating to the child's out of school experiences and to assess the child's actual level of knowledge and ways of thinking.

Given these facts on second language acquisition, what instructional practices and pupil activities facilitate second language acquisition? What influences student output or verbalization? And how should the second language classroom be organized? These are questions we will return to in chapter 7.

6.3. Acquisition of literacy

The fact that Mozambican school children are educated through Portuguese, a second language for the majority, has specific consequences for the acquisition of reading and writing. The current theoretical understanding of the psycholinguistic processes implicated in reading and writing have mostly been gained through empirical research on first language literacy. More recently, however, the specific problems encountered in the acquisition of literacy skills in a second language context have also been investigated. The focus of this research, it should be mentioned, has been on reading rather than on writing.

Current theoretical models proposed for reading (see e.g. Vellutino, Scanlon, Small & Tanzman, 1991; Swaffar, 1988) contend that the ability to read is based on a number of processing types that are activated simultaneously. Technically, reading of alphabetic texts is based on 1) knowledge of the shape of the letters, 2) identification of the sound-symbol correspondence that each letter represents, and 3) knowedge of the orthographic principles of the actual language. Further, the reader must have 4) lexical and 5) grammatical knowledge in the language of the text. S/he must know the lexical stems and inflections that make up the words in the text and the grammatical patterns represented in the text in order to understand its content, something that generally can be taken for granted in L1 reading. In addition, the way a text will be understood by a reader depends upon the reader's 6) background knowledge. In short, reading is carried out utilizing all this knowledge in simultaneous, parallel processing of so called top-down and bottom-up types. The sound-symbol correspondence and the synthesis of smaller units to larger units are the basis for bottom-up processes, while the three other kinds of knowledge, lexical, grammatical and background knowledge, are the basis for top-down processes, i.e. for the reader's expectations, or predictions, as to the content of the text.

In addition, reading is also sensitive to the cultural and social background of the child. It has been shown convincingly that the socio-cultural ideas of what reading is for and the sociolingustic functions of literacy in the local community and the school has a decisive impact on the way reading is acquired, and for what purposes (e.g. Heath, 1983). In this conception, literacy is viewed as a set of discourse practices, i.e. "ways of using language and making sense of speech and writing" (Gee, 1990) - a means to take meaning from the environment. The structure of a communty's literacy events reflects the larger sociocultural framing in which all communication is embedded (Kulick & Stroud, 1990). Numerous studies have shown that children acquire their understanding of literacy as part of becoming socialized into the norms and values of their communities. As literacy is increasingly coming to be seen as a culturally organized system of skills and values learned in specific contexts, so has an understanding of the interactive exchanges that mediate literacy exchanges become a necessary part of understanding what literacy is (Schieffelin & Cochran-Smith, 1984).

The complexity of the reading process implies that reading can take place at very different degrees of depth. This is especially obvious when reading is acquired in a second language, particularly if a child does not fully master this language. Reading can mean that the child can read out aloud the sounds of the words of the text without being able to understand the text itself. Reading of this kind only presupposes ability in the technical aspects of reading, i.e. the first three points mentioned above. Depending on the degree of the reader's lexical, grammatical and background knowledge, s/he will get a more or less rich understanding of the text. For many children in Mozambique, it is the case that they do not have sufficient knowledge of Portuguese vocabulary and grammar, nor, exactly for this reason, of the subject matter of a text. This means that although these children might "read"

a text, it would not be a means for them to understand the content of the text. They would either not understand it at all, or superficially only.

In initial phases of reading acquisition, the child often quickly learns to recognize a few words without being able to analyze them into their smaller components. But in general, the main strategy is to rely on bottom-up processes, i.e. on the ability to identify the letter-sound correspondences, thus decoding the text word by word. Only when this process has been automatized so that words can be identified without the utilization of controlled processes, can more of the top-down/conceptually driven processes be applied. As mentioned above, these processes rely on expectations and predictions on the basis of earlier knowledge and lexical and syntactic context. This means that the child who has limited knowledge at these levels of language and experience will have small possibilities of taking the step from the laborious type of reading that a sole reliance on bottom-up processing implies to more effective strategies.

It is obvious that many more problems result from learning to read in a second language than what has just been mentioned. If the learner has not developed the phonological system of the new language well, s/he will have difficulties in identifying all the phonematic qualities that are reflected in the orthography of that language. This problem does not arise in situations where children learn to read in their first language, since it can be taken for granted that the phonological system actually is developed at the time the child starts to read. This is, in actual fact, one of the bases for judging a child as ready for schooling in those countries that test for this. Other problems are related to the child's lexical and grammatical abilities: A limited and perhaps loosely internalized vocabulary may hinder the establishment of the symbol-word correspondence that must be automatized for fluent reading to take place, and with a restricted grammar, the predictions for how the text will continue, will not be possible. These are briefly the reasons why the acquisition of reading presupposes oral proficiency in the language to be read.

Based on the theoretical insights reviewed so far, there is in fact a very great consensus among reading experts and scientists that the acquisition of the reading skills should be carried out in the child's mother tongue, or in a second language where all the different subsystems are orally developed at the point where reading starts. However, it should also be mentioned that initial mother-tongue literacy acquisition in itself is probably not sufficent. Cziko (1982) reports upon a mother-tongue literacy project in rural areas of Southern Sudan, noting that although the project did make some headway on improving the literacy skills of children, a number of factors constrained the level of skills that were actually attained. Among such factors he mentions a) little or no use of literacy skills outside of school, b) sporadic school attendance of both teachers and pupils, c) little time spent on meaningful reading activities in the classroom designed to show functional uses of literacy, d) reading materials that attempt to utilize the sound-symbol correspondence between written and spoken forms of language, but that do relatively little to emphasise reading comprehension, and e) lack of vernacular reading materials for use in other subject areas (ibid.:312-313).

We believe that every single factor cited by Cziko is also highly relevant in the Mozambican context. Instructional practices that emphasize sound-symbol relationships and that disregard the "meaning" component of reading can frequently be found in Mozambican classrooms. Because of the lack of literacy materials outside of the school, the rote reading practices exercised in the Mozambican classroom comprises just about the only model of what reading is for that the child encounters.

6.4.Texts and readability

Textbooks should obviously be available for the group of users for which they are intended. One way of determining exactly how available they are for various grade levels is to analyze their literacy characteristics. This type of analysis is particularly relevant with respect to the L2 population of users that make up the majority of Mozambican school children. As mentioned earlier, there are other indices of text difficulty that are not captured in these measures. These difficulties are more characteristic of expository texts, and are a consequence of the fact that "scientific texts" employ specific *lexical, syntactic, semantic* and *pragmatic* features that can make a text less available even for L1 speakers. Among the semantic problems found in expository texts we find, for example, a) new technical vocabulary, b) natural, everyday, vocabulary with different, technical, meanings, c) complex strings of words or phrases, d) abundant use of synonyms and paraphrases, e) special means of reference etc. Pragmatic problems center around the fact that children can have limited experience with the set of concepts that are central for the lexical problems. Furthermore, the structure of definitions, rubrics and other text explanatory devices may also be more or less suitable for an L2 speaker. Clearly, text construction variables such as these will only serve to exacerbate the L2 speakers' comprehension problems.

An evaluation with respect to these latter dimensions of text difficulty has necessarily fallen outside the scope of the present investigation. However, within a conception of text book construction that emphasizes the desirability of minimizing the obstacles to content learning that the reader encounters in a stretch of text, so that, for example, new concepts and their lexical and syntactic encodings are introduced in an as familiar linguistic environment as possible for the child, such problems may find a solution. One could argue that it is the nature of expository, pedagogical, texts to introduce and elaborate difficult and unfamiliar content areas with their attendant linguistic and pragmatic specialities. In fact, knowledge of an area of expertise often involves knowing how to talk and reason about the phenomena it deals with. However, it would be feasible to teach complex content in a linguistic framing that it is adapted to the pupils' linguistic proficiency as measured, for example, by the values for dimensions along the oral-literate continuum. The texts currently used in Mozambican primary schools exhibit tremendously high values for abstractness, informativity and elaborateness. On certain dimensions, the values for natural sciences (grade 4) and geography (grades 5 and 6) far exceed that of other textbooks. This state of affairs is not satisfactory. Considering the level of Portuguese proficiency shown by the Mozambican school children, these texts are quite likely impenetrable for the majority of the pupils. A "simplification" of expository texts along these dimensions can help soften their impact on pupils and should facilitate their subject content acquisition.

Referring to a notion of simplification immediately raises the question of how this is best accomplished. It is fairly generally agreed upon that texts that have been simplified sometimes have the consequence that readers find them *more* difficult rather than easier to process afterwards. Part of the problem with simplifying texts along specific dimensions (as proposed by readability formula, for example) is that simplifying one dimension may automatically complexify another part. A change resulting in complex, many-worded clauses becoming shorter units may distort coherence relations between parts of the text, and the substitution of specific and low-frequency vocabulary items for more frequent words may increase the syntactic demands that the reader is confronted with. Clearly, it is also the case that such manipulations may even be dysfunctional from the perspective of the content area presented in an expository text, as they would inevitably imply that subject specific lexical items and syntax would be taken out of the text.

Furthermore, we might want to question the usefulness of simplification of texts as a pedagogical device from a different point of view. It might be the case that simplified texts quite simply socialize readers into using a particular set of reading strategies that would be confined to the school context. When, and if, pupils become real world readers, they will continually be meeting texts of varying complexity and quality, and, as we have pointed out elsewhere, good readers are able to adjust their reading strategies in a controlled and flexible manner in order to solicit text content for different purposes.

6.5. Classroom interaction

There is a general agreement among most researchers and practitioners that the child must be exposed to the second language to a significant extent. What this has been taken to mean in practice, however, differs. In general, it seems clear that when a second language is used as a medium of instruction this is facilitating language acquisition. And in fact, in the Mozambican context, the second language will have to be acquired (even though this takes a large number of years) in order to acquire academic content. What conditions must then be met for second language and content to be integrated?

We have seen that children learn a second language most optimally in situations that demand meaningful communication. Studies of classroom interactive styles (e.g. Long, 1983) argue that contexts that involve active negotiation of meaning are the most optimal. Through a modified interaction comprising *comprehension checks, clarification requests, expansions* and *metastatements*, the teacher can maximize the students' engagement in conversations. Furthermore, teachers that also adapt their level of *linguistic (structural) complexity* ("simplification") to the perceived level of development of the pupil (a natural "strategy" for speakers who are engaged in meaningful communication, i.e. negotiation of meaning, with a less proficient interlocutor) also contribute to pupil engagement and communication. Given these instructional variables, how can the teacher arrange the classroom so that active negotiation of meaning is facilitated? One arrangement that has been found to be successful is that pupils are placed in hetereogenous groups with respect to language proficiency, and allowed to work and communicate around classroom tasks. It is namely the case that student-student interactive discourse is a prime context for communicative negotiations. Another method is to organize classrooms so that they, at times at least, treat concerns that are of immediate relevance to the learner in the classroom. Not least important is the pedagogical style of the teacher and the type of content that is mediated most appropriately by a second language. For example, referential questions, drills and academic content where the discourse rules are characterized by rigidity tend to be negatively related to student verbalization and consequent negotiation of meaning.

However, it is simultaneously very important that instructional techiques for the explicit teaching of the second language be developed. This focus on the teaching of a second language, i.e. acknowledging the fact that the children initially speak another mother tongue has been shown to be a significant factor in successful second language programmes. These techniques must be flexible and designed to articulate with the students' initial level of second language proficiency. This in turn requires access on behalf of teachers and other relevant school personnel to appropriate techniques of linguistic assessment, and routines and procedures for accomplishing assessment of pupils' abilities (see below). Related to what has been claimed above to characterize the second language acquisition of young children, it is imperative that these instructional techniques are not

merely decontextualized and formal exercises in grammatical structure, but functionally and communicatively embedded.

For all of what has been said so far, we must mention an important caveat. It has been demonstrated in research (e.g. Wong Fillmore 1982) that the instructional techniques that enhance student participation in "meaningful" communicative contexts are differentially effective for different groups of students. With Chinese pupils in English speaking schools, adapted teacher communication increased pupils' participation. In Hispanic classes, student-student interactions in hetereogenous proficiency groups was more efficient in this respect. Obviously, we here touch upon socioculturally appropriate ways of entering into meaningful communication. At the present time, we have no data on such factors for Mozambican children. However, it would appear as though the linguistic routines that teachers use to teach Portuguese as a second language are not socioculturally familiar to the child. We would suggest that more time could profitably be expended on using various familiar narrative techniques and other culturally significant pragmatic devices in language learning. At the present time, we cannot suggest in more detail what such techniques could comprise in a Mozambican context, due to the lack of work on culturally specific routines for language acquisition and metalinguistic development.

It is almost a truism at this point that the way in which teachers and students use language is perhaps *the* most significant factor behind ease of communication and educational enhancement. It would be a large step forward if the children could be helped in their understanding of what is going on in the classroom. Interestingly enough, studies show that the complexity of the academic content transmitted in the classroom tends to be lower in those cases where the teacher does not use, or is not proficient in, the mother tongues of the pupils. One reason for this that immediately comes to mind is that it is harder for the teacher to appropriately gauge the level of the pupils in a second language, often underestimating, or not being able to adapt to, their actual abilities. In any case, it is often more difficult for the teacher to "pace" the lessons where there is the risk for miscommunications and misunderstandings.

Many authors have expressed more or less well-founded opinions on how mother tongues should be used in the classroom. Some authors have put forward suggestions on the *optimal relative amounts* of each language to use (Lagaretta, 1977), whereas others have argued that the important consideration should be that both languages are used in *equivalent pedagogical functions* (e.g. Milk, 1990). Other researchers, however, have put forward firm claims that any type of dual use of languages in the same classroom situation should be avoided, in order so as not to "confuse" the child. The view held here, (to be further developed below), accords with those researchers who suggest that switching into a mother tongue should be employed for specific purposes and be differentially employed in different situations.

In what specific ways, then, can the mother tongue be used for content instruction in classes that otherwise teach through the medium of Portuguese. What must be noted here is that it is the pattern of mother tongue use, rather than the quantity of exposure to the language that is the important variable in this context (cf. also the remarks we made above about "meaningful communication in L2"). And in fact, research has shown that switching between languages is frequently determined by specific principles and designed to serve particular functions. For example, in a study of a bilingual classroom with Chinese - English speaking students (Guthrie & Guthrie, 1987), five predominant functions of "code-switching" were found; 1) *translation* (words that students do not know, serving to reduce uncertainty and ensuring comprehension), 2) to construct a *"we-code"* (in order to keep order in the classroom and to mitigate commands and rebukes delivered in the second language), 3) *procedures and directions* (to effectively manage and direct the interactive

flow of lessons), 4) *understanding check* (to elicit areas of miscommunication), and 5) *clarification* (bringing about sensitivity to variable meanings and variable ways of expressing the same content). Although less than 7% of classroom interaction actually took place in the mother tongue, a comparison with another classroom with a similar composition of bilingual students, but with a monolingual teacher, showed that the functional use of the mother tongue enhanced pupils' active engagement in the lessons.

One related, but further, use that can be made of code-switching is to provide *stylistic variation in the instructional language*. A predominant characteristic of current teaching practices in Mozambican schools is the heavy use of *repetition* (often group repetition) to enforce content acquisition, where the same content is reproduced more or less verbatim in Portuguese a number of times. Although rythmic repetition may be a culturally familiar learning routine for the child, its overuse within the classroom to the detriment of more varied and creative routines may contribute to "learning stagnation". At the very least, it risks contributing to the student choosing "rote" solutions to, for example, reading tasks. (One finding from our own reading study was that children attempted to find verbatim answers to comprehension questions in the text they had read.) Code-switching has the potential to combine both the advantages of repetition with the advantages of stylistic variation for the same content.

Not least important in using mother tongues for specific purposes is the opportunity this gives the teacher to engage the pupils' *socio-affective language functions* in the acquisition and negotiation of content. By utilizing those aspects of language that are integrally connected to the coding and expression of primary identities, and by giving the pupil the opportunity to encode culturally appropriate social roles of "novice and caretaker" (e.g. through such didactic and indirect stylistic devices as metaphor and figures of speech that the Mozambican child would appear familiar with from family socialization), the teacher can create a supportive environment for learning by helping the child to develop an interest in lesson content and using familiar pragmatic structures for coping with this content.

7. RECOMMENDATIONS

The research and evaluation conducted within the present project points clearly to the necessity of taking into account the multilingual context in which the primary school child finds itself, and in which the teaching materials and methodologies must function. The purpose of this section is to discuss what this, somewhat programmatic, statement might mean in practice? In other words, what specific recommendations follow from the research and evaluation?

We will attempt to sketch some implications and practical recommendations of the research and evaluation referred to above, and we will accomplish this by presenting proposals for both long-term and short-term measures. The long-term measures involve more extensive remedial action, necessarily based on periods of research and development. An example of such a measure would be the construction of new materials and a new curriculum for Portuguese that would take as their point of departure the fact that Portuguese is a second language (albeit an important one) in a multilingual context. Work on such a project needs to be preceded by language education research in order that the new materials be able to do justice to the Mozambican realities.

Short term measures, on the other hand, have been designed so as to be more or less immediately applicable to classroom practice or in-service teacher training programmes within the framework of constraints and economic restrictions inherent in the present Mozambican system of schooling. One short term measure, for example, that could be implemented straight away is employing pupils' mother-tongues at certain points in the classroom. Another short-term measure (to be detailed below) is the production of glossaries and supplemental pamphlet materials for school subjects.

7.1. On multilingualism, language planning and education

Any suggestions and recommendations on how to improve the language situation and children's linguistic proficiency in Mozambican schools is ultimately dependent on the development of a clear set of language policy documents and procedures for educational implementation. We therefore recommend

1. that follow-up workshops be organized for educational administrators and politicians, where recommendations from scientific reports such as the current one can be disseminated, discussed and revised in dialogue, in order that the findings from educational research be integrated into channels of political decision making.
2. that different official policy and implementation bodies be created and existing bodies be strengthened for the practical enforcement of language policy decisions. The division of labour between different bodies should be clearly limited, and there should be a central coordination of responsibilities.
3. that a policy document be prepared on the societal use of African languages and that this document have legal value. One suggestion may be to legislate that specific languages have limited official status in areas where they comprise a certain percentage of speakers. Furthermore, an educational document, giving children the right to be educated in their mother tongues and securing resources for the development and implementation of this policy should also be prepared. The document should also lay down principles for the use of Portuguese and develop an ideological conception of Portuguese as a second language. This policy document should emphasize and provide

the means for work in areas necessary for developing African languages as educational languages.

4. that a survey of Mozambican languages for pedagogical purposes be initiated in order to determine what languages should be used at which levels of schooling and in which functions. Such a survey would investigate the size of the languages, their demographic spread, their mutual intelligibility, their status, prestige and market value within the societies they are spoken, the availability of literate materials and individuals, the dominance relations of each language to surrounding languages, the historical and socioeconomic origins of the contact situation, the patterns of language use of its speakers. Such factors would enhance the possibility of choosing appropriate languages for initial mother tongue education.

7.2. On bilingual education programmes

One way - perhaps the major way - in which a system of education can take account of multilingual realities is through the design and implementation of bilingual education programmes. Bilingual programmes can, as we have seen, vary with respect to the extent and types of usage of mother tongues and second languages, as well as the relationship between the two languages.

7.2.1. On mother tongues

In order to develop the mother tongue component of the bilingual programmes we recommend

1. that goals be specified for the use of mother tongues within specific bilingual programmes, i.e. for how many school years a certain mother tongue should be used, for what subjects, whether it should be used in parallel with the second language as medium of instruction at certain grade levels etc.
2. that sufficient economic and professional resources be deployed in the development and evaluation of teaching materials and techniques for a select group of languages.
3. that different mother tongue programmes be implemented and evaluated, e.g. fast and long-term transition to Portuguese as a language of instruction.
4. that realistic, attainable and clearly formulated syllabuses for mother tongues be developed at different grade levels with attendant instruments to assess pupils progress.
5. that the idea and objectives of the programme be continually an object of parent and community participation and scrutiny and that school authorities be obliged to disseminate a scientifically correct information about alternative educational programmes.
6. that teachers be especially trained in bilingual teaching methodology and, most importantly, in techniques for the teaching of African languages as first languages.
7. that a system for teacher placement or recruitment be organized in such a way that individual teachers come to teach in geographical areas where their own mother tongues are spoken.

7.2.2. On the immediate implementation of mother tongue use in schools

While a long term implementation of a mother tongue programme needs to be based on the availability of funding, personnel and facilities for serious work, the discussion above about the Zairean situation pointed to problems involved in an immediate implementation of these programmes in a country. The conditions for their implementation must first be created in each area where they are going to be used. It is, however, also possible to take small steps towards a full implementation of mother tongue instruction. The first steps might be to use the childrens' languages orally in explanations and for instruction generally and to successively introduce them into formal teaching, when materials and trained teachers are available.

We would like to recommend

1. that the Mozambican school system immediately introduces the use of mother tongues for selected and auxiliary pedagogical purposes into the classroom. Such purposes that could be served by mother tongues could be translation (of difficult and unfamiliar vocabulary or content), repetition/clarification of content, and as an understanding check.
2. that a "cue-system" or set of guidelines be produced for teachers and explained in in-service training groups, which would assist them in structured and thoughtful use of mother tongues.
3. that terminologies in mother tongues be chosen and standardized by language and subject specialists, and disseminated in an available format to schools.
4. that models of explanatory strategies be developed for specific mother tongues.

7.2.3. On Portuguese as a second language

In order to enhance a wide-spread proficiency in Portuguese, the introduction of the language and its teaching must be carried out more systematically and consciously than what is presently the case. With respect to the teaching of Portuguese as a second language we recommend

1. that the ideology of Portuguese as a second language pervade all grade levels. This means that materials and teaching techniques should incorporate the insight that second language acquisition is a long-term project for an individual. In the Mozambican case it also means, specifically, that it should be taken into account that the pupils are mother tongue speakers of Bantu languages.
3. that guidelines be developed on how materials in Portuguese L2 should be constructed. These guidelines should build on knowledge about second language acquisition generally, and the acquisition of Portuguese as an L2 specifically.
4. that Portuguese as a second language in this context should be understood as the indigenous norm of Portuguese under development in Mozambique and that teachers be asked to participate in in-service training/information programmes on the nature of Mozambican Portuguese.
5. that graded materials for Portuguese as a second language be produced.
6. that instructional techniques for teaching Portuguese as a second language that could function in the Mozambican classroom be explored and implemented. Such techniques should be based on the principle of "meaningful communication", and take the learners' actual level of development in the language as their foundation. These

instructional techniques should also be disseminated among practicing teachers, perhaps in the form of in-service video viewings.

7. that teachers be instructed on how to use Portuguese as an instrument for teaching/learning. This would include sharing experiences on different definitional formats for concepts, using various types of explanation, etc. In other words, extending the teachers' mastery of the Portuguese academic register.
8. that the linguistic demands of the examination system be investigated and eventually revised so as to better accord with the nature of the Portuguese spoken in Mozambique and its status as a second language.
9. that assessment instruments be developed.

7.2.4. On the transition to Portuguese as a medium of instruction

If mother tongues are introduced as medium of instruction in the initial teaching, the most conceivable future scenario is that the children will experience a shift to Portuguese as the medium of instruction at a certain point in their schooling. In order not to exclude children from further schooling, it is important that this transition is not made in an abrupt manner. We therefore recommend

1. that the transition from mother tongue teaching to mainly content instruction in Portuguese be sensitively prepared and flexibly applied for individual pupils on the basis of an assessment instrument and teachers' judgements.

7.3. On the acquisition of literacy skills

In order to improve the teaching of literacy generally and in connection with this give consideration to the child's linguistic background, we would like to recommend

1. that initial literacy skills be taught in the mother tongue (or most proficient language) of the pupil.
2. that the teaching of reading and writing be centred on *meaningful* activities. This involves encouraging the use of literacy skills in a wide-range of different situations (including e.g. writing letters), which would induce the pupils not only to acquire a broader understanding of the range of possible functions of literacy, but also encourage literate discourse among pupils and teachers around the various meanings, uses and implications of specific texts.
3. that pupils be trained in flexibly choosing reading strategies for different purposes.
4. that pupils be required to read texts for comprehension and inferencing and subsequent summary and discussion and that verbatim recall or use of guessing strategies be discouraged.
5. that teachers be instructed on how to arrange their teaching so as to enhance the activities in 1-4 above.
6. that programmes for adult literacy and adult literacy retention be alerted to the importance of a "literate community" for the child's opportunities to understand literacy in action.
8. that various kinds of literacy materials be made available to the community (newspapers, school bulletins, supplementary readers , health manuals etc.).

7.4. On the linguistic construction of textbooks

It is important that textbooks are adapted to the cultural background and the linguistic proficiency level of the children at the same time as they serve to develop the child's knowledge base and language skills. We would therefore like to recommend

1. that a relevant and culturally appropriate curriculum be worked out for each subject area, detailing a reasonably attainable and realistic set of goals for what content should be covered at each grade level, and a motivated set of pedagogical axioms that could function as guidelines for how content should be presented. Such guidelines should center around the need for "bridging" to the pupils experience and encourage more individual involvement and engagement through the use of questions and activities on content that test for understanding and application.
2. that the guidelines should include specific recommendations on how texts should adapt to second language speakers/mother tongue speakers and simultaneously aid in the integrated learning of language and content.
3. that a glossary and manual covering the concepts and terms covered in the texts should be prepared for, and disseminated to, teachers. The manual should contain examples of how "bridging" can be accomplished, and display a variety of definitional and other back-up devices that could be employed to explain content in Portuguese and/or the mother tongue.
4. that teachers must be made aware of what problems in their subject areas arise from linguistic problems, and what problems are a result of differering cultural conceptions of a phenomenon.
5. that the composition of textbooks in Portuguese for the future be based on a corpus of Mozambican Portuguese that will at least allow for an adjustment to a more familiar type of language.

7.5. On classroom techniques

In order to implement the suggestions for educational innovations mentioned above it is necessary that classroom techniques and framing factors are adopted that facilitate the attainment of the learning goals in a manner that is in agreement with pedagogical and linguistic axioms. We therefore recommend

1. that classrooms be restructured and dimensioned so as to allow the use of pedagogical strategies that build on principles of meaningful communication and individual assessment.
2. that different principles of organizing classrooms and using classroom time be developed with the view to encouraging and facilitating peer-group task interactions where meaningful communcation is required.
3. that teachers be aided in understanding the importance of and using socioculturally specific language acquisition routines (narratives, figures of speech) and incorporate these routines into L2 learning and content teaching, so that the varied functional capacities of the language learner (including the socio-affective functions) can be expanded and used for learning.
4. that in-service teacher workshops be initiated where teaching practitioners could debate problems and exchange ideas in the teaching of specific contents.

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