The potential benefits and challenges of implementing bilingual education in primary schools in south Sudan

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THE POTENTIAL BENEFITS AND CHALLENGES OF IMPLEMENTING BILINGUAL EDUCATION IN PRIMARY SCHOOLS IN SOUTH SUDAN

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Children in South Sudan helping set up their classroom by taking the chalkboard to lean against a nearby tree.

(photo by Jacqueline Marshall)

Dedication

I dedicate this to my mother who died while I was studying for my masters degree. She was German and it is to her that I owe my weak bilingualism in German, despite have lived in environments dominated by English. She was unfailingly enthusiastic about any of my achievements and I'm sure that would have been the case for the completion of this masters degree too.

Acknowledgements

I want to express my thanks to numerous people who were willing to send me information or discuss related issues by email and those who met with me to talk about education in South Sudan. They were gracious and generous with their knowledge and their time. I appreciate their thoughtfulness and honesty.

I also wish to thank Marian Bennett for her friendship and encouragement, and for proof reading chunks of this dissertation shortly before its completion.

Mistakes and omissions are of course my own.

Table of Contents

List of Tables

List of Maps

List of Graphs

List of Charts

List of Figures

Abbreviations

AET	Africa Educational Trust
BE	Bilingual education
CDC	Curriculum Development Centre
CEC	County Education Centre
CP	Convergent pedagogy
CPA	Comprehensive Peace Agreement
CUP	Common Underlying Proficiency
EC	European Commission
ESL	English second language (teaching)
ESN	Education Support Network
GER	Gross enrolment rate
GoS	Government of Sudan
IRL	Institute of Regional Languages
L1	First language (i.e. mother tongue)
L2	Second language
MLE	Multilingual education
MoI	Medium of instruction (also known as 'language of learning and teaching')
NIL	National Institute of Languages
MT	Mother tongue
NCA	Norwegian Church Aid
NSCSE	The New Sudan Centre for Statistics and Evaluation
OLS	Operation Lifeline Sudan
RTTI	Regional Teacher Training Institute
SBA	School Baseline Assessment
SBEP	Sudan Basic Education Program
SC	Save the Children Fund
SLC	Sudan Literature Centre
SoE	Secretariat of Education (for SPLA held areas of South Sudan)
SPLA	Sudan People's Liberation Army (military wing of the SPLM)
SPLM	Sudan People's Liberation Movement (political wing of the SPLA)
SRRA	Sudan Relief and Rehabilitation Association (humanitarian wing of SPLM/A)

Summary

The final part of a peace deal between the southern Sudanese rebels and the Government of Sudan was signed on 9th January 2005. After over 20 years of the most recent civil war, this allows the possibility of real development taking place in all sectors in South Sudan as opposed to survival and emergency measures only.

The emerging Government of South Sudan has a favourable policy towards the use of children's first language as a medium of instruction in the early years of primary school, transitioning later to English; a form of bilingual education (BE). However very little education has taken place during the civil war and no recent school materials exist to support this policy. This study looks at the possibilities of implementing BE in primary schools in South Sudan. The aims are, (1) to assess the situation in South Sudan, (2) determine the potential benefits and challenges of implementing BE in primary schools, and (3) to suggest strategies for its implementation.

The primary method of research used has been a literature and document survey. This has been supplemented with email and face to face discussions with those involved with languages and education in South Sudan.

This study first presents the theory and research behind BE and the different models of BE that exist. It then examines the language and educational context of South Sudan. In terms of languages, South Sudan has up to 52 local languages with Juba Arabic known as a trade language and some use of Sudanese Arabic and English.

In the light of the BE theory and research, and the context of South Sudan, it explores the challenges of implementing BE, of which, how languages will be chosen is one. It also finds that there are many benefits to BE. In terms of pedagogical benefits, it gives children who do not know English access to education, it allows more interactive learning, it is supportive of local culture, it is a good foundation for learning English and it should decrease class drop-outs. Its main disadvantage, is that it will need investment costs and will take time to establish. Once set up though, recurrent costs should not be higher. As a system, there is one aspect which would be an advantage over an 'English only system', namely it could make positive use of individuals with lower education and less knowledge of English as lower primary school teachers. Given the lack of highly educated people in South Sudan, and the need to get an education system established, this would be helpful.

The study finds two factors key to the implementation of BE, (1) continued political will of the southern education authorities and (2) donor support for BE. It recommends some short-term steps that the southern authorities could take towards starting to implement BE.

Word count of the dissertation = 11978

Chapter 1: Introduction to the study

1.1 Introduction and aims

Apart from 11 years of peace from 1972 to 1983, Southern Sudan has been in a state of civil war from around the time of Independence in 1956. In January 2005 a Comprehensive Peace Agreement (CPA) was reached between the Sudan People's Liberation Movement/ Army (SPLM/A), the main rebel movement in the South, and the Government of Sudan (GoS). The SPLM is now in the process of becoming part of a Government of National Unity[1]. An early challenge to the CPA came when John Garang, leader of the SPLM was killed in a helicopter crash at the end of July 2005, only three weeks after his inauguration as Vice President of Sudan. But his deputy, Salva Kiir, has now been sworn in, in his place. Conflict still exists in Dafur and there are problems also in eastern Sudan between the GoS and the Beja people. Indeed there still seem to be some problems with tribal clashes and militias in the South, but basically the cease-fire there has held. For Southerners, some hope now exists for normal life, including the chance for children, likely to be the first of several generations, to go to school.

The SPLM had some systems in place to administer the areas under its control, but it had almost no resources to do much in the way of provision of services like health or education. This dissertation focuses on the area of children's education, and more particularly on that of language and education in primary schools. Language is certainly not the only reason for the conflicts of Sudan, but it is often cited as one contributing reason for the conflicts usually with reference to the process of 'Arabisation' and the imposition of the Arabic language. Perhaps partially as a consequence of this, southern Sudanese are proud and possessive of their languages. Arabisation has also led Southern Sudanese to a preference for English over Arabic. In line with this, policies of the SPLM[2] have been very supportive of cultural diversity and use of indigenous local languages as the medium of instruction (MoI), at least in the early stages of primary school, with a later transition to English. But making

[1] In Sudan's National Assembly, President Omar Al Bashir's National Congress Party (NCP), will get 52% of the seats, the SPLM 28%, and all other opposition parties throughout Sudan will share the remaining 20%. (King, 2005)

[2] The main documents describing the language and education policies of South Sudan are:
'Education Policy of the New Sudan and Implementation Guidelines' (SPLM 2002:4) and 'Syllabus for Primary Schools', volumes 1 and 2 (SoE 2002a; SoE 2002b).

policy is only a first step. There are pressures now to build an education system, and in this immediate post-conflict situation, uncertainties and shortages of resources persist. Additionally, there are other complicating factors, like a large number of indigenous languages.

The aims of this study are, (1) to assess the situation in South Sudan, (2) determine the potential benefits and challenges of implementing bilingual education (BE) in primary schools, and (3) to suggest strategies for its implementation. By BE, the author means a system which uses both the first language (L1) or mother tongue (MT) of the children, and a second language (L2), as MoIs in school. The system suggested by the policies of the SPLM, is that the MT is used as the MoI for the first three years of primary school and English is used as the MoI thereafter.

1.2 Justification

More awareness exists world-wide today of the benefits of children having some of their education through their L1. Dutcher (2004:10) gives some of them:

- improved language competencies in the L1
- better achievement in other subject areas
- higher level of self-esteem
- increased community and parent participation
- solid foundation for learning a second or third language

However, millions of children still start school in a language they barely know, and the issue of language use in education has often been ignored[3]. The author's own interest in these issues arises from her time working with Southern Sudanese, on literacy related projects, from 1998-2002 with SIL-Sudan[4].

[3] E.g. in terms of Western scholars commenting on education in developing countries, neither Kenneth King's (1991) study of aid to the developing world and the role of donor agencies in the education sector, nor Colclough and Lewin's (1993) study, 'Educating All the Children. Strategies for Primary Schooling in the South' has any analysis of the role of language in education.

[4] SIL-Sudan is the Sudan branch of SIL International. SIL International is 'a faith-based organisation that studies, documents, and assists in developing the world's lesser-known languages. SIL's staff shares a Christian commitment to service, academic excellence, and professional engagement through literacy, linguistics,

In terms of language, Sudan shares features with other African countries. It is linguistically diverse, little is written in many of its languages or the languages are not written at all, and to get on with life, people have to use and know several languages. This multilingual reality is normal for the majority of people in the world. This study wrestles with the issues of how school systems can better reflect that reality and how bilingual or multilingual education can be implemented, in complicated, linguistically diverse settings, where resources are often limited.

1.3 Scope

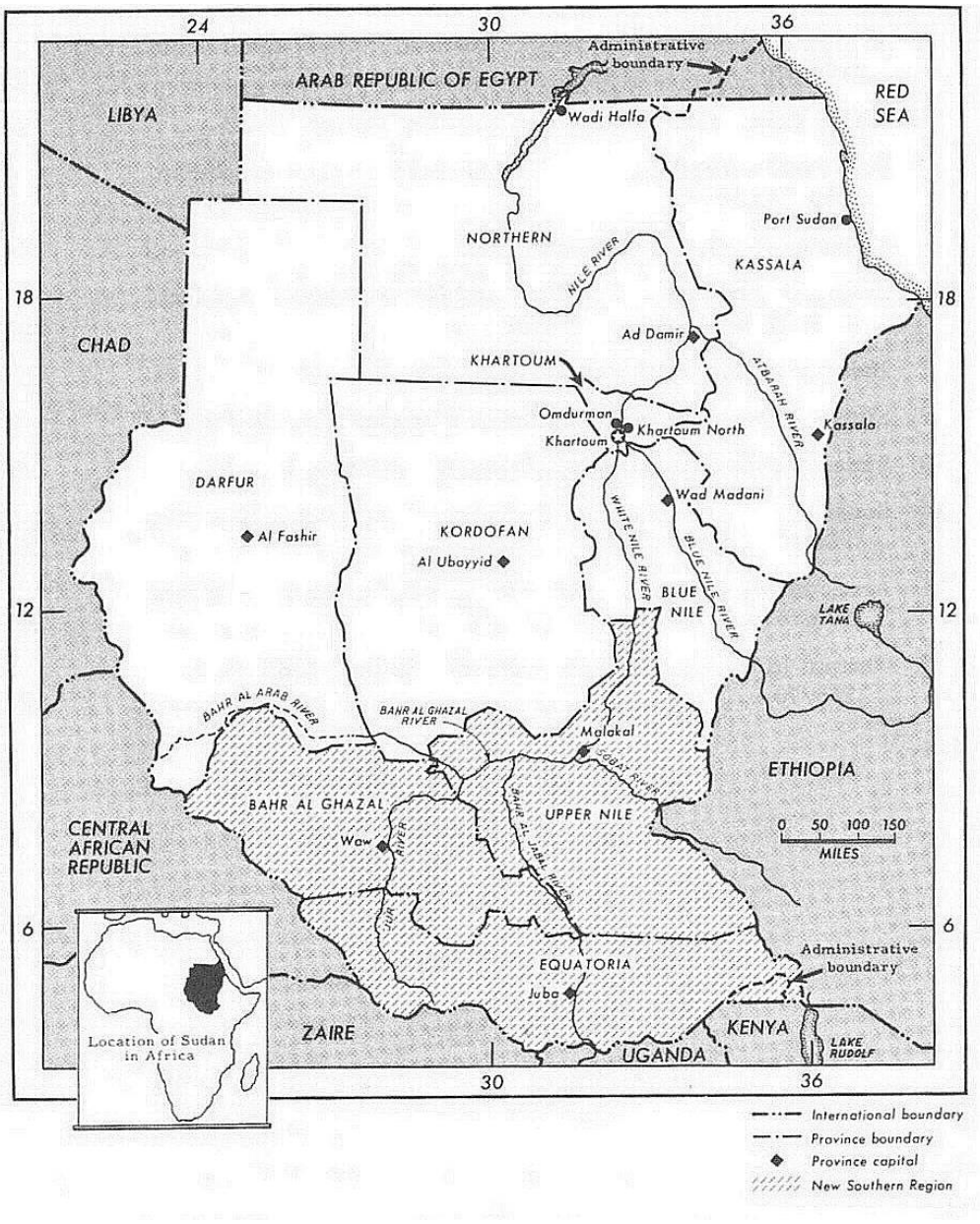
This study focuses on the implementation of BE in primary school. It also focuses on South Sudan (as defined at Independence in 1956[5]) rather than Sudan as a whole, for the reason that the South has had a somewhat separate identity and history. This area is shown in Map 1 below. The term 'South Sudan' or the 'South' is used to refer strictly to this area. The term 'southern' or 'south' is used to indicate more ambiguously the portion toward the southerly end. Under the CPA the South will be semi-autonomous. In addition, the agreement includes the holding of a referendum in 6 years under which South Sudan may secede if it wishes (BBC 2005). However, the context of the whole of Sudan cannot be ignored and will be considered.

translation, and other academic disciplines. SIL makes its services available to all without regard to religious belief, political ideology, gender, race, or ethnic background.' (SIL 2005b)

[5] The protocols makings up the CPA agreement define 'North' and 'South' in these terms referring to the 'South/North border of 1/1/1956' (e.g. see 'Agreement on Security arrangements during the interim period', Sept 2003 (SPLM and GoS, 2003).

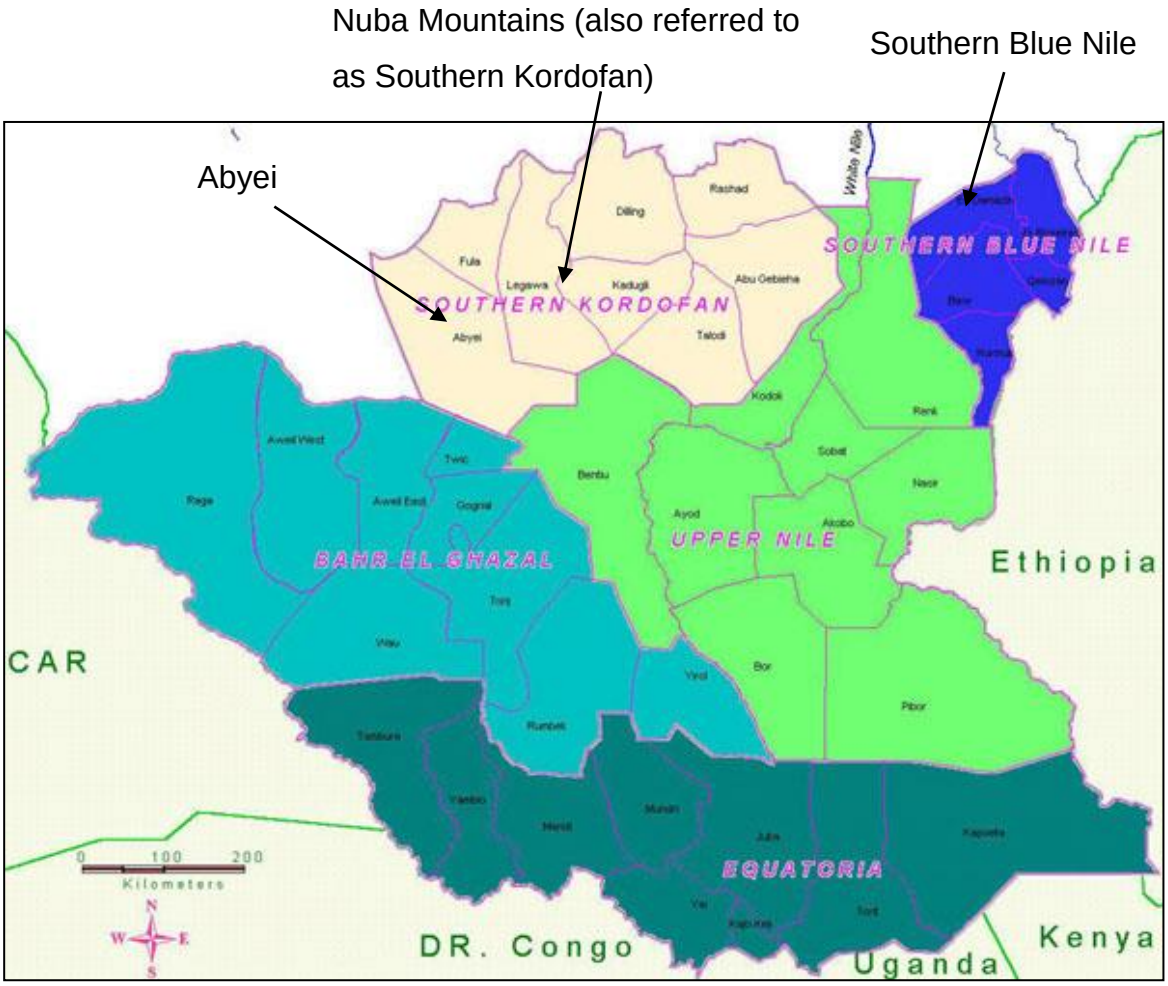
Map 1 The provinces of Sudan in 1973 showing the Southern Region

(from Nelson et al. 1973:xiv)



There are areas which some would regard as part of the South which are referred to as the contested or disputed areas. These are Abyei, Nuba Mountains and southern Blue Nile and are shown in Map 2. They are treated differently under the CPA, and will not be the main focus of this study. For more information on them see Appendix 2.

Map 2 South Sudan and the contested regions



1.4 Methodology

Primarily the method of research used has been a literature and document survey. This included both primary documents[6] and secondary documents[7].

These have been supplemented by email discussions with key informants involved in education or languages in South Sudan. A number of other people provided helpful information through informal conversations. In addition, a two week trip was made to Nairobi, Kenya in July 2005 to meet more formally with people involved in education, a number of whom were at senior levels in key organisations. Where individuals allowed, the author taped and later transcribed these discussions, whilst letting the informants know that a full transcript of

[6] Government statistics, internal and external reports from various organisations involved in education in South Sudan.

[7] Books, journal articles and articles from the internet.

the discussions would not be included in the study. Occasional though, pertinent quotes have been included (anonymously, if so desired by the interviewee).

The approach used was close to that of an unstructured interview. Although discussion was centred around broad themes relevant to this dissertation, the author wanted the interviewees to speak freely on their own terms about the issues raised and be free to raise other relevant issues. (Robson 2002:281)

The individuals met more formally included the following:

	Role and Organisation
William Ater	Deputy Commissioner of Education for the Secretariat of Education for the SPLM
Michael Brophy	Director of Africa Educational Trust
Scopas Elias	Freelance Adult Education Consultant
Christine Perkins	Education Advisor for ACROSS
Thomas Tilson	Deputy Chief of Party/Education Support Manager for CARE/ SBEP

Most of those spoken to, were involved in the planning, management and policy level of education, rather than those closer to the practice of it (e.g. teachers, children, parents). The individuals consulted, formally and informally, were a mix of expatriates and Sudanese. Whilst it would have been beneficial to include more people involved in, or impacted directly, by the practice of education, it would have been beyond the time available for this study.

1.5 Overview

Chapter 2 gives an outline of some of the theory and research underpinning BE. The practical implications of implementing BE, specifically for the case of South Sudan are dealt with in Chapter 4, after Chapter 3 has covered the particular language and educational context of South Sudan. Broader issues affecting implementation such as the socio-political environment and costs are also considered in Chapter 4. Chapter 5 gives the study's conclusions and recommendations.

Chapter 2: The basis for bilingual education

This chapter gives an outline of some of the theory and research underpinning bilingual or multilingual education. It focuses mainly on the potential pedagogical effects and models of BE.

2.1 Bilingualism

> *…a person's ability in two languages are multidimensional and will tend to evade simple categorisation.*
>
> (Baker 2001:6)

Being bilingual is more complex than one might first think. Baker (2001:3 following Valdes and Figueroa 1994), suggests the following criteria to classify the type of bilingualism:

1. Age of L2 acquisition (simultaneous with L1/ sequential/ late).
2. Ability (incipient/ receptive/ productive).
3. Balance between the two languages.
4. Development (ascendant: L2 is developing along with the L1, recessive: one language is decreasing[8]).
5. Contexts where each language is acquired and used.
6. Choice to learn the language (must the person learn the language in order to function effectively, or do they have a choice?).

Language ability is split into four areas; speaking, listening (understanding), reading and writing. Someone may be competent in reading a L2 but not good at speaking it. Or they may be able to speak and understand a language without being literate in it.

A bilingual can be viewed in two ways, either (1) a fractional way- as two monolinguals in one person, or (2) an holistic way in which 'the bilingual is not the sum of two complete or incomplete monolinguals, but that he or she has a unique linguistic profile' (Baker 2001:7). There is much to support view (2). Research relating to brain functioning shows that language processing in both bilinguals and monolinguals is similar in that it is dominated by the left hemisphere. In addition, a bilingual's languages are not stored in completely different locations in the

[8] Also referred to as additive or subtractive bilingualism.

brain. Another issue is the extent to which the two languages function independently or interdependently. Evidence exists for both of these. (Baker 2001:143-144; Grosjean 1994:1659).

Another term that is used, is that of being a 'balanced bilingual', where competency in two languages is similar (and fairly well developed) across similar domains. This concept is used a lot in research and theory but has some limitations. Fishman (cited by Baker 2001:7) argues that a person will rarely be equally competent across all situations. Similarly Grosjean says, 'bilinguals acquire and use their languages for different purposes, in different domains of life, with different people' (Grosjean 1994:1656).

Being bilingual used to be viewed as a disadvantage, e.g. Laurie, a professor at Cambridge university said a bilingual's 'intellectual and spiritual growth would not thereby be doubled but halved. Unity of mind and character would have great difficulty in asserting itself in such circumstances.' (Laurie 1890 cited by Baker 2001:135).

Early research (from 1920s to 1960s) usually compared monolinguals and bilinguals through intelligence tests and usually showed monolinguals to perform slightly better. However, much of this research is now seen as flawed, because it did not for instance match the compared groups socio-economically and normal statistical variation was not always taken into account (Baker 2001:136-138).[9]

There are also a small number of studies in the same time period that show no difference in IQ between bilinguals and monolinguals (Baker 2001:139-140).

Studies from the 1960s onwards, show mostly positive cognitive benefits for bilingualism, though testing moved away from IQ testing to a multi-component view of intelligence and cognition (Baker 2001:142). In Baker's (2001:147) view, the weight of evidence suggests that balanced bilinguals have superior divergent thinking skills compared with unbalanced bilinguals and monolinguals. In addition they have increased metalinguistic

[9] E.g. D. J. Saer (cited by Baker 2001:136) in 1923 found a 10 point difference in IQ between monolinguals and bilinguals (with the bilinguals lower) in a sample of 1400 children from a rural area of Wales. When W.R. Jones re-analysed Saer's research in 1966 he found no statistically significant difference between the two groups (Baker 2001:138).

awareness[10] (Baker 2001:152). There are various explanations for why this might be the case. One is that bilinguals have a wider and more varied range of experience and meaning than monolinguals due to their operating in two languages and probably two or more cultures (Baker 2001:156). These beneficial effects only seem to be present in balanced bilinguals, not in weaker or less balanced bilinguals.

2.2 Cognitive theories relating to bilingual education

Theories relating to BE for children, have to take into account that cognitive development is taking place at the same time as language development of two or more languages. Cognitive development is a broad term referring to the development of the mind and mental processes. Mental processes relate to things such as perception, understanding, memory, problem solving, imagery and language (Carroll 1999:5).

There are a number of key points that the author sees as the basis for cognitive theories relating to BE:

1. Thought is not completely language specific. Although language is always used to express thoughts and emotions, part of thinking is language independent and deals not with words but concepts or feelings.[11]
2. Though the relationship is not simplistic, cognitive and language development are linked and the link is not solely in one direction (Brown 2000:37-38).[12]
3. Significant language development and cognitive development continue to take place through childhood and adolescence. Regarding language development, some people think children have finished learning their L1 by the time they go to school at the age of five or six. However, even in terms of spoken language, this is not true [13]. The well known developmental psychologist, Piaget, considered cognitive development to go

[10] Metalinguistic awareness can be defined as 'the ability to think about and reflect upon the nature and functions of language.' (Baker 2001:150)

[11] Most will have experienced times, even in a L1, when they know and have a sense of what they are trying to describe but have 'lost' the most appropriate words to use.

[12] Almost all agree on this, but the nature of that link is viewed differently by different theorists and researchers. One of the major variables is how much the cognitive processes associated with language learning and use, are general purpose (e.g. used for other kinds of learning), or restricted to language use and learning. Research provides some support for both. (Carroll 1999:317–329)

[13] By around the age of 6 children will have mastered most of the phonology (sound system) and the grammar of their language (apart from rarer forms). They will have an adult like pronunciation and will have learnt 8000 to

through four stages though childhood and adolescence. At the end of the final stage which covers ages 11-15, he considered the child's cognitive structures to be like those of an adult including conceptual reasoning.

4. When a person owns two languages they work somewhat interdependently

Jim Cummins has been one of the main contributors to this area, and has proposed a number of related models/ theories which are based on the above points, and other research findings. Cummins' theories, provide a cognitive explanation for the effects of BE. This is not to say that there are not other additional explanations (e.g. social and cultural).[14]

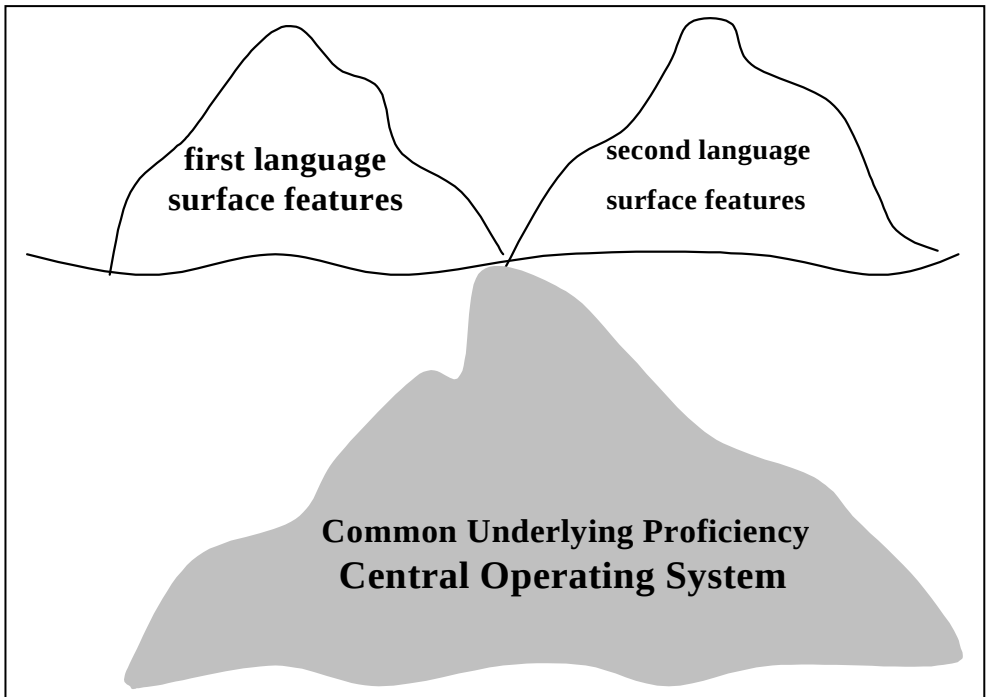
A pictorial representation of Cummins' main model, the 'Common Underlying Proficiency (CUP)' model, and a description of it including its implications are given below (following Baker 2001:165-166)[15]. It uses the analogy of an iceberg to show that that two languages are visibly different in conversation, but underneath the surface, the languages are fused and do not function separately.

12000 words (about 4 words a day). From the ages of 6 through 12, children accelerate their learning of vocabulary, tripling their word learning rate. By the age of 20 they will know about 70000 words (from about 20000 word families). They will have learnt to describe complex topics, relationships between ideas, and use language in metaphoric ways (Dutcher 1995:2 following McLauglin 1992).

[14] Jim Cummins would also be agreement with effects of socio-cultural and political factors on the education of minority children (e.g. Baker 2001: 393-397).

[15] Other theories of Cummins', which the author does not cover here are the 'Thresholds theory' and 'Developmental Interdependence Hypothesis' (Baker 2001:166-170). They are not covered, because in the author's view it seems they can largely be drawn from the CUP model.

Figure 1 Cummins' CUP model



1. When a person owns two or more languages there is one integrated source of thought.
2. Bilingualism and multilingualism are possible because people have the capacity to easily store, and use two or more languages.
3. Cognitive functioning and school achievement may be fed through one monolingual channel or equally successfully through two well-developed language channels.
4. The child's language ability in whatever language(s) is used in the classroom needs to be at a level to be able to meet the demands of the class.
5. Speaking, listening, reading or writing in a L1 or L2 helps the whole cognitive system to develop. However if children are made to operate in an insufficiently developed L2, the system will not operate at its best.
6. When one or both languages are not functioning fully (e.g. because of pressure to replace the home language with another) cognitive functioning and academic performance may be negatively affected.

2.3 Language, identity, culture and indigenous knowledge

Other reasons supporting BE revolve around language, identity and culture. People associate their language strongly with their own identity. Culture, worldview and language have developed alongside each other. While it

is true that any language can be used to express anything, some concepts are easier to express in some languages than others. A language will reflect history, rites, correct social behaviour, and knowledge of the immediate environment[16] (Brown 2000:200, Gfeller and Robinson 1998:26). Heugh (1999:310), takes this further saying, 'there are bodies of indigenous knowledge which reside within each linguistic community which remain untapped or hidden in situations where the status of some languages are reduced.'

Many minority groups in the world are in the process of loosing their languages[17]. Associated with this, these groups are almost certainly feeling psychological and emotional pain. BE which includes minority group languages can help cultures to survive and thrive, while giving children access to other languages which are economically or political useful. It also allows participation of members of the community in education as well as the participation of older pupils in the life of the community (Gfeller and Robinson 1998:22).

Pedagogically, in terms of moving from the known to the unknown it makes sense to start with the child's own language, worldview and environment. Without use of a familiar language, interactive teaching methods are impossible. In addition it is much more difficult for children to grasp the fundamental idea that print has meaning when learning to read in a language they do not understand well. Similarly, in terms of spoken and written language it is difficult to be creative.

Given all the above, some argue for linguistic rights. At the moment there is no universal covenant of linguistic rights[18] although language rights are weakly covered in some of the other covenants (they do not cover L1 education) (Skutnabb-Kangas 2000:482-483). Heugh (1999:309-312) says that a rights based approach alone has little chance in succeeding in Africa because of the relatively wide gap between state administration and civil society. However, she says that African languages and multilingualism have an economic value because African countries are increasingly trading with each other so that African languages of wider communication, e.g. Arabic, Hausa and Swahili, not just English are important. In addition she says that development has been

[16] Skutnabb-Kangas (2000:99) gives a nice example of language specificity to environment from the Sami language (Samis live in the European Nordic countries), '…what do you call a four year old male reindeer with a white spot on one leg, and with the antlers pointing forward? In one word please?'

[17] Probably 50% of the total world's languages (around 6000) will disappear in the next hundred years. (Crystal, 2000:19)

hindered because local realities and indigenous knowledge have not been the basis on which development strategies have been built.

2.4 Different models of bilingual education

Bilingual education is a simple label for a complex phenomena.

(Cazden and Snow 1990 cited by Baker 2001:192)

BE involves education using more than one language. However the presence of bilingual children in the class alone does not denote BE. The curriculum needs to use and promote two or more languages in some way, and one of them should be the child's L1. Many different models are possible. Some variables are given below:

- The aim in language terms (monolingualism/ bilingualism and biliteracy).
- The cultural and societal aim (pluralism and multiculturalism/ assimilation/ apartheid).
- How the languages are used (taught only as a subject/ used as MoI to teach other subjects).
- The relative time allotted to the use of different languages throughout the years in school. Models which have a focus on L1 for a few years before switching to mainly L2 use are called 'transitional' models. Models which continue to devote some time to L1 whilst also developing L2, and using both as mediums of instruction, at least through primary school are referred to as 'maintenance models'.
- The typical child in the class, e.g. whether they have a minority or a majority language as their first.
- The 'language profile' across children in the class, i.e. whether they are all from one 'language profile' or from a mixture.[19]

(Baker 2001:193-194)

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[18] Some work has been done on a universal covenant of linguitics rights partially under UNESCO (Skutnabb-Kangas 2000:501)

[19] Some like Skutnabb-Kangas(2000:628) emphasise that bilingual education is not just for minority children. If the societal aim is truly pluralism, then majority children need to become bilingual/bicultural too.
This has interesting implications in other ways as well. In South Africa there are 11 national languages which include 9 indigenous African ones and Afrikaans and English. In a paper on the use of English in South Africa, one recommendation that the writers make to redress some of issues to do with relative status and power of languages, is that all teachers should know or learn at least one of the African languages to a basic level (Granville et al. 1998). In the author's view this is a positive and helpful step in trying to create a more multicultural/multilingual society and make those who usually have power (those with high competency in English) into learners too.

A distinction is made between 'strong' and 'weak' forms of BE. Those which have language and societal aims of pluralism, biculturalism and biliteracy are strong. Most academics writing on this classify transitional models as weak forms of BE (e.g. Baker 2001:194). [20]

Models often refer to children who speak minority and majority languages which makes sense in settings where there is a clear majority language. However, in many African contexts there is no indigenous majority language for a country; everyone comes from a language minority. Often an ex-colonial language is used in education and government, though widespread knowledge of this may be weak. So ironically, almost no one has the privilege of being educated to a significant extent through their L1, a situation which would seem unthinkable elsewhere.

Some of the different models of BE are illustrated further in the following section on research results.

2.5 Research results on bilingual education

> *Research has shown that speed of learning a second language is not necessarily related to the amount of exposure to the second language, especially when that exposure to the second language comes at the expense of the development of the first language.*
>
> (Dutcher 1995:3)

Overviews of the results of two relevant studies/ programs are given below. The Thomas and Collier study, though from America, is key because of its size and comprehensiveness. The other program is from Mali, which

[20] Skutnabb-Kangas (2000: 610) however says that the main difference between a maintenance and transitional program 'is not mainly the number of hours through the medium of the MT of the students or whether the transition happens in grade 7 or 9…. It is in the status of the minority MT and the ideology behind this.' One of her points is that minority language children should not have to be constantly having to prove that use of their language is not a problem. However Skutnabb-Kangas (2000:627), amongst her principles for successful multilingual education (which she defines as leading to high levels of multilingualism, a fair chance of success in school achievement, and positive intercultural identities and attitudes), says at least 8 years of support (i.e. use as main medium of education) should be given to the language that is least likely to develop to a high formal level, which would seem to rule out a transitional model.

has many similarities in conditions to other African countries. There is much other research that supports the findings below (e.g. see Baker 2001; Skuttnabb-Kangas 2000; Dutcher 1995; Heugh 1999).

2.5.1 Thomas and Collier study

This compared different types of BE in USA. Data was collected from 5 participating school districts between 1982 and 1996. It used over 700,000 language minority student records which included 42,317 students who had attended the schools for 4 years or more. Data covered kindergarten to grade 12. At the time it was the largest database of language minority education data[21]. All the students had no prior exposure to English and their L1 was mostly Spanish. (Thomas and Collier 1997)

It found three key predictors of academic success for language minority students (Thomas and Collier 1997:15-16):

1. Cognitively complex on-grade-level academic instruction through students' L1 for as long as possible (at least through Grade 5 or 6) and cognitively complex on-grade-level academic instruction through the L2 (English) for part of the school day, in each succeeding grade throughout students' schooling.
2. The use of current[22] approaches to teaching the academic curriculum through two languages.
3. A transformed socio-cultural context[23] for language minority students' schooling.

A comparison of the different programs for English reading tests is given below:

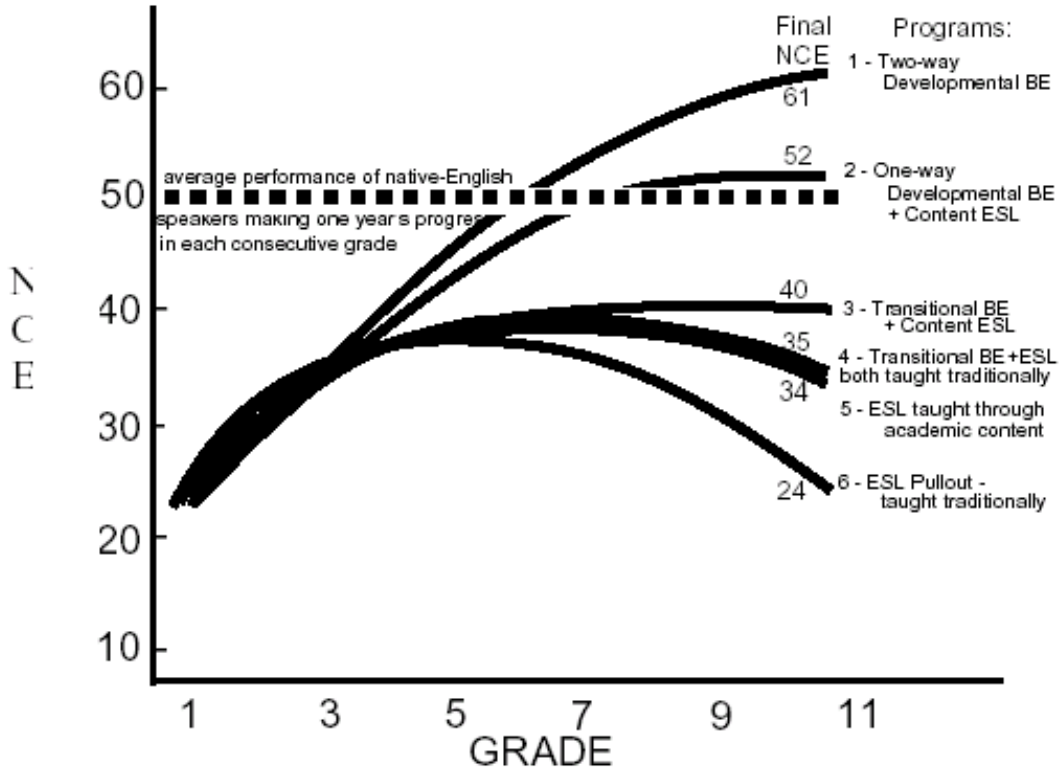
[21] The author of this study believes this is still the case.

[22] By 'current approaches' it means interactive learning, combining language and subject content teaching, use of cognitively complex but on-grade tasks, curriculum that reflects the diversity of the students backgrounds.

[23] The aim here is two create the same supportive sociocultural context for learning two languages as the native English speaker has for English.

Graph 1 Thomas and Collier Study: Results of standardised tests in English reading

(Thomas and Collier 1997:53)



key to graph:	
NCE: normal curve equivalent	
Programs on the graph: (Programs are listed from stronger to weaker. Also note that none of the programs uses the L1 as MoI beyond grade 6)	
1. Two-way developmental	Language minority and majority students are in the same class. Both English and Spanish (or other MT) used as MoIs, at least to grade 6. Language and literacy instruction provided in both languages. After grade 6, all students are mainstreamed into English based classrooms, but with an effort to include the minority language as a subject.
2. One-way developmental	Only language minority children are in the class. L1 and L2 are used as MoI for 6-7 years. Initial literacy in L1. After grade 6 all students are mainstreamed into English based classrooms.
3. Transitional bilingual education with content based English second language (ESL) teaching	Language minority children receive 2-3 years of education in their L1 with ESL teaching provided via academic content. Initial literacy is provided in L1. The aim is to mainstream the children by the end of the 3rd grade.

4. Transitional bilingual education with language based ESL teaching	Language minority children receive 2-3 years of education in their L1 with ESL teaching provided via traditional language based instruction. Initial literacy is provided in L1. The aim is to mainstream the children by the end of the 3rd grade.
5. Content based ESL teaching	Language minority children receive 2-3 years of ESL in the context of academic content instruction. This is usually done via 'pull-out classes'.
6. Language based ESL teaching	Language minority children receive traditional ESL instruction. This is usually done via 'pull-out classes'.

From the graph it can be seen that, only in the strong programs, the one and two way developmental BE programs do children ever catch up with their MT English speaking age-mates in English performance. Even then, it is only after 5-6 years that they match their English speaking age-mates. Minority children have a moving target, as the native English speaker performance will be improving every year. Also, in the long term those with content ESL as opposed to traditional ESL do better.

Thomas and Collier (1997:49) summarise, '… the message from our findings is overwhelmingly clear. All language minority groups benefit enormously in the long-term from on-grade-level academic work in L1. The more children develop L1 academically and cognitively at an age-appropriate level, the more successful they will be in academic achievement in L2 by the end of their school years.'

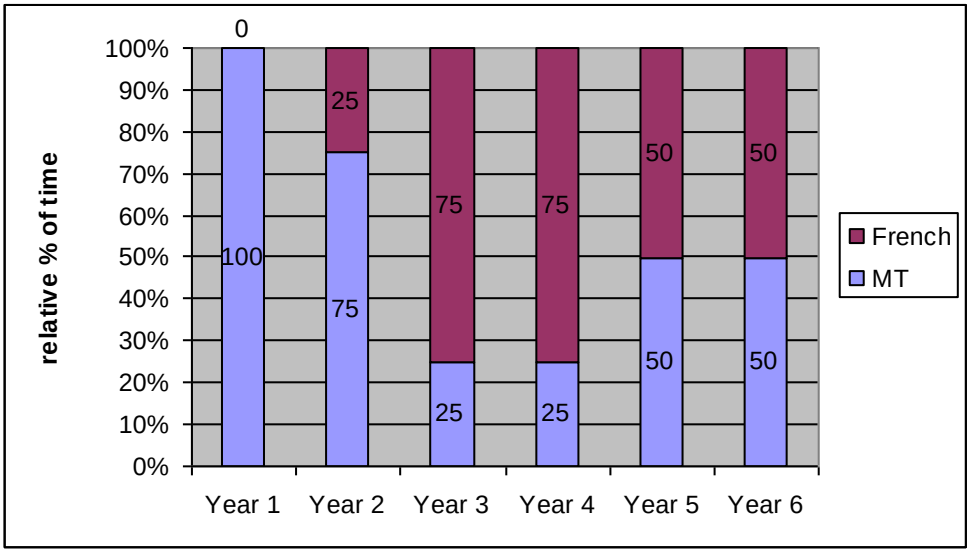
2.5.2 Mali: 'Convergent pedagogy' and mother tongue use

During the colonial period, French was the MoI in schools in Mali. In 1987, a new system was introduced to combat the low quality of education. This uses the MT as MoI throughout primary school along with French. Grade 1 is conducted wholly in the children's MT. French is introduced orally in grade 2, and the percentage of instruction in French increases over the six-year primary cycle. The same primary school leaving exam is taken in French. A new student-centred approach referred to as convergent pedagogy (CP) is also used. Bender says, 'This is based on the idea that instruction should build on students' prior knowledge, that all new learning must be connected with prior knowledge, that prior knowledge is valuable and worth reinforcing in school, that traditional/home values are important, and that children's home communities are and should be a source of learning. …This involves whole-language type methods for the teaching of reading… Finally, it calls for the use of national languages.'(Bender 2001)

The time allotted to each language throughout primary school is given below:

Chart 1 Relative use of languages through primary school for schools using convergent pedagogy in Mali

(following Canvin 2003:216)



In 2001, 16% of schools were using CP in 8 out of 11 of Mali's national languages. The results of these schools, compared with others, in the school leaving exam (in French) are given below:

Table 1 Percentage of pupils passing school leaving exams in Mali in the two approaches

(Bender 2001)

Region	**Convergent pedagogy**	**Traditional**
Bamako	76	57
Gao	60	54
Kayes	68	49
Koulikoro	93	61
Mopti	69	51
Segou	47	45
Sikasso	65	46
Timbuktu	62	62

It can be seen that the exam pass rate is higher for CP[24]. Children in CP programs are also 5 times less likely to repeat a year and 3 times less likely to drop out (World Bank 2005). If anything, children in CP schools are from a lower socio-economic status than those in traditional schools because parents from a higher socio-economic status tend to favour the traditional approach and insist on their children going to those schools. There are other positive results. Students were much more motivated, confident, curious, respectful of tradition and helpful at home (Bender 2001). The results cannot be put down totally to a switch in MoI. Nonetheless a CP type approach would be impossible without the use of the MT.

2.5.3 Other research results

There are a few other findings from research that are relevant to BE (Dutcher 1995:3-4, Baker 2001:172):

1. Young children, with the exception of accent acquisition, do not learn languages better that older children.
2. There seem to be two kinds of language skills needed for children in schools: (1) social communication skills, and (2) academic language skills.[25] The first can be acquired in an L2 in 1-2 years, the second needs approximately 5-7 years. This difference explains why minority children who have achieved conversational fluency in an L2 often struggle when transferred into a mainstream classroom.

[24] It should noted that in Timbuktu and Segou where the difference in result is insignificant there were some implementation problems (short period of implementation, teacher shortages forcing CP and traditional classes to be combined, and lack of materials).

[25] Cummins refers to these as (Baker 2001:171-172):

- Basis interpersonal skills (BICS)
- Cognitive/ Academic language proficiency skills (CALPS)

Chapter 3: The language and educational context of South Sudan

This chapter describes the language and educational context of South Sudan. It is a foundation for the discussion in Chapter 4 on the implementation of BE in South Sudan.

It is against the background of the recent CPA, that Southern Sudanese authorities with various NGOs are trying to establish an education system in the South. In this agreement, the South has some autonomy, but it will have to share to some degree civil administration and security forces with both the government and its current allies. It's a complex agreement and will need goodwill to implement throughout the forthcoming six years and especially during the final referendum in the South (Johnson 2005). For those unfamiliar with Sudan, the information on the CPA in Appendix 4 is helpful background. Some maps are also given in Appendix 1, and are useful for giving a sense of the landscape, resources, and the administrative divisions of Sudan.

3.1 Language ecology

> *Language is the most massive and inclusive art we know, a mountainous and anonymous work of unconscious generations.*
>
> (Sapir 1921)

This section focuses on the languages of South Sudan; how they are used and relate to each other, the levels of bilingualism and how languages and language policy have developed. All of this will effect the status of languages, language attitudes and how choices can be made for language use in education.

The principle source of data for Sudanese languages for this study has been the web version of the 15th edition of the Ethnologue (SIL 2005a). Andrew Persson, a linguist and translator who has worked with Sudanese languages since the late 1970s also provided helpful input.

3.1.1 Introduction to the languages of Sudan

The Ethnologue (SIL 2005a) lists 134 living languages for the whole of Sudan including Standard Arabic, Sudanese Arabic (also referred to as Khartoum Arabic) and Creole Arabic (commonly referred to as Juba Arabic). 53 languages, including Juba Arabic are spoken as L1s in South Sudan, 43 languages are spoken as L1s

in the Nuba Mountains. Some of the languages may be viewed as dialects of each other. The language spoken by the largest number of people is Sudanese Arabic, of which there are listed 15 million L1 speakers in 1991[26] mainly in the North. The population for the whole of Sudan in 2003 is estimated to be 34.5 million, that for South Sudan 7.5 million (NSCSE 2004:32), and the Nuba Mountains 1.3-1.6 million (Johnson 2003:131). Given the number of languages mentioned, and the relative size of the geographical areas and populations, this means that South Sudan is quite linguistically diverse and the Nuba Mountains is very linguistically diverse.

The languages are split amongst various language families. In the South, the languages belong to Nilotic, Moru-Madi, Central Sudanic, Surmic and Niger-Congo families. Most Nuba Mountains languages belong to a different language family unique to that area of Sudan, the Kordofanian family[27]. In contrast, many of the other language families in South Sudan are found in neighbouring countries, e.g. Ethiopia, Kenya, Uganda.

Juba Arabic is used as a trade language in the southern part of South Sudan (the Equatorian states). Juba Arabic does *not* have a high degree of mutual comprehensibility with Sudanese Arabic (SIL 2005a)[28]. It is known mostly by townspeople as a L2, though there are groups of people who speak it as a L1. Many groups in the northern part of South Sudan also speak Arabic, which is closer to Sudanese Arabic as a L2. The few people who have managed to attain some education in the South, also speak some English. In the Nuba Mountains, Sudanese Arabic is much more widely spoken as a L2 and very little English is known.

The maps below indicate the locations where languages are spoken.

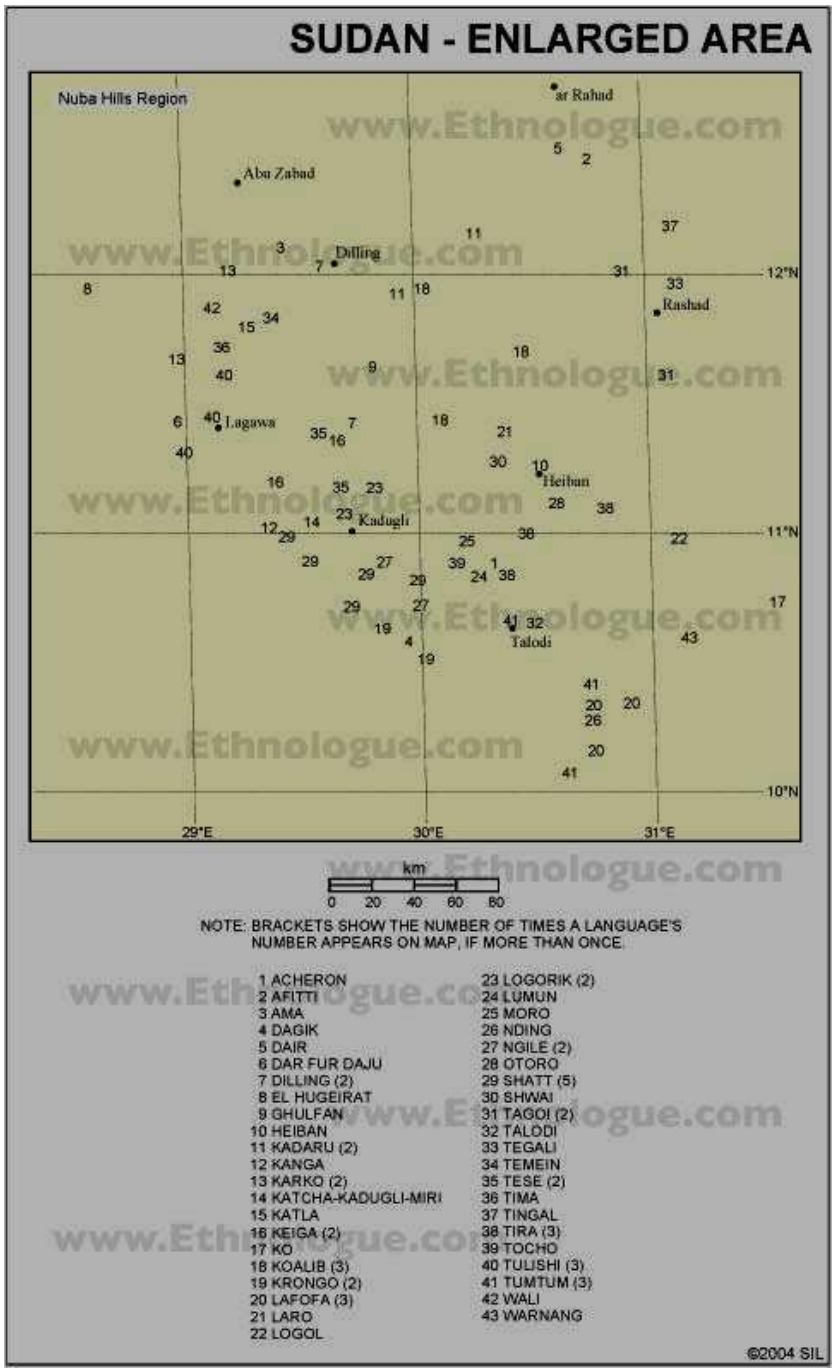
[26] Using the formula used in Appendix 5 to extrapolate populations, this yields 21.6 million L1 speakers of Sudanese Arabic in 2003.

[27] Another interesting and surprising feature of the Nuba Mountains languages, is that they are often quite different from each other. According to Andrew Persson (2005a), two possible explanations are, '(a) it was a cradle of language diversity (this is a recognised linguistic feature for points of origin) and the various families spread out from there, or (b) people from many different language families fled there for refuge.'

[28] Juba Arabic, a creolised version of Arabic, has been developing in South Sudan for over a hundred years. Its vocabulary is predominantly derived from Arabic and Bari. Its phonology and grammar are heavily influenced by other local languages of South Sudan. (Watson 1989)

Map 3 Locations of languages of Sudan

Map 4 Nuba Mountain languages



3.1.2 More details on the languages of South Sudan and their relationships

Much useful information on Southern Sudanese languages is given in two tables in Appendix 5. Table 6 on page 67 gives data from the Ethnologue for the languages. Table 7 on page 81 shows how the languages are related to each other. Table 6 reveals that:

1. The Dinka language is listed under its five main dialects. If the numbers for these are combined, this would be the largest group (32% of the total) followed by the Nuer (19% of the total).
2. A few of the larger language groups form the majority of the population. If one counts the Dinka dialects as one language then:
    - The largest 4 groups; Dinka, Nuer, Zande and Bari together form over 65% of the population. Of the remaining language groups none constitute more than 5% of the population by themselves.
    - The top 10 groups; Dinka, Nuer, Zande, Bari, Shilluk, Otuho, Luwo, Moru, Mandari, Didinga, Toposa[29] form just over 80% of the population.
    - The largest 20 groups form over 90% of the population.
3. A number of the language groups cross country borders.

Table 7 shows that languages exist in closely related clusters or 'branches of a language family tree' with quite a high degree of mutual comprehensibility. In addition, Table 6 shows that groups often know other neighbouring languages even when they are not closely related. Thus, Southern Sudanese are often bilingual in two three of the local languages.[30]

3.1.3 History of language development and language policy in South Sudan

In the colonial period in 1928, the Rejaf Language Conference was held to determine which languages deserved a place in education in South Sudan. Nine major languages, listed in Table 2 under 'Role A languages' were chosen (IRL 1987).

According to Janet Person (2005:1), 'Languages were selected partly on the basis of being spoken by major tribes but also with regard to representing the whole of the South, so that each part of the South would have a language of education. For example, even though the Ndogo are not a big tribe, their language was developed for teaching in Bahr el Ghazal schools.'

[29] Toposa and Didinga have the same size and thus hold 10th equal place in the table

[30] This multilingualism in local languages was also confirmed to me by various informal conversations with people.

So, in the colonial period in South Sudan, schooling was started in local languages leading onto English in the higher grades. Schooling was mostly provided by Christian missions with some government supervision. Arabic and English were used in government in the North and the South. Arabic was not widely known in the South at the start of the 20th Century, but spread as a lingua franca with trade and the establishment of the colonial administration. (Janet Persson 2005:1-2)

After Independence, the administration of all schools was transferred to the national government though the missionary schools and their foreign staff were allowed to remain in operation until 1964 when missionaries were expelled. The policy of the GoS was to use Arabic as the language of instruction in both the North and the South. This meant that in the South, in areas controlled by the GoS, the use of Arabic was enforced from the beginning of primary school (Nelson 1973:142-144). In other areas under rebel control, the communities continued to try to run basic 'bush schools' using the system they had inherited from the missionaries (Elias 2005).

The Addis Ababa Agreement made provision for the Southern Region to use local languages as part of the primary schooling and for English to be the working language of government alongside Arabic (Janet Persson 2005:2). Development of school materials in these languages started taking place in 1977, through a partnership between SIL-Sudan and the Southern Regional Ministry of Education. In 1979, funded by a $1 million grant from USAID to the Southern Regional Ministry, the Institute of Regional Languages (IRL) was established in Maridi (Janet Persson 2005:4). These buildings today are in the process of being renovated into one of the Regional Teacher Training Institutes (RTTIs).

The languages selected by the government for immediate development and use within the educational system were the 9 previously selected in the colonial period. These were designated as 'Role A' languages. These had had orthographies[31] and a small amount of literature because they had been used previously in education (Janet Persson 2005:6).

[31] An orthography is a writing system, i.e. an agreed set of symbol/letter to sound correspondences (forming an alphabet) and spelling rules. Not all writing systems in the world are based on the same alphabetic principal (one symbol per sound in the language). English which uses an alphabet, has quite an irregular sound/ symbol correspondence making it a more difficult language to spell and for non-native speakers to read. Some are syllabaries (using a different symbol for each syllable rather than each sound/phoneme. Amharic, of Ethiopia is

According to Andrew Persson (2000b), the main focus of the government was on the Role A languages, though IRL and SIL-Sudan and were free to work on other languages and did so. These other languages were designated Role B languages (IRL 1987). They are listed below:

Table 2 Role A and Role B languages of South Sudan

Role A languages	**Role B languages**
Bari	Acholi
Dinka	Anuak
Kresh[32]	Avokaya
Lotuho	Baka
Moru	Banda
Ndogo	Belanda Bor
Nuer	Belanda Viri
Shilluk	Didinga
Zande	Jur Modo[33]
	Jur Luwo
	Kaliko
	Mabaan
	Ma'di
	Mundu
	Murle
	Toposa

an example of this). Mandarin Chinese is logographic, where symbols are used to represent words, but the symbols have no direct relationship to the sounds of the words. However all the southern Sudanese indigenous languages have been written using a Roman or adapted Roman script (with some extra symbols and diacritics), which is arguably one of the simplest to learn. Where Juba Arabic has been written, a Roman script not the Arabic script has been used. The writing system for Arabic has some notable differences from those using Roman scripts; advanced writers omit marks indicating vowels (Hebrew, a Semitic language, also only writes consonants), and it is written right to left.

[32] Listed under its alternative name of Gbaya in the Ethonologue and in Table 6 on page 67

[33] 'Jur Beli' is listed rather than 'Jur Modo' as a role B language in the IRL and SIL booklet, '1977-1987 Ten Years of Partnership' (IRL 1987:2). Jur Beli was initially chosen for work and Jur Modo was thought to be a dialect of Jur Beli. However Andrew Persson's (2005b) dialect survey in 1978 showed them to be separate languages and Jur Modo was worked on as it is spoken by a larger number of speakers.

This means that most of these languages have some kind of orthography and some school materials from that time. With a few exceptions, these materials were designed to teach literacy and language skills in the MT, not other subjects through MT. There were plans to work on subject materials in the MT, though this work barely had a chance to start (Hollman 1981). Some of the books, or revised versions of them are still in print with SIL today. Juba Arabic does not have a standard orthography and was never used in a written form in schools[34].

After the start of the Second Civil War in 1983, and the consequent exit of SIL-Sudan personnel from the South in 1988, work on MT schools materials more or less came to a halt. SIL-Sudan thereafter focused its efforts more on Bible translation into some of the local languages and some non-formal literacy materials.

Other organisations have worked with indigenous languages. The Sudan Literature Centre (SLC), part of ACROSS has developed books in local languages. Catholic missions have also developed church materials and some materials for schools. Some organisations involved in other kinds of development work have tried to work with the local languages[35].

3.2 Education in the South

3.2.1 Education over the course of the last civil war

Initially very little education took place after the outbreak of the Second Civil War. In 1993 some education was started up by UNICEF and 'Operation Lifeline Sudan' (OLS)[36] in collaboration with Sudan Relief and Rehabilitation Association (SRRA)[37]. In 1999 education in the SRRA was restructured to create the Secretariat of Education (SoE) headed by a Commissioner of Education. The SoE however has had very little resources of its own, being the education arm of a rebel movement rather than that of a government. In the 1990s, very few

[34] Some books have been written in Juba Arabic, but they were books mainly for adult use in a church context; some Bible stories and a Christian song book (published by the Sudan Literature Centre). Because the orthography was never settled, the spelling used in these is quite inconsistent.

[35] For instance, the Carter Centre in 2002 translated some of its material for trainers (on the eradication of guinea worm) into some of the local languages.

[36] OLS was established in April 1989 to offer humanitarian assistance to those in southern Sudan needing it owing to famine and the civil war. It is a consortium of two UN agencies, UNICEF and the World Food Program, and around 35 non-governmental organisations.

[37] SRRA is the humanitarian wing of SPLM and SPLA.

bilateral donors were willing to support education in South Sudan[38]. A relatively small number of international agencies were involved in implementing education in the 1990s, some of which were UNICEF/OLS, Save the Children (SC) UK, SC Sweden, Norwegian Church Aid (NCA), The New Sudan Council of Churches and ACROSS. UNICEF supplied the largest amount of support (Kenyi cited by Brophy 2003:9).

Mostly, NGOs supporting education have worked in particular parts of South Sudan, with some kind of agreement with whatever local authorities existed, e.g. county education officers. UNICEF is one of the few organisations that has to some extent worked across the whole of the South. The support given by NGOs has usually been in the form of teacher training and school supplies (textbooks, exercise books, pens, pencils and chalk). While the NGOs have perhaps been able to provide some kind of 'incentive' to teachers during teacher training, they have not been able to pay teacher salaries in the schools[39]. This means that teachers have been largely volunteers with some support from their communities; perhaps via gifts of food, or help with work in their gardens to grow food. Obviously, this affects the motivation and quality of teachers.

The resulting quality of educational provision in the South has been at a very low level. The statistics below are taken from 'Towards a Baseline: Best Estimates of Social Indicators for Southern Sudan' (NSCSE 2004). It relies most heavily on educational statistics from the School Baseline Assessment (SBA) conducted by UNICEF and Africa Educational Trust (AET). These statistics cover the SPLA occupied areas of the South excluding the contested regions (NSCSE 2004:59-61).

[38] One of the reasons for this was they saw 'relief' and 'development' as different stages, and support for education as being incompatible with the 'relief' stage. Others like the European Commission had suspended assistance to Sudan as a whole because of concerns about human rights, democracy and civil conflict (The European Commission 2005:3). Norway was one country that did give support to South Sudan.

[39] Part of the reason for this is that funders are usually unwilling to provide 'recurrent personnel remuneration'.

South Sudan Educational Statistics:
Enrolment:

- The gross enrolment rate (GER) for 2002 was 23%[40]
- The overall ratio of females to males in primary education in 2000 was 35.9%
- The primary completion rate in 2000 was only 2.4%[41]. This is not helped by the fact that officially primary schooling is 8 years but many schools do not have 8 grades
- In 2000 the grade 4 completion rate[42] was 19%
- In 2000 the cohort reaching grade 5[43] was 28%

School environment (statistics for 2002 unless otherwise stated):

- About 10% of classrooms were permanent buildings of brick or concrete[44]
- 48% of schools had access to safe water
- 32% of schools had access to latrines
- Schools were open for an average of 7 months
- Until recently, 16% of the textbook need was met (the need is defined as two pupils sharing a set of books for four core subjects). UNICEF at the end of 2003 reported this had risen to nearly 40%.

Teachers (statistics for 2000):

- Only 7% of teachers were women
- Only 7% were formally trained (received one year of college training)
- 45% of teachers had no training at all
- 48% had received in-service training run by NGOs (ranging from 2 weeks to 9 months)

3.2.2 The new primary syllabus for South Sudan

Since 1996, the SoE has been working on a primary syllabus and teaching materials. All the materials for core subjects are now available in English only.

Many NGOs have not been using the SoE's curriculum and materials, but rather those of neighbouring countries. The SoE, now with increased authority as it is becoming part of a recognised government, has said that from 2006 all schools should start using its curriculum and materials (Ater 2005). However at this point, the syllabus has not been fully implemented.

[40] Gross enrolment rate = the ratio of the total enrolment (regardless of age) to the population of the age group that officially corresponds to the level of education. I.e. it is possible for the gross enrolment rate to be greater than 100%.

[41] = the number of completing students divided by the graduation age population.

[42] = the number of students completing grade 4 divided by the grade 4 age population.

[43] This is a measure of 'school efficiency', and as such it is higher that the completion rates because it is measured against the number of children entering school (not the number of children in the general population). It should also be noted that this figure was measured via the 'indirect method' which is a comparison in the same year, of children enrolled in grade 4: children enrolled in grade 1. This method of measurement would be prone to error in the case of a rapidly growing school population, though this was probably not the case in 2000.

[44] The remaining classes were grass-thatch structures or under a tree.

The table below, gives the time allocation to different subjects throughout primary school (SoE 2002a and 2002b). P1-P3[45] periods are of 30 minutes duration, P4-P8 periods are of 35 minutes duration.

Table 3 Time allocated to subjects in the new primary school syllabus of South Sudan

Subject	P1-P3	P4	P5	P6-P8
MT	10	4	2	2
English	5	8	7	7
Mathematics	5	7	7	7
Science	4	4	4	4
Social Studies	4	4	4	4
Religious Education	4	3	3	3
Music	1	2	2	2
Physical Education	5	3	3	2
Home Science		3	3	3
Agriculture		3	3	4
Swahili		5	4	4
Arabic			4	4
Business Education			2	2
Periods per week	**40**	**50**	**50**	**50**
Hours per week	**20**	**30**	**30**	**30**

In terms of languages, what this syllabus outlines:

MT is the MoI in P1-P3, and continues to be taught as a subject from P4-P8.

English is taught as a subject from P1-P3 and is the MoI in P4-P8. English reading and writing is started in P1.

Swahili is taught as a subject from P4-P8.

Arabic is taught as a subject from P5-P8.

This syllabus is assessed further in the following chapter.

3.2.3 Recent developments

The concept of 'New Sudan' which was being used to describe the South by the SPLM has been replaced by 'South Sudan'. It is anticipated that the SoE will become the 'Federal Ministry of Education for South Sudan' within the new government structure. (Abuyi 2005a)

[45] P1 stands for grade 1 of primary school, P2 for grade 2 etc.

According to the Deputy Commissioner of Education in the SoE, the challenge now is 'putting a system in place'. Almost everything is having to be built or developed from scratch, including infrastructure and institutional frameworks through which education can be delivered. He also mentioned the absorption of returnees (many who have been refuges in the North and been through an Arabic system of school) into a weak education system as a major challenge[46]. He said that the aim was for a 'decentralised system', but this needs good managers. (Ater 2005)

Abuyi (2005a) reporting on various education meetings that took place between March and May 2005 gives the priorities in the educational sector as:

- curriculum development
- training of teachers
- provision of textbooks and other school supplies
- construction of schools
- development of approaches to protect children
- development of approaches to help girls to go to school

As of July 2005, one of the major constraints for the SoE is lack of funds for printing textbooks, and for paying teachers and education officials salaries, though it is hoped that mechanisms will soon be in place for the government of South Sudan to receive funds from the national government.

As different protocols have been signed in the last few years there has been a policy shift amongst donors. E.g. in 2003 the UK Department for International Development (DFID) made a grant of £2 million to UNICEF for delivery of 'quick impact' educational initiatives in whole of Sudan (Brophy 2003:10). The European Commission (EC) is also planning to restart aid[47]. USAID in 2003, committed $20 million to the 5 year Sudan

[46] The NSCSE (2004:27) estimates that the current population of 7.5 million in the South could grow by 4.5 million in the next 6 years, including returning refugees.

[47] The European Community Country Strategy Paper for Sudan for 2005-2007 (EC 2005:29-30), reserves 30 million Euro for the Sudanese education sector, both North and South. This will be given through both government structures and international NGOs.

Basic Education Program (SBEP) which is aimed at southern Sudan. CARE is the primary contractor and implementer of SBEP. The three main 'intermediate results' areas of the program are given below (CARE International 2004:7):

- improving teacher education programs
- increasing the capacity of primary and secondary schools to delivery quality education, especially for girls
- improving non-formal education for out-of-school youth and adult learners

SBEP is now one of the most significant education programs because of its scope and size. See Appendix 6 for other organisations working in South Sudan.

3.2.4 Educational structures

It is proposed that the SoE has various departments responsible for different parts of the educational system at a national level (SoE and SBEP 2005):

Table 4 Departments under the SoE

Departments	Planning Department	Administra-tion and Finance Department	Quality Promotion and Innovation Department	Gender and Social Change Department	General Education Department	Higher Education Department
Responsibilities	Education Planning and Monitoring ▪ Data and Statistics ▪ Policy Analysis and Support Physical Planning Development Partners	Efficiency, Quality, and Financial Compliance Audit Financial Management General and Personnel Administration Procurement and Distribution	Standards Human Resource Development ▪ Distance Education ▪ Teacher Education ▪ Management and Development Training ▪ Scholarships Curriculum ▪ Development ▪ Assessment ▪ Layout and Production National Languages Examinations Research	Gender Equality Life Skills ▪ HIV/AIDS ▪ Environment ▪ Landmine Awareness ▪ Nutrition Civic and Peace Education Special Needs	Early Childhood Development Primary Education Secondary Education Alternative Education Other Schools	Vocational, Technical, Science, and Business Education Tertiary Institutions

Not all of these have yet been set-up but a national Curriculum Development Centre (CDC) was set up in Maridi in 2004 with a staff of core curriculum developers (CARE International 2004:3)

In addition, SBEP has been helping the SoE set up structures and processes through which the SoE can implement education across the South, known as the Education Support Network (ESN). The ESN has the RTTIs at its core with County Education Centres (CECs) as spokes or outreach centres. RTTIs provide both pre-service teacher education and support for the CECs. Each CEC will have up to five tutors and an administrator to support in-service teacher training, education management courses and non-formal programs (CARE International 2004:7-8).

The initial plan is for four RTTIs in South Sudan and one in Nuba Mountains. In 2005 the ESN is working with about 8 CECs. Maridi RTTI opens in 2005 and Arapi RTTI is already running, supported by NCA. Locations of the RTTIs are given below:

Table 5 Location of Regional Teacher Training Institutes

(CARE International 2004:11)

Town of the RTTI	**Region/ State**[48]
Maridi	Equatoria
Arapi	Equatoria
Aramweer	Bahr el Ghazal
TBA	Upper Nile
TBA	Nuba Mountains

The long term plan for a fully functioning ESN, is to have 8 RTTIs and more than 50 CECs (CARE 2004:20).

[48] The designation of 'region' or 'state' is used somewhat interchangeably in this study. This because the GoS has used the term 'state' whilst the SPLM has used 'region'. In light of the CPA, the South is in the process of changing it's nomenclature to 'state'.

3.2.5 Education and language policies today

The draft constitution for Sudan, that is under consideration as a result of the CPA, has a section on language[49]. It makes Arabic and English official languages and it gives all indigenous languages the status of 'national languages'. It says nothing about use of languages in primary schools, though presumably paragraph (1), 'All indigenous languages of the Sudan are national languages and shall be respected, developed and promoted', and the absence of any prescription of language use in primary school would allow their use at this level (SPLM and GoS 2005). Currently, the MoI in the North of Sudan in primary and secondary school is Arabic.

The South Sudan education policy is more specific. Paragraph 3.2.7 of 'Education Policy of the New Sudan and Implementation Guidelines' states that 'MT shall be the MoI during the first three years of formal education (primary one to three)' (SPLM 2002:4). This document does not explicitly state what the MoI is after this. However the 'Syllabus for Primary Schools', as already described, makes the languages used in primary schools and the transition in MoIs explicit (SoE 2002a:3, 4, 13).

Some NGOs say that the language policy for the South is unclear, e.g. no particular languages are specified, and given that all the books have been developed in English, they are unsure what to do [50].

[49] See Appendix 7 for the full section on language in the draft constitution.

[50] It is also not clear at this point what education policy will be followed in the contested regions, and of course this is a political issue. At the moment the Nuba Mountains and at least the most southerly part of Blue Nile State are using the SoE curriculum and want to continue to do so. However they are not attempting to use MT as the initial MoI but rather start straight away with English (Ater 2005; Perkins 2005; Tilson 2005). According to Ater they have chosen to start with English because of the difficulty of working with so many languages, though he said some individuals were also making efforts to work on their MTs.
Some spoken to said that, in Nuba Mountains, a large part of the motivation to use the SoE's curriculum and English, is a result of not wanting a curriculum 'imposed from Khartoum'. Also, although starting in English seems to be generally accepted as 'the right thing to do', it is also a very painful process, since many of the teachers have been educated in Khartoum through an Arabic system, and Standard Sudanese Arabic is much more widely spoken. Given the greater proximity of the Nuba Mountains to Khartoum it may also be short sighted with regards to the future language needs of children, though it seems that the long run intention is to at least teach Arabic as a subject in school.

Chapter 4: Implementing bilingual education in South Sudan

In considering the basis for BE, Chapter 2 articulated many of the advantages of strong models of BE which are summarised below:

- It gives language minorities access to education, giving them language and academic skills in their L1 as well as in wider languages.
- It allows much more participative learning.
- It enhances learning of and in a L2.
- It affirms the child's own culture and identity.
- It values minorities allowing a unity through diversity approach.
- It decreases high drop-out and repetition rates.

Given the context of South Sudan just described in the preceding chapter and that children don't know English when they go to school, these can be seen to be highly relevant to South Sudan. Pedagogically, the use of MT in education could play a significant part in a better quality education.

This chapter discuses the implementation of BE moving from the very broad issues which influence implementation, like the socio-political environment, to issues which are increasingly practical and focused on how BE could be implemented within the education system. They could be considered as decreasing concentric circles with the bilingual education program in the centre. All the areas interact.

In terms of implementing a BE education program, there are a number of constraining factors:

There is a lack of resources (money, infrastructure, personnel) in general.[51] The money situation should improve as money comes through from the central government and donors follow through on their commitments to

[51] Michael Brophy who has worked closely on different aspects of education in South Sudan said: 'It's nice for national conferences to agree on a policy that includes local languages. I just don't see how southern Sudan can cope with it. And I'm not saying they shouldn't do it… I just don't see how they can manage it. There's no

support South Sudan. Nonetheless there are a large number of competing demands and it is not just a matter of implementing BE, but building institutions that can continue to support and sustain BE. The other factor that needs to be taken into account is the current low level of training and qualifications of existing teachers (or availability of personnel to become teachers).

Another tension that exists, is between the need to get some kind of education 'up and running' for the majority of children quickly, and doing it the right way. A staged approach needs to be followed so that a basic version of education can be implemented soon, with different later stages planned which move to a broader and more ideal implementation. This applies to primary education in general but also to BE as part of it.

4.1 Socio-political environment

> *All education takes place in a political context. It is the result of what parents, community members, and government authorities have decided they want children to learn. All effective programs need that political support.*
>
> (Dutcher 1995:37)

The historical and political background of South Sudan has been such that there has been a fairly wide degree of support for use of local languages in primary school, from national more overtly political levels to community levels. Those Sudanese spoken to in the course of this study, thought most communities would be happy to have children start in their MT in school and become literate in their MT as well as in English. Another perception was that through displacements resulting from the civil war, some people were in the process of loosing their languages and this was not a good thing. Some Sudanese themselves were educated using the MT during the First Civil War or the peace time after the Addis Ababa Agreement and viewed that experience positively. Elias (2005) said it gave him confidence because by the time he had finished grade 3, he could read and write his own language fluently. Another well educated informant, who did not have MT taught in primary school, said he regretted not being able to write his own language.

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infrastructure at all for developing even one text book. I think the last SBA showed that 14 or 15% of the books that were needed were in school… And that was in one language [English]' (Brophy 2005)

So this approximate pattern of education; starting in the MT and moving to English is already somewhat familiar and is acceptable to most southern Sudanese. Knowledge of English is seen as being economically beneficial[52] though it should be recognised that it too owes its place to politics and history, as a reaction to earlier attempts at 'Arabisation' in the South. Those the author talked to, acknowledged the need for Arabic; whether the South secedes or not there will continue to be an economic and political relationship with northern Sudan. It was also acknowledged that Swahili was an important language of wider communication[53].

4.2 Language choices

With 53 local languages, consideration needs to be given to which would be chosen for education and how the choices would be made. There are several issues:

- The long term choice of which will be used.
- The shorter term choice of how those languages will be 'rolled out', assuming it will be impossible to implement them all at once.

According to Abuyi (2005b), the preference for some from smaller language groups, if their children cannot start in their own language, is to start in English. There are though two interpretations of this; everyone starts in English, or some groups start in English whilst others use the MT.

Some possible criteria for language choice are:

- Size of language group.
- Making sure that no large geographical area is ignored.
- Making sure that each 'language family branch' is covered, and that the languages chosen are the most central to the cluster, or the most acceptable to all.

[52] Most of the international NGOs operating in South Sudan use English as a working language. During the civil war these have been the only source of employment in the South.

[53] Swahili is not currently widely spoken in Sudan but it is used in areas to the south and south-west of Sudan; Kenya, Tanzania, Uganda, parts of Congo. Many Sudanese refugees in these countries have learnt Swahili.

These areas might need more data, research, and discussion amongst communities, e.g. would it be acceptable to use just one of a related group of languages for school? Some choices along these lines have already been made. When MT materials were being developed for schools in the late 1970s some kind of decision/agreement was made that Kakwa, Kuku and Mandari could all use Bari materials. Some of the Bari materials were even tested in Mandari schools (Hollman 2005). These kinds of choices would cut down the number of languages needed and even ignoring closely related languages, the largest 20 languages form over 90% of the population. But, groups may sometimes have closely related languages but not feel affinity for other reasons.[54] [55]

There is some historical precedent for choosing languages, the 1928 Rejaf Language Conference. The author's view is that, the Role A languages chosen then, were quite a good choice in that they covered the bigger groups and attempted to cover geographical areas. However not all of the language family clusters were covered. The most significant ones omitted are the Southwest Surmic, and the Bongo-Baka languages.

The role of Juba Arabic needs to be decided. It is likely that its use as an L2 has grown as a result people being more intermixed due to internal and external displacement and the need to find a common language to interact. In towns where there are mixed communities, Juba Arabic is often the common language. Here it might be difficult and divisive to split classes along language lines. One approach would be to design an orthography for Juba Arabic and use it as a written as well as a spoken language and use it to cover the initial years of schooling. However attitudes to Juba Arabic are sometimes quite negative. Some may not want to give it the status of a written language. If Juba Arabic is not to be used in a more formal way, then the options are:

1. Use English, which is likely not to be very effective since it is not widely known. For pragmatic reasons large amounts of oral Juba Arabic would be used with it.
2. As per (1) above but split the class into different languages groups for the MT class only.

Some approaches that could help dispel tensions that might arise from language choice are given below:

[54] In the Sudanese case just mentioned the Mandari are culturally fairly different from the Bari; the Mandari are a cattle-herding group, whereas the Bari are mainly agricultural.

[55] We see examples of this in other parts of the world too. Swedish, Norwegian and Danish are largely mutually intelligible yet for cultural, historical and political reasons, 3 languages exist (Crystal 1979:19). We see the opposite in Germany, where many dialects exist yet children going to school learn 'standard' German.

1. Wide consultation and awareness raising

Because of the potentially political nature of choosing and developing languages for use in education, it would be best that the decision is not made by a small group of people. Along these lines, the SoE has plans for a language conference in 2006, with relevant stakeholders attending, to be part of this process.

2. Give communities and schools choices about the implementation of BE

The communities and/or schools involved should be consulted about either a pilot program or the actual BE program to be implemented[56]. They should be given information about the potential benefits of BE and have the choice about whether to use an English only or BE system. Hopefully, if pilot programs are well implemented and seen to given better educational and social outcomes, communities will be interested in a wider implementation. Other places where BE programs have been successfully implemented, have used a similar approach of consulting and agreement with communities, e.g. Papua New Guinea (Klaus 2003).

3. Alternative approaches through new technology

SIL has developed a program called 'AdaptIt', which helps in producing much quicker translations between dialects or related languages[57]. The person using AdaptIt, must be bilingual in both languages (which is common in Sudan) but does not have to be linguistically trained. This means that if the initial phase of implementation focused on the larger groups and having at least one language per language family cluster, and good quality materials were developed and tested for these languages, it would be relatively easy to translate materials into other languages in the clusters. Given that the groups are fairly closely related, the pictures, stories etc should be appropriate[58].

[56] Despite generally positive attitudes of Sudanese to their own languages, the author, in her previous job, occasionally come across the view from parents, that children could just learn English in school as they already knew MT. So awareness raising and consultation with communities needs to be part of the process of implementing BE.

[57] The languages must have similar grammatical structures. (Duerksen 2005)

[58] The problem with translating materials from unrelated languages and cultures is that the pictures, activities and concepts described are often foreign.

4. Encourage inter-group co-operation rather than competitiveness

Parts of the South have been divided up by rebel factions or the GoS and have at times fought each other over the course of the civil wars. So the need for co-operation extends to issues other than language and is a necessity for the country to progress. There is much in common between the different groups and if they can help each other and borrow from each other, e.g. along the lines described in the previous paragraph, rather than each group starting from scratch, then the use of local languages in education could be made easier.

Use of one national language has sometimes been promoted in the interests of national unity. However Skutnabb-Kangas (2000:435) argues that it is the suppression of linguistic and cultural rights that can lead to interethnic conflict. Indeed the civil wars in Sudan are examples of this. In addition, although some argue that the use of 'English only' is fair for everyone, in fact it benefits elites who know English, and perpetuates existing inequalities in society.

4.3 Costs and funding

The main financial costs in implementing BE are investment costs covering the following; standardising languages, getting materials prepared, running and evaluating pilot programs and setting up the institutional frameworks to support BE.

The recurrent costs of BE need not be higher than other programs, given that the main costs are of teachers salaries and materials, which must be made available in any case. Whilst printing costs for smaller volumes usually work out higher per unit, desktop publishing with computers has reduced the costs associated with smaller print runs. It is also possible to keep materials costs down in others ways e.g. by keeping books simple and not using colour. Dutcher (1995:38), in surveying a number of programs, found the recurrent costs for BE and other programs to be about the same.

Cost-benefits also have to be considered. Dutcher gives two; (1) the cost saving as a result of reduced student repetition and (2) the increase in income as a result of better quality and more years of schooling owing to reduced drop out rates (Dutcher 1995:38).

BE programs take time to implement, they need investment costs, and sustained political commitment. In the case of Sudan they would need both internal commitment and external commitment from international agencies. However in the long term they should result in a better quality and a more efficient education system, at a similar recurrent costs.

Examples of costs of bilingual education programs:

Guatemala

Guatemala began experimenting with BE in four indigenous Mayan languages in 1980. The BE program covers pre-primary and 4 grades of primary school. In 1995 the program was running in a complete form in 400 schools, and in an incomplete form in another 400 schools, representing 30% of the enrolled Mayan children. USAID has given about $20 million over this time, covering both pilot and wider implementation of the program. The World Bank also supplied $1 million towards textbooks (Dutcher 1995:38). The BE program comprised 0.13% of the primary education recurrent budget and increased the unit cost of primary education by 9% compared to the older 'Spanish only' system. However, gains have been achieved in terms of reduced wastage in the system through decreased repetition and dropout rates. (Vawda and Patrinos 1999:297)

Mali

A World Bank study examined the costs of the BE system in Mali, discussed earlier in Chapter 2. It found that French only programs cost about 8% less per year than the CP program, but the total cost of educating a student through the French only six-year primary cycle was about 27% more largely because of the difference between repetition and dropout rate. (World Bank 2005)

4.4 Implementing a bilingual education program

Before considering how BE could be implemented, the following items need to be assessed:

- What the syllabus says should happen and whether this should be revised at all.
- The current situation with respect to teaching and materials.

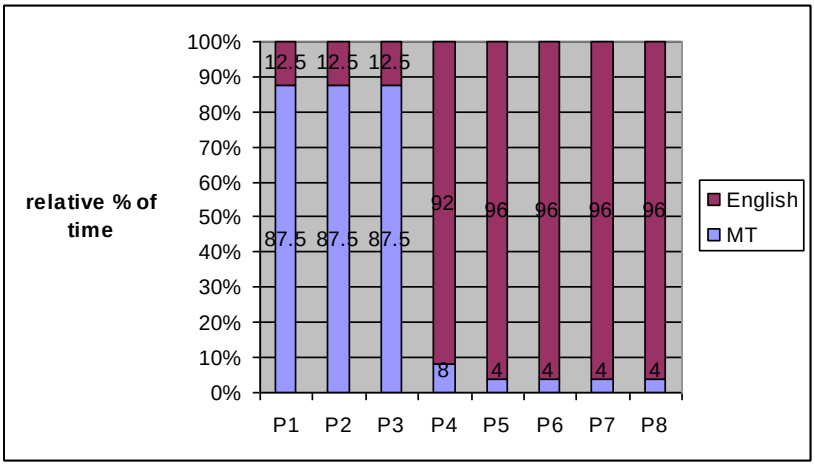
4.4.1 Assessment of the new syllabus

This section assesses the new syllabus outlined in the previous chapter in section 3.2.2.

The syllabus is very broad and similar to the Ugandan and Kenya syllabi. While this is fine as an ideal, initially it is likely that only the core subjects will be covered and the overall hours in school will probably be less[59]. The syllabus tries to start with the local and become more national/global. It leaves room for local practices and culture. E.g. The social studies curriculum has a place for local rituals and ceremonies. The syllabus does not describe pedagogical approaches to be used[60]. (SoE 2002a; SoE 2002b)

Following the time allocations to subjects given in the syllabus (see Table 3), the split between the two MoIs is given below:

Chart 2 Relative use of MT and English in new South Sudan syllabus



The obvious problem with this is the sudden switch between MoIs at the end of P3. It is unlikely that the children would be capable of switching from one MoI to another, with only 3 years of learning English as a subject behind them.

[59] Refer to Table 3 on page 30 to see all the subjects included in the syllabus.

[60] Though technically, the place for a description of pedagogical approaches would be a curriculum rather than a syllabus.

4.4.2 The current situation

As described in Chapter 3, very few children are going to school at all, and the drop out rate is high. In addition the only approved books that exist are in English. A few organisations are buying the older MT materials from SIL and doing some training in specific languages of the localities in which they work, but even then, at the most, MT is being taught as a subject for the first few years[61]. The teachers are attempting to teach the other subjects through English, although in reality, local languages are used in the spoken form because it would be impossible to do otherwise. In addition, the teachers' English is often not good, so children barely get an education in their MT or in English.

In addition, at the moment, those who are involved in significant ways with primary education, e.g. SBEP, are totally focused on English (Tilson 2005). English is important; without teachers whose knowledge of English is good and can teach it well, it will be impossible for the children to become competent in it. But the research suggests that simply submersing the children into English, ignoring the languages they are competent in and bring to the classroom, will not produce good results either.

4.4.3 The ideal long term model

It needs to be considered whether the model proposed in the syllabus is a good model in terms of a medium to long-term aim (around 20 years time).

A strong model is presented as the ideal in the relevant literature. In these, the L1 is used as a MoI (usually alongside the L2) for at least 6 years. This has lots of advantages; both languages are developed academically to a high degree and by the end of six years both languages should be well established in the child and allow for either to be used as an ongoing MoI. This would be the ideal. However, the author suggests staying fairly close to the current syllabus as a medium to long term goal for these reasons:

1. Materials needed for P1-P3 should be fewer and simpler than those needed for higher grades. This should minimise the costs of implementing MT as a MoI in terms of developing materials. Given that many of

[61] UNICEF, Save the Children Fund (SC) UK, ADRA and ACROSS for instance, bought (and buy) materials that exist from SIL, and used them in some of their programs and teacher training.

these languages are fairly newly written, choosing to use the languages in the written form mainly for P1-P3 only, is a compromise which gives some foundation for further developments if they are desired at a later stage. It will help some development of the local languages in terms of terminology and allow time for languages to become more standardised in terms of spelling.

2. Although the model is a transitional model, the author suggests that it is stronger than a transitional model would be in many Western settings. In these, it is likely that the L1 does not get much support outside the class, whereas the L2 is usually widely spoken outside the class. In rural Sudan, this is reversed, the L1 is supported outside the class, whereas the L2 (English) has very little support. This may change as development brings in more outside influences making English more widely used. However, it is not just about how much support the L1 gets outside the class but linking L1 culture and knowledge to the culture, language and knowledge of the classroom. This relates to the ethos of the school and the attitudes of the teachers as well as the curriculum.

Some possible changes which could help the transition between MoIs are given below:

1. The model could be made stronger by introducing a year of kindergarten which is all in L1 and in which the children develop further oral skills and are introduced to pre-reading and pre-writing.
2. From P5-P8 the proportion of time given to MT is very small; just over an hour per week. It would be good if this could be made larger (say at least doubled), though with such a broad curriculum one can see the problem of fitting everything in.
3. In P1, English should only be introduced orally, with reading and writing introduced in P2. The children will be learning reading and writing in MT in P1, so this change should minimise confusion between two slightly different sound/writing systems. The concepts of reading and writing, once learnt in MT should transfer fairly easily to a L2.
4. In P3, start teaching one subject through English rather than the MT[62]. Basic maths for example, is a good subject to teach both content and language through, as it is easy to use concrete examples which is helpful when pupils' language skills are weaker (Met 1998:46).
5. In P4 and P5, even if all the materials are made available in English, there will have to be some concurrent use of L1 and L2 in the classroom, because the children will still be learning English at this time. This

[62] The core subjects from P1-P3 are Maths, Social Studies, Science, MT and English.

should not be frowned upon, but seen as part of the learning process. However, teachers should be taught techniques and strategies for dealing with a bilingual classroom.[63]

4.4.4 Possible stages of implementation

In this section, some possible stages of implementation are proposed, for any one language. It should be noted that this is very much a sketch. Each stage could be split up further[64]. It assumes that broader issues relating to consultation, language choices, funding have been dealt or are taking place in parallel. Also, before there is any kind of widespread implementation, materials and methods should be tested in pilot programs.

The background default pattern of education is that teachers are being trained in English and given English materials for the class.

The proposed stages are:

1. Agreeing an orthography

In South Sudan, orthographies exist for all of the larger languages, at least for all Role A and Role B languages which cover most of the population. This does not mean that there are no issues with those orthographies, and their ongoing development. But in terms of a precondition for developing MT materials and teaching MT in schools, the alphabet and some basic spelling rules should be agreed, teachers trained and materials written with those rules in mind. Even so, it is likely that there will be a greater variability in how any one language is written than say compared to English (which has been through many centuries of standardisation). This is to be expected. Klaus says of Papua New Gunea, where relatively newly written languages are being used in early education, 'everyone recognises that the vocabulary may be expanded and refinements made in the writing approach over the next 20 years or so, everyone also accepts that a start can be made in teaching children with a less-than-perfect and incomplete written language and materials.' (Klaus 2003:110)

[63] One danger in a bilingual classroom, when one language is weaker than the other, is that much time will be spent translating fairly directly between the two languages. Besides being time consuming, a pitfall is that students focus solely on the language they understand best. There are various techniques that can be used to combat this and improve learning. For more on this see Baker (2001: 277-280).

2. Developing the teaching of MT as a subject for P1-P3 using an interactive whole language methodology[65], and minimal printed materials

Whether this is separated from stage 3 or not depends on how much there is a need to get something better than the current situation going *soon*. This stage, focuses on the MT slot in the timetable for P1-P3 and making that effective.

There is great potential in this for these reasons:

- L1 use holds a key for creativity and confidence in both the teachers and children.
- Many teachers' skills in English are not that good. In contrast, teachers know their MT though they may not be competent in writing it. Given some training in writing their MT, it should not be difficult for them to become good writers. It should be much easier than improving the quality of their English.

It may seem like there is a contradiction between the terms 'whole language' and 'minimal printed materials'. In some respects this is true; printed materials are obviously helpful, and this is another compromise. 'Whole language' methods rely on a rich literate environment, but it is also possible to create a literate environment in the class, arising from the everyday experiences of the children and the community. E.g. the teacher can generate a short story on the board or newsprint coming out of a shared experience. That story then can be used to help the children learn/practice reading and writing. The story can be kept on newsprint, displayed in the class in order to come back to it later (or for the children to read it in their own time), or made by hand into a 'big book'[66] to be used later. Cross curricula themes can be chosen, so that what is covered, reinforces what is being learnt in other subject areas. The central plank of this approach is training for the teachers to be confident in writing their own languages and in using these kind of approaches with children.

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[64] E.g. stages (2) and (3) could be separated into further stages of materials development, teacher training, pilot program implementation and evaluation, and wider implementation.

[65] An interactive whole language approach is a whole language methodology but with some more 'bottom up' phonics based teaching included. The phonics part of the teaching is usually linked to meaningful texts. There is thus a focus both on meaning, creativity and correctness. There is also a focus on creative writing as well as reading.

[66] Big books are larger books that can be used from the front of a class. They usually have a picture on one page and sentences on the other. The teacher can read them to the class or there can be some kind of shared reading of the book.

There are some assumptions behind this. The availability of materials has been dire during the civil war. It assumes the basic resource level (e.g. of newsprint) rises. Materials need to be displayed, which presents difficulties in outdoor classes.

Essential printed materials would be one of the following per class or teacher:

- An alphabet chart or book
- A two way MT-English dictionary for the teachers covering basic vocabulary and the key terms used in the syllabus from P1-P5[67]
- A spelling guide for the teacher
- A teachers guide for teaching MT[68]

In addition to this, a primer may be required to help teach the first stage of reading and writing, and some storybooks (enough to go around the class). It might be possible to manage without a primer, but given the generally low levels of education of the teachers, this may be expecting too much.

Another possibility is to produce some materials which have pictures only, and could be used as resources for teaching through any language[69]. These could be printed in bulk. Wordless 'story books' could be produced as well and used in different ways.

3. Developing the teaching of other subjects through the MT for P1-P3, and the teaching of MT as a subject for P4-P8

The P1-P3 MT subject materials would be developed during this stage. Care should be taken as to how they are developed. If they are simply a translation of the English materials that exist, there may be problems, e.g. the content will be covered much more rapidly in the class[70].

[67] The author suggests the dictionary at least covers terms used up to P5 because it is highly likely that the classroom will be bilingual up to P5 whatever language the materials are printed in.

[68] All these materials will of course be in the MT, though it may be helpful for both the teachers and others involved in the programs (who may not be MT speakers) to have the last two of these items written in MT and English, on parallel pages.

[69] AET in collaboration with UNICEF has done this in South Sudan using wordless posters of different parts of the syllabus (Brophy 2005).

This stage must marry the MT and English teaching as the two cannot be considered in isolation. It should focus particularly on the 'bridge' between the two. As such it may not just affect MT materials and teaching but English materials and teaching. Teachers must be trained in constructive ways that two languages can be used in the classroom (even when materials may be in one language).

4.4.5 Teacher training and teacher deployment

Currently training of teachers is becoming more formalised[71]. The new plan is for pre-service training to be done at RTTIs and in-service training to be done at CECs. Grade 12 graduates will be able to take 2 years pre-service training at one of the RTTIs, whilst grade 8 graduates do in-service training over 4 years to qualify as teachers[72]. It is intended that there is an unified curriculum, so that those going through either pre-service or in-service training cover the same material, though this is still being worked out (Tilson 2005). It is not clear to the author, how secondary school training is included (or whether this is only an option for those going into pre-service training).

For primary teachers to be trained for BE, some training for this would have to take place in both RTTIs and CECs. At least part of the training, particularly the demonstration of approaches/ methods and the subsequent teaching practice should be in the MT. Support /training for the different local languages could be split up amongst the RTTIs according to the languages in the regions. At CEC level it would probably only be necessary for a CEC to support one or two languages.

One implication for teacher deployment is that primary teachers need to be bilingual in both English and the local language of the area[73]. Even if materials from P4 were in English, it would be difficult to teach effectively

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[70] In Mali they experienced this problem (Bender 2001)

[71] Until now, various NGOs ran three phases of training of three months each using a system set up by UNICEF in collaboration with the SoE.

[72] The in-service training covers the pattern of 3 weeks training followed by 9 weeks of teaching, 3 times per year. I.e. Training is sandwiched between teaching practice.

[73] This also means that 'foreign teachers', from say Kenya or Uganda could only teach in the last grades of primary school or in secondary school. Because of the dearth of teachers in Sudan, one strategy may be to employ teachers from neighbouring countries.

without some use of the MT for at least P4 and P5. Possibly from P6 onwards teachers would not need to know the language of the locality (assuming there is a separate teacher for 'MT as a subject' in these grades.)

However, BE presents an opportunity to use teachers with lower qualifications, and less good English, for P1-P3. A different level of qualification could be designed for them and this could help meet the shortfall predicted in the requirement for teachers[74], as well as providing an income and jobs[75].

4.4.6 Institutional development and plans of the SoE

In plans for departments under the SoE there is a 'Quality, Promotion and Innovation Department', which is responsible for 'national languages' (see Table 4). There has been discussion about a 'National Institute of Languages' (NIL) to be based in Maridi, and this may be what is envisaged as being in this structure. However, to date, little has been done to set this up[76].

The reasons for this may be largely resource and donor driven. SIL has agreed to support the development of BE but the support they can give is not in direct funding but making available some personnel who could help with planning, training and linguistics. Currently too, SIL is not based in South Sudan, though it has plans to move some personnel back in the near future. In addition BE is not currently a focus of the major programs/ donors.

To implement BE, NIL would have to have close working links with the CDC (under the same higher level department), and those involved in primary education (under the 'General Education dept'). It would also be helpful for it to develop links with university linguistics departments as universities are once again established in

[74] The SoE has target of 52% GER in six years time. Using this, a SBEP model for teacher supply and demand shows a deficit of about 12,000 teachers. (CARE International 2004:3)

[75] In PNG, where MT is used as MoI in Kindergarten and P1 and P2, local people, who have a lower level of qualifications are trained to teach this part of school. They are also paid less. This has all sorts of advantages; the teachers are part of the community and can interact easily with parents, it opens up jobs and salaries to people who would otherwise not have that opportunity, the costs saved help counteract other costs there might be in implementing MT education. (Klaus 2003:108-109)

[76] A director of languages, has been appointed, but as of July 2005 he had no staff or office, though the Deputy Commissioner of Education (Ater 2005) said that would change shortly.

the South. The relevant institutions; NIL, universities, CDC, RTTIs and CECs will between them have to develop capacity in the areas of linguistics, local languages and bilingual education, including skills of curriculum and materials development, and teacher training.

Chapter 5: Conclusions and recommendations

The school is a piece of alien culture. Can it be domesticated?

(Mazrui 2002:277)

This study has shown, that in the multilingual, multicultural context of South Sudan, BE is essential to improve the quality, relevance, access and equity of primary education for the majority of children. In addition, along with Heugh (1999) the author believes it is a step in the direction of recognising the African languages as a resource and allowing a more endogenous development to emerge.

Larger structural forces will tend to favour the use of English only. This is conceptually simple and a system understood by those offering assistance to Sudan. However, South Sudan presents a complex linguistic reality; teaching only through one language does not address that reality and will not solve many of the fundamental problems. Arguably, BE not only meets the needs of students better, but also the needs of, and the requirement for, teachers given many are not highly educated and do not know English well.

Two factors emerge as key to the implementation of BE in South Sudan:

1. Continued political will for BE from within the country particularly within the SoE. The SPLM has had a vision for BE, but in the pressure of an immediate post-conflict situation they need to maintain that vision and make the case for BE clearly to potential donors, who inevitably have their own agendas.
2. Donor commitment towards BE pilot programs and fuller implementation. One hopeful sign is that UNESCO is willing to support a language conference (Ater 2005). Some other bilateral and unilateral donors seem supportive of BE but it remains to be seen whether they will follow through with assistance[77].

[77] The World Bank seems to have developed an increasingly supportive view of L1 use in education; they might be willing to help (World Bank 2005). USAID has in the past been supportive of BE in Sudan and elsewhere, and may be willing to contribute in some way. Given the major role SBEP has in teacher training and teacher training curriculum, it would need to be involved in BE were it to be implemented. The EC's recent strategy paper also offers hope saying, 'The EC would be well placed to support development of a potentially

Assuming (1) above, the author recommends that the SoE assign a core of staff and resources to NIL, in order that they, together with other willing partners work on:

1. More research in order to make well founded proposals for which languages should be used in education, and the possible processes to be used in selecting them.
2. Detailed plans for the implementation of BE starting with some pilot programs.
3. Awareness raising of the need for BE amongst stakeholders in education and potential donors.
4. A South Sudan 'languages in education conference'.

These feed into each other in roughly the order given. For instance, (1), (2) and (3) would be required inputs for a language conference, which would hopefully confirm choices of languages and agree on a strategy for BE to be implemented. Hopefully too, these steps will raise the funding required. More basic versions of BE could be implemented more quickly and might be a helpful first step in this post-conflict situation.

Another area of research, which could be a helpful contribution to the development of BE in Sudan and similar contexts, concerns the relationship of oral to literate cultures and the presence of primary and secondary discourses in both [78]. Western type schooling is largely about developing academic literate secondary discourses and according to Gough and Bock (2001:101), '…the development of academic literacy is more about the apprenticeship to Western rhetorical norms and ways of thinking, writing and talking, rather than secondary discourses in general.' Given that African cultures are predominantly oral, it is worth exploring whether there are ways in which L1 secondary oral discourses could be used and developed more in school, in order to support the child's own culture, L1 language development, cognitive development and thus also the learning of other types of discourse along with the learning of the L2.

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multicultural and multi-lingual education system and offers sufficient resources to be able to make an impact.'(EC 2005:20)

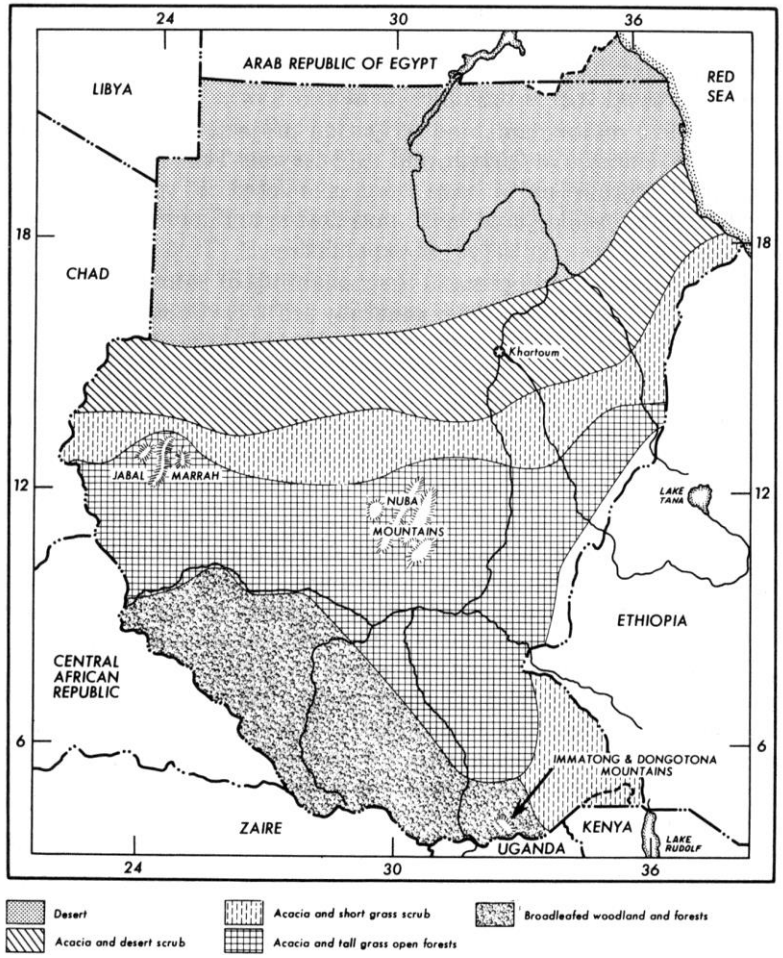
[78] Primary discourse includes everyday conversational interaction, it does not demand specialist knowledge for participation. Secondary discourse requires a degree of expert knowledge. Secondary discourses are usually learnt through social institutions beyond the family such as schools and businesses. Some examples of secondary oral discourses for Xhosa language of South Africa are those used in ceremonies for 'opening a homestead', 'releasing a widow', praise poetry, tradition legal discourse and folk tales. (Gough and Bock 2001: 96)

BE education needs additional skills to what has conventionally been offered in 'educational assistance'; skills in linguistics, in developing curriculum and materials in two languages, and teaching through two languages alongside each other. Given the relative novelty of BE in this non-western, linguistically diverse context, and the fact that no one organisation has all the skills needed, there will need to be a willingness to listen and to learn from all the partners involved. If the SoE and others are willing to pick up the challenge, it could be an exciting time of developing of a new paradigm in education, where there is 'Education for All…In their own languages'. If not, despite much hard work that is going into establishing the new education sector in South Sudan, it is likely to be a system which does not serve the majority of children and in which existing inequalities are perpetuated.

Appendix 1 Maps

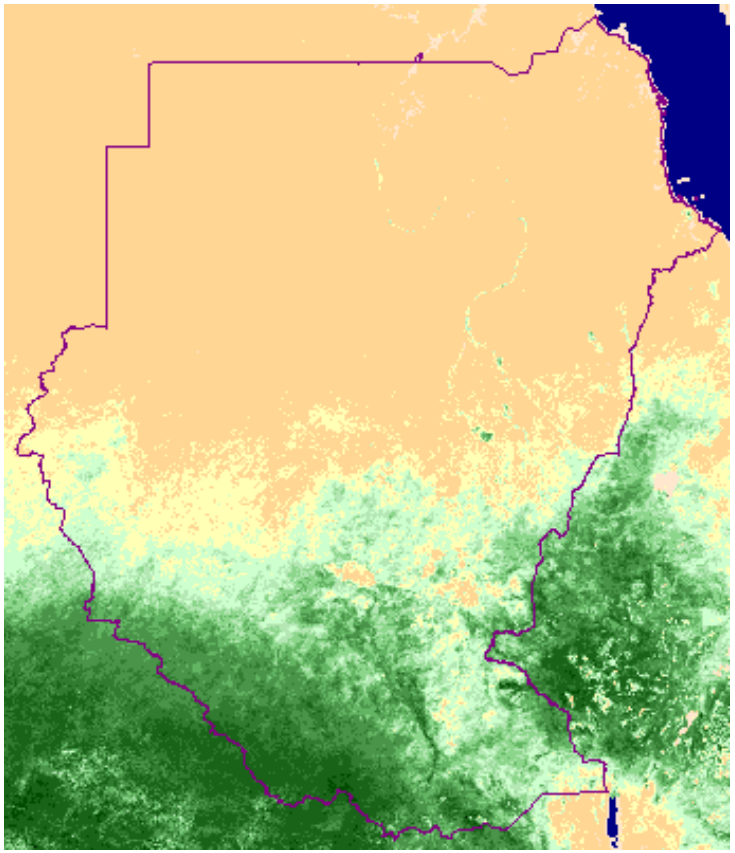
Map 5 Vegetation in Sudan

(from Nelson 1973:60)



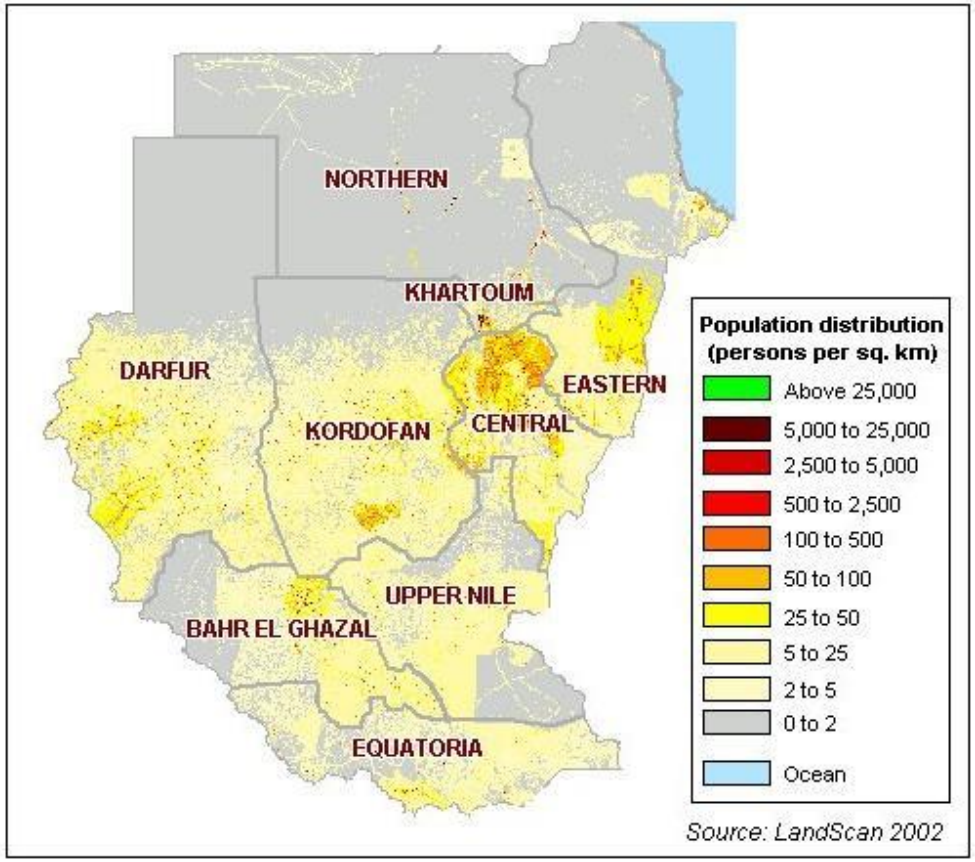
Map 6 Satelite photo of Sudan

(from UN 2005)



Map 7 Population distribution of Sudan

(from Sudan Tribune 2005)



Map 8 The current states of Sudan

(from Verney 1995)

Map 9 South Sudan showing the states, counties and payams

Appendix 2 Information about the contested regions

The boundaries of the contested regions

The boundaries of the disputed regions are defined as follows in the CPA:

- Abyei, is 'the area of the nine Ngok Dinka chiefdoms transferred to Kordofan in 1905' (SPLM and GoS, 2004a:2). An Abyei Boundaries Commission (ABC) shall be set up to demarcate the exact boundaries of these nine chiefdoms and should finish its work within the first two years of the Interim Period. (SPLM and GoS 2004a:6)
- 'The boundaries of Southern Kordofan/Nuba Mountains state shall be the same boundaries of former Southern Kordofan Province when Greater Kordofan was sub-divided into two provinces [i.e. Northern and Southern Kordofan].'(SPLM and GoS 2004b)
- Blue Nile 'shall be understood as referring to the presently existing Blue Nile State.' (SPLM and GoS 2004b)

It should be noted that the GoS has at different times divided Sudan into different provinces and states. E.g. In the latest definition in 1994 it divided Sudan in 26 states. One needs to be aware of this when looking at different maps. It means that one of the contested regions is sometimes referred to as 'Blue Nile' (because it coincides with the current Blue Nile State) or 'southern Blue Nile' because it refers to the southern part of an older larger province of 'Blue Nile'. The CPA refers to it as 'Blue Nile'.

The history behind the contested regions

In February 1972 the Addis Ababa Agreement brought an end to the First Civil War. The agreement made provision to transfer certain areas which were adjacent to the Southern Region to it. These included areas which had been part of the southern provinces before 1956 as well as areas culturally similar to the South. The former (which included Kafia Kingi and Hofrat al-Nahas currently in southern Dafur) were to be automatically re-transferred but were not. The latter (which included the district of Abyei in the southern part of the then Kordofan province and the district of Chali in southern part of the Blue Nile province) were to be allowed to

vote on whether they joined the South or remained in the North. However, no referendums were held. (Johnson 2003:44)

The Nuba Mountains were not included in the Addis Ababa Agreement and were not part of the Southern Region in colonial times or after Independence in 1956. They were for a short while in the colonial period a separate province and it was intended to attach them to southern Sudan. However the presence and objections of Baqqara pastoralists and merchants from the central Nile valley prevented that and it was reabsorbed in Kordofan (Johnson 2003:44). However, in contrast to the First Civil War, the Nuba Mountains did become involved in Second Civil War in the South, resulting in parts of the Nuba Mountains controlled by the government and parts by the SPLM. As such it is part of the CPA.

Contention over boundaries has had a lot to do with natural resources. Abyei has the Bahr al Arab river running through it, access to which is important for both Dinka and Arab pastoralists. Oil had not been discovered at the time of the Addis Ababa Agreement. In 1980, after the discovery of oil, the National Assembly considered a bill to set the boundary between North and South further south to include oil at Bentui and agriculturally productive areas of Upper Nile Province in the North. This provoked immediate confrontation with the Southern Regional government and the bill was withdrawn. (Johnson 2003:45)

Appendix 3 History of South Sudan

This appendix gives a brief overview of some of the main periods and events over the last 100-200 years of Sudan, with particular focus on the place of southern Sudan within Sudan.

In terms of the last 200 years the main periods of Sudanese history, can be divided up as follows:

- Turco-Egyptian rule (1821-1883)
- The Mahdist State (1883-1898)
- Anglo-Egyptian rule (1899-1947)
- Nationalism, Independence (in 1956) and the First Civil War (1947- 1972)
- The Addis Ababa Agreement and Regional Governments (1972-83)
- The Second Civil War (1983-2005)

The South was not properly included into the area of Sudan until the period of Anglo-Egyptian rule (1899-1947). The Turco-Egyptian conquest of Sudan in 1821 unified small, independent, northern Sudanese, Muslim states, which themselves had not expanded beyond the Shilluk kingdom with its capital of Fashoda and the Dinka living along the Kiir (Bahr al-Arab river). However the conquering Turco-Egyptian powers penetrated further south bringing in European, Egyptian and northern Sudanese merchants, and adventurers into the South. They also placed greater pressure on their subjects for slaves and taxes leading to a dramatic expansion slave-raiding into the South and in domestic slave owning in the North (Johnson 2003:4-5).

The Mahdist state was lead by a northern Sudanese religious leader (the 'Mahdi') who wanted to both purify Islam and throw out the Turkish-Egyptian oppressors (Nelson 1973:21). The country was divided between those that were Muslim and had pledged allegiance to the Mahdi (the 'Ansar') and those that hadn't (both Muslim and non-Muslim) (Johnson 2003: 6-7).

The British ruled Sudan through a system of 'native administration', a system which used indigenous structures and institutions as much as possible. This however happened later in the South than the North partially because it seemed like there were less indigenous structures to hook onto. The Chief's Court, which developed after the 1920s was a result of British innovation that incorporated local custom. (Johnson 2003:12)

During the time of the British, not much was done to further education which was mainly left in the hands of the missions in the South. Less than 10 years before Independence the education policy changed and southern chiefs were then required to provide a quota of boys for education. This meant that in 1956 at Independence very few Southerners were trained in modern administration and commerce (Johnson 2003:15). In a similar way, other parts of Sudan, the west and east, also lagged behind in development during British rule. (Johnson 2003:17)

Nationalism, Independence and the First Civil War 1947-1972

The de facto rule of Sudan by Britain, was questioned by Egypt at the end of the Second World War. Tensions and rivalry between the two led to a quicker Independence for Sudan than might have otherwise been the case, as the northern nationalists were able to play both sides off against each other. Up till 1947 the British were not fully committed to administering the South as part of Sudan. Rather there was some thought that it might be linked to the East African colonies. A policy of separate development and administration had been in place for around 20 years, but in the face of northern nationalist opposition to this, this idea was abandoned and the South was never really consulted on its future (Johnson 2003:21-25).

Elections for the first self governing parliament were held in 1953 to prepare for Independence in 1956. One possibility for which unionists were campaigning was unity with Egypt. The National Unionist Party won. However despite its name, it was a coalition of which the majority were in fact against union with Egypt. This was thus abandoned. Most Southerners then belonged to a newly formed Liberal Party which won the majority of seats in the South. A Sudanisation Commission was held, the results of which were disappointing for the South as nearly all key roles in the South were given to northerners. The Liberal Party's proposal of a federal system for the country was ignored. This led to the Torit mutiny in the South in 1955 and, in 1960-2 leading southern political figures left for the bush or neighbouring countries to start an exile political movement and form the core of a guerrilla army known as Anyanya[79]. Various governments tried to create an Islamic national identity. There was an attempt to remove Christian or British influences from the South, Arabic was introduced as the language of administration and education. By 1969 civil war had spread to all three southern provinces. (Johnson 2003 26-31; Verney 1995:12)

[79] The vernacular name for a type of poison.

The Addis Ababa Agreement and Regional Governments 1972-83

The Addis Ababa Agreement brought peace and allowed for the formation of the Southern Region with some institutional autonomy. The Southern Regional government consisted of a regional assembly which could elect and remove the president of the High Executive Council (HEC) subject to the confirmation of the President of the Republic. The Southern Regional government could vote to exempt the Region from national legislation considered detrimental to the South.

President Nimeiri who had brokered the Addis Ababa Agreement was however under pressure from various northern parties, some of whom were still committed to an Islamic state and who thought he had conceded too much to the South. Issues to do with the borders of the Southern Region, newly discovered oil areas and attempts to reduce the power and unity of South by further subdividing it into 3 regions set the stage for the outbreak of the Second Civil War. Disunity amongst southerners e.g. between the Nilotes and the Equatorians contributed. (Verney 1995:12-13). In addition, the integration of the northern and southern troops in the Southern Region took place much faster that Southerners had expected and the number of northern troops ended up exceeding the number of southern troops. These factors contributed to the Bor Mutiny of 1983 and the start of the Second Civil War (Johnson 2003:41-42). The SPLA and its political wing, the SPLM were formed under John Garang at this time.

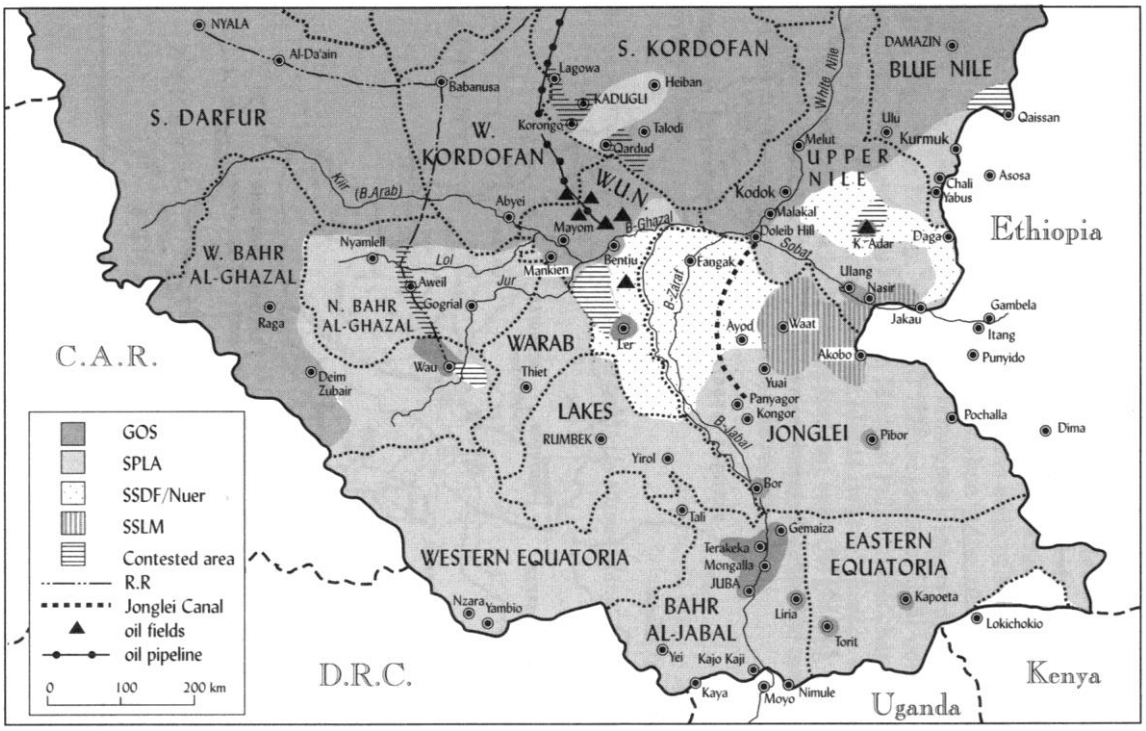
The Second Civil War 1983-2005

There have been various factions of rebels fighting in the South, though the SPLA has been the main one. The civil war has often been presented as the SPLA fighting for 'greater autonomy for the Christian and animist South'. However as Johnson (2005) says, 'The official goal of the SPLM has always been, and still remains, a "New Sudan". This ostensibly means a Sudan freed from the dominance of Islamic sectarian politics, and where underdeveloped regions have a greater say in their own administration, greater control over their own resources, and a greater share in the nation's governance.'

The areas that were controlled by the SPLA, other rebel groups and the GoS are given in the map below:

Map 10 Areas held by the Government of Sudan and rebel groups in 2002

(Johnson 2003:xxii)



The mainstream peace process between GoS and the SPLA was the Inter Governmental Authority on Development (IGAD) process. In 1997, a Declaration of Principles was agreed on. These gave the peoples of southern Sudan the right to self-determination but stated a preference for a united Sudan, providing principles, including a secular and democratic state and rights of self-administration for the South were met (EC 2005:7). Serious IGAD led peace negotiations were resumed in June 2002 resulting in various protocols, including those on security, power and wealth sharing. These culminated in the CPA on 9th January 2005.

Appendix 4 Outline of the Comprehensive Peace Agreement

The SPLM is to take over the administration of the entire South, including those areas currently under GoS control (mainly some garrison towns in the South). This will be followed by a six year transitional period (starting in July 2005), at the end of which a referendum will be held in the South on whether it will secede or not.[80]

In the transitional period, the leader of the SPLM will be come Vice President of the entire country as well as President for the Southern Region.

Some of the main features of the agreement are given below (BBC 2005):

- The oil wealth is to be split 50:50 between the Central Government and the Southern Government.
- Government jobs are to be split 70:30 in favour of the government in the central administration, and 55:45 in favour of the government in the contested regions.
- Islamic law is to remain in the North.
- Sharia law in Khartoum is to be decided by elected assembly.
- The Nuba Mountains and Blue Nile will have their own regional governments headed by a governor directly appointed by registered voters. Until the time of that election, there will be a governor from either the SPLA or GoS on a rotational basis. (SPLM and GoS 2004b)
- Abyei State will be accorded special status. Its residents will be citizens of both Western Kordofan in the North and Bahr el-Ghazal state in the South. It will be administered by a local executive council elected by the residents of Abyei. (SPLM and GoS 2004a)
- During the interim period the North and South are to maintain separate armed forces. Under international monitoring, government troops are to be withdrawn from the South and SPLA troops from the North (i.e. from the contested regions). Some integrated units will be formed (of which half the personnel will be GoS

[80] Abyei is to be granted the right to a referendum at the end of the interim period as to whether it becomes part of Bahr el Ghazal (in South Sudan) or remains part of the North (SPLM and GoS, 2004:3). It is not clear to the author from what seem to be the relevant protocols (SPLM and GoS, 2004b), whether this is also true of the Nuba Mountains and southern Blue Nile. Most people consulted with, believed it applied to these areas too.

and half SPLA) and will be deployed in the North and South.[81] If, after the interim period, the South decides not to secede, these units will form the core of a future national army. If the South secedes, these units will be dissolved and their component units reintegrated into their respective forces. (SPLM and GoS 2003)

[81] The numbers of troops in these integrated units to be deployed in different areas are (SPLM and GoS, 2003):

- Southern Sudan: 24000
- Nuba Mountains: 6000
- Southern Blue Nile: 6000
- Khartoum: 3000

Appendix 5 Detailed data on Southern Sudanese languages

Table 6 below gives data from the Ethnologue (SIL 2005a) for languages found in South Sudan. Note that the table lists populations of L1 speakers. Although Juba Arabic is mainly used as a L2, and some might not consider it an indigenous language of the South, it is included because it is the L1 for a small number of Southern Sudanese.

Languages are listed from the largest population of speakers to the smallest. The population figures given for different language groups should be treated cautiously as they come from different sources from different dates. Given that there has been civil war in the South Sudan for much of the last 50 years, population data has been difficult to collect. Associated factors make population growth less predicable due to events like people displacements, famines and war casualties. In addition it is possible, that some figures are merely extrapolations of earlier figures[82]. But given that no better data is currently available, these figures can at least be used as a guide. The population figures given for particular dates, have been extrapolated to give an estimate for the year 2003, and these are the figures used for comparison purposes. The extrapolation has been done using a natural growth rate (crude birth rate minus crude death rate) of 2.85% per year which is the rate that NSCSE and UNCEF have used in their population estimates (NSCSE 2004:27). This should help give a more accurate idea of the sizes of different language groups and allow for some comparisons with each other. In fact the total population for South Sudan from the table, using the extrapolated population data comes to close the NSCSE (2004:27) estimate of 7.5 million, which is reassuring. Locations of languages are not given in the table but indications of these are given in Map 3 on page 22[83].

What Table 6 does not show very clearly, is how the languages are related. This is better revealed below in Table 7 on page 81. This can alternatively be pictured as a 'tree', with main 'trunks' being the languages families already mentioned, and different branches coming off these main trunks. Languages sharing a common branch are closely related and somewhat mutually intelligible. Another way of describing this, is that languages exist in closely related clusters.

[82] The last national census which included South Sudan was done in 1983 but does not appear to have included much data on language use. The 1993 census did not include South Sudan (NSCSE 2004:27).

[83] More detail on language locations is given in the Ethnologue.

E.g. in Table 7 below, Shilluk, Luwo, Thuri, Belanda Bor, Anuak, Päri are on a common branch and therefore closely related.

Table 6 lists Shilluk as having a lexical similarity of 60% with Anuak, Pari and Luwo. Where lexical similarity is not given, it does not mean that languages are not closely related, only that whatever language surveys have been done have not tried to measure that relationship. Further examples of the lexical similarity between closely related languages are given below:

- Murle, Tennet, Didinga, Narim are also shown as one branch of a language family. Murle is listed as having a lexical similarity of 74% with Narim, 71% with Didinga.
- Otuho, Dongotono, Lango (of Sudan), Lopit, Lokoya are one branch of a language family. Otuho has a lexical similarity 64% with Lokoya, 63% with Lopit, 60% with Dongotono.
- The differences between the dialects of Dinka have been enough to separate them out into 5 main dialects which are listed in the Ethnologue. There are in fact about 26 dialects of Dinka, though all the groups identify themselves as Dinka and say they can understand each other (Persson 2005a). The ethonologue says Dinka northeastern (Padang) has a lexical similarity of 92% with Northwestern Dinka, 88% with Southwestern Dinka, 88% with Southeastern Dinka, 86% with South Central Dinka.
- Bari, Kakwa, Mandari share one branch of a language family. Bari has a lexical similarity 86% with Ngyepu, 85% with Pöjulu, 81% with Kuku, 80% with Nyangwara, 71% with Mondari, 73% with Kakwa (only Kakwa and Mondari/Mandari are listed separately in the Ethnologue, the rest are listed only as dialects of Bari).

Table 6 Data on the languages of South Sudan

Notes on Table

1. The data source is the Ethnologue (SIL 2005a).
2. Languages are listed from largest to smallest in population.
3. The table includes a column which gives 'Dialect information and lexical similarity'. Lexical similarity is measured by comparing word lists with words of the same meaning from both languages. It is the percentage of words that are the same or similar. Where this is done with languages which are closely related (i.e. grammatically similar) this should give a measure of mutual comprehensibility.
4. The 'Role' column gives some information about whether the language has been selected for use in education. E.g. Role A languages were selected by the colonial administration in 1928 for use in schools. For more information see section 3.1.3.

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
1	NUER	Naath, Naadh.	Dor (Door), Eastern Jikany (Jikain, Jekaing), Abigar, Western Jikany, Cien, Thognaath (Thok Nath), Lou (Lau), Nyuong, Thiang (Bul, Gawaar, Jagai, Laak, Leik). Dialects correspond mainly to geographic divisions	Speakers also use Arabic	740,000	1982	SIL	1,335,125	18.52%	Nilotic	A	18.52%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
2	DINKA, SOUTHWESTERN (REK)	Rek, Western Dinka.	Rek (Raik), Abiem (Ajong Dit, Ajong Thi, Akany Kok, Akern Jok, Apuoth, Apwoth, Anei), Aguok (Agwok), Apuk, Awan, Lau, Luac, Malual (Malwal, Atoktou, Duliit, Korok, Makem, Peth), Paliet (Baliet, Ajak, Buoncwai, Bon Shwai, Bwoncwai, Kongder, Kondair, Thany Bur, Tainbour), Palioupiny (Palioping, Akjuet, Akwang, Ayat, Cimel, Gomjuer), Tuic (Twic, Twich, Twij, Adhiang, Amiol, Nyang, Thon). Luac dialect is different from Luac dialect in Northeastern Dinka. Lexical similarity 89% with South Central Dinka, 90% with Southeastern Dinka	Speakers also use Sudanese Arabic	450,000	1982	UBS	811,900	11.26%	Nilotic	A	29.78%
3	ZANDE	Azande, Zandi, Pazande, Sande, Badjande.	Dio, Makaraka (Odio).		350,000	1982	SIL	631,478	8.76%	Niger-Congo	A	38.54%
4	DINKA, NORTHEASTERN (PADANG)	Padang, White Nile Dinka.	Abiliang (Dinka Ibrahim, Akoon, Bawom, Bowom), Dongjol, Luac (Luaic), Ngok-Sobat (Ngork, Jok), Ageer (Ager, Ageir, Abuya, Beer, Niel, Nyel, Paloc, Paloic), Rut, Thoi. Lexical similarity 92% with Northwestern Dinka, 88% with Southwestern Dinka, 88% with Southeastern Dinka, 86% with South Central Dinka.	Speakers also use Sudanese Arabic	320,000	1986	UBS	515,968	7.16%	Nilotic	A	45.70%
5	BARI	Beri	Kuku, Nyangbara (Nyangwara, Nyambara), Nyepu (Nyefu, Nyepo, Nypho, Ngyepu), Pöjulu (Pajulu, Fadjulu, Fajelu, Madi), Ligo (Liggo). Lexical similarity 86% with Ngyepu, 85% with Pöjulu, 81% with Kuku, 80% with Nyangwara, 71% with Mondari, 73% with Kakwa		420,000	2000		456,943	6.34%	Nilotic	A	52.04%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
6	DINKA, SOUTH CENTRAL (AGAR)	Agar, Central Dinka.	Aliap (Aliab, Thany, Aker), Ciec (Ciem, Cic, Chiech, Kwac, Ajak, Ador), Gok (Gauk, Cok), Agar. Gok is also influenced by Southwestern Dinka and has a number of Arabic loans. Agar is becoming accepted as the educational standard for South Central Dinka. Lexical similarity 90% with Southeastern Dinka	Speakers also use Sudanese Arabic	250,000	1982	UBS	451,056	6.26%	Nilotic	A	58.29%
7	DINKA, SOUTHEASTERN (BOR)	Bor, Eastern Dinka.	Bor (Bor Gok), Athoc (Athoic, Atoc, Borathoi, Bor Athoic), Ghol, Nyarweng (Nyarueng, Narreweng), Tuic (Twi)	Sudanese Arabic is the second language. Speakers of some dialects also speak Nuer Gewaar and Nuer Lou	250,000	1982	UBS	451,056	6.26%	Nilotic	A	64.55%
8	SHILLUK	Colo, Dhocolo, Chulla, Shulla.	Lexical similarity 60% with Anuak, Pari, Luwo		175,000	1982	SIL	315,739	4.38%	Nilotic	A	68.93%
9	OTUHO	Lotuko, Lotuho, Lotuxo, Lotuka, Lattuka, Latuko, Latuka, Latooka, Otuxo, Olotorit.	Koriok, Logiri (Logir), Lomya (Lomia), Lorwama, Lowudo (Loudo, Lauda), Logotok. Lexical similarity 64% with Lokoya, 63% with Lopit, 60% with Dongotono		135,000	1977	Voegelin and Voegelin	280,314	3.89%	Nilotic	A	72.82%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
10	LUWO	Lwo, Jur Luo, Jur Lwo, Jo Lwo, Dhe Lwo, Dhe Luwo, Giur.	Different from Lwo of Uganda, or Luo of Kenya and Tanzania, but related	Vigorous. Thuri speakers sometimes use Luwo as second language. All domains, local administration, some use in schools, churches. Positive language attitude. Speakers also use Dinka, English, or Arabic	80,000	1983	census	140,338	1.95%	Nilotic	B	74.76%
11	DINKA, NORTHWESTERN (ALOR)	Ruweng.	Alor, Ngok-Kordofan, Pan Aru, Pawany. A separate language from other Dinka (J. Duerksen SIL). Lexical similarity 88% with Southwestern Dinka and Southeastern Dinka, 84% with South Central Dinka		80,000	1986		128,992	1.79%	Nilotic	A	76.55%
12	MORU	Kala Moru.	Agi, Andri, 'Bali'ba, Kadiro, Lakama'di, Miza, Moruwa'di. Andri and 'Bali'ba dialects are similar, Kadiro and Lakama'di are nearly identical		70,000	1982	SIL	126,296	1.75%	Moru Ma'di	A	78.31%
13	MANDARI	Mondari, Mundari, Shir, Chir, Kir.	A different language and culture from Bari. Lexical similarity 75% with Nyanggwara, 71% with Bari and Ngyepu, 70% with Pöjulu, 66% with Kuku, 61% with Kakwa		116,000	2000	WCD	126,203	1.75%	Nilotic		80.06%
14	DIDINGA	'Di'dinga, Xaroxa, Toi, Lango.	Ethnic groups: Chukudum, Lowudo. Slight differences in speech between Chukudum and Lowudo, apparently mainly phonetic. Lexical similarity 83% with Narim, 71% with Murle.		100,000	2000		108,796	1.51%	Surmic	B	81.57%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
15	TOPOSA	Taposa, Topotha, Akara, Kare, Kumi.	Eastern Toposa, Western Toposa, Jiye. Eastern Toposa and Jiye are linguistically closer to Turkana; Western Toposa to Karamojong. Inherently intelligible with Nyangatom, Karamojong, and Turkana, but each has strong ethnic attitudes. Separate literature is needed also because of loans from different second languages, and different discourse structures. Limited intelligibility of Teso	Vigorous. Neighboring groups use it in trade (Didinga, Murle, Boya-Longarim, Tennet). All domains. Positive language attitude. The Toposa are peaceful with the Karamojong, have a mutual nonagression pact with the Nyangatom, are intermittently unfriendly to the Jiye of Sudan, permanently in tension with the Turkana, and to the Murle-Didinga group (Murle, Didinga, Boya-Longarim). A small number speak Southern Sudanese Arabic (Juba Arabic) for trading. A few know some English from school	100,000	2000	M. Schroeder	108,796	1.51%	Nilotic	B	83.07%
16	MURLE	Murelei, Merule, Mourle, Murule, Beir, Ajibba, Agiba, Adkibba.	Related to Didinga. Subgroups: Lotilla, Boma, Olam (Ngalam). Maacir may be a dialect or ethnic group. Lexical similarity 74% with Narim, 71% with Didinga		60,000	1982	SIL	108,253	1.50%	Surmic	B	84.58%
17	JUR MODO	Modo, Jur.	Lori, Modo (Jur Modo, Modo Lali), Wira, Wetu		100,000	2004	SIL	97,229	1.35%	Central Sudanic	B	85.92%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
18	KAKWA	Bari Kakwa, Kakua, Kwakwak, Kakwak		People are friendly with the Toposa; unfriendly to the Turkana	40,000	1978	SIL	80,755	1.12%	Nilotic		87.04%
19	ANUAK	Anywak, Anywa, Yambo, Jambo, Nuro, Anyuak, Dho Anywaa	Closer to Acholi and Luo of Uganda than to Shilluk		52,000	1991	UBS	72,854	1.01%	Nilotic	B	88.06%
20	LOPPIT	Loppit, Lopid, Lofit, Lafite, Lafit, Lafiit.	Lexical similarity 63% with Otuho		50,000	1995	Scott Randall	62,604	0.87%	Nilotic		88.92%
21	REEL	Atuot, Atwot, Thok Cieng Reel.	No dialect differences. Lexical similarity 77% with Nuer; 49% with Dinka		50,000	1998	Atuot community	57,543	0.80%	Nilotic		89.72%
22	JUMJUM	Berin, Olga, Wadega			50,400	2000	WCD	54,833	0.76%	Nilotic		90.48%
23	MABAAN	Maaban, Meban, Southern Burun, Gura, Tungan, Barga, Tonko, Ulu.	Partially intelligible with some southern dialects of Burun		50,400	2000	WCD	54,833	0.76%	Nilotic	B	91.24%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
24	ACHOLI	Acoli, Atscholi, Shuli, Gang, Lwo, Akoli, Acooli, Log Acoli, Dok Acoli	Labwor, Nyakwai, Dhopaluo (Chopi, Chope).		45,000	2000		48,958	0.68%	Nilotic	B	91.92%
25	PÄRI	Lokoro			28,000	1987	SIL	43,896	0.61%	Nilotic		92.53%
26	LOKOYA	Lokoiya, Lokoja, Loquia, Lowoi, Owoi, Loirya, Oirya, Ellyria, Oxoriok, Koyo.	Lexical similarity 64% with Otuho, 57% with Lopit, 56% with Dongotono	Speakers are reported to be bilingual in Otuho	40,100	2000	WCD	43,627	0.61%	Nilotic		93.14%
27	MÜNDÜ	Mundo, Mountou, Mondu, Mondo.	Shatt. Closest to Mayogo and Bangba of Democratic Republic of the Congo	There is intermarriage with the Avokaya and Baka, and bilingualism in those languages. Some bilingualism also in Bangala and Arabic	23,000	1982	SIL	41,497	0.58%	Niger-Congo	B	93.71%
28	AVOKAYA	Abukeia, Avukaya.	Ojila (Odzila, Odziliwa), Ajugu (Adjiga, Ojiga, Agamoru). Close to Logo. Avokaya Pur near Faradje is closer to Logo than to the Ojila dialect of Sudan	intermarriage and bilingualism with the Baka and Mundu, especially near Maridi	40,000	2002		41,140	0.57%	Moru Ma'di	B	94.28%
29	BELANDA VIRI	Viri, Bviri, Biri, Gumba, Gamba, Mbegumba, Mvegumba, Belanda		Speakers also use Belanda Bor	16,000	1971	Welmers	39,324	0.55%	Niger-Congo	B	94.83%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
30	BURUN	Barun, Lange, Cai, Borun.	Ragreig, Abuldugu (Bogon, Mugo-Mborkoina), Maiak, Mufwa (Mopo), Mughaja (Mugaja, Mumughadja). Some southern dialects are intelligible with Mabaan		18,000	1977	Voegelin and Voegelin	37,375	0.52%	Nilotic		95.35%
31	BAKA	Tara Baka		Sudanese Creole Arabic is the main second language. Zande is taught in school and used in church. Some speakers intermarry with the Avokaya and Mundu and also use those languages. Moru also used	25,000	1993	UBS	33,112	0.46%	Central Sudanic	B	95.81%
32	MA'DI	Ma'adi, Ma'diti.	Pandikeri, Lokai, Burulo		18,000	1982	SIL	32,476	0.45%	Moru Ma'di	B	96.26%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
33	ARABIC, SUDANESE CREOLE (JUBA ARABIC)	Juba Arabic, Southern Sudan Arabic, Pidgin Arabic	Difficult intelligibility of Nubi, Sudanese Arabic, or Modern Standard Arabic.	Trade language. 44,000 second-language speakers. Used as the major language of communication among speakers of different languages in Equatoria, south of Wau and Malakal. Used in many religious services as first or second language in Juba and a few other towns. Most people in towns speak at least two languages, and it is common for them to speak Creole Arabic, English, and 1, 2, or 3 vernaculars	20,000	1987		31,354	0.43%			96.69%
34	LANGO	Langgo.	A separate language from Otuho	Speakers also use Otuho	20,000	1987	SIL	31,354	0.43%	Nilotic		97.13%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
35	NDOGO			Language of wider communication. Vigorous in most areas. Spoken as a second language by the Golo, Gbaya at Deim Zubeir, Bai, West Central Banda, Balanda, Golo, Sere, some Gbaya, Woro, some Luwo. All domains. Oral use in courts, commerce, personal letters. Used in first year in some schools. Positive language attitude. Nearly all speak some Bayi, Golo, Sere, Balanda, Arabic, English, Dinka, Luwo, Gbaya, or Banda as second language	23,300	2000	WCD	25,349	0.35%	Niger-Congo	A	97.48%
36	GBAYA	Kresh, Kreish, Kreich, Kredj, Kparla, Kpala, Kpara.	Naka (Kresh-Boro), Gbaya-Ndogo (Kresh-Ndogo), Gbaya-Ngbongbo (Kresh-Hofra), Gbaya-Gboko, Orlo (Woro), Gbaya-Dara, Dongo. 8 tribes and dialects. Gbaya-Ndogo is prestigious and understood by all. Naka is largest and also well understood	About 4,000 others speak Gbaya as second language. Men and those who have been to school speak Sudanese Arabic as second language for most common topics. They do not accept Standard Arabic, except for a few who have been to school	16,000	1987	SIL	25,084	0.35%	Central Sudanic	A	97.83%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
37	LULUBO (also called Olubo)	Luluba, Olubogo, Oluboti, Lulubo, Ondoe, Lolubo		There is strong interest in using Olu'bo for education. Many also use Bari	15,000	1985	SIL	24,875	0.35%	Moru Ma'di		98.17%
38	THURI	Dhe Thuri, Jo Thuri, Wada Thuri, Shatt.	Bodho (Dhe Boodho, Dembo, Demen, Dombo), Colo (Dhe Colo, Jur Shol, Jo Colo), Manangeer (Jur Manangeer).		16,700	2000	WCD	18,169	0.25%	Nilotic		98.42%
39	FEROGE	Ferroge, Feroghe, Kaligi, Kaliki, Kalige, Kalike.	Indri, Mangaya, and Togoyo are closely related languages	Many also use Sudanese Arabic	8,000	1982	SIL	14,434	0.20%	Niger-Congo		98.62%
40	BELANDA BOR	De Bor		Most speakers also use Belanda Viri. There is much intermarriage between the two groups		1983	SIL	14,034	0.19%	Nilotic	B	98.82%
41	BELI	Behli, Beili, Jur Beli, 'Beli.	Wulu, Bahri Girinti, Sopi (Supi). Lexical similarity 46% with Jur Modo, 45% with Bongo, 41% with Mo'da and Morokodo, 39% with Baka	Using Jur Modo literacy materials	6,600	1982	SIL	11,908	0.17%	Central Sudanic		98.98%
42	KELIKO	Kaliko.	Eastern Keliko, Western Keliko		10,000	1998	SIL	11,509	0.16%	Moru Ma'di	B	99.14%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
43	BONGO	Bungu, Dor	Busere Bongo, Tonj Bongo, Bungo. Slight dialect differences between those on the River Busere, who have had Zande influence, and those around Tonj. Bungo dialect has minor differences. Close to the Jur Beli cluster	Bilingualism in Jur Beli is low. Generally, adults understand Zande, and adult males understand Dinka Rek. The youth do not understand Zande or Dinka because education is mostly in Arabic with some English. Many students drop out of school because they cannot understand the language being used	10,100	2000	WCD	10,988	0.15%	Central Sudanic		99.29%
44	KACIPO-BALESI		Kichepo, Suri, Western Suri. Related to Murle and Didinga. Pronoun differences between Balesi and Zilmamu. Lexical similarity 40% to 54% with Murle, 35% with Mursi		10,000	2003		10,000	0.14%	Surmic		99.43%
45	MOROKODO	Biti, Ma'du, Morokodo.	A dialect cluster. Lexical similarity 63% with Jur Modo, 41% with Beli, 45% with Bongo, 43% with Baka	The Ma'du dialect may be extinct (1984). Many use Moru as second language	3,400	1977	Voegelin and Voegelin	7,060	0.10%	Central Sudanic		99.53%
46	DONGOTONO		Lexical similarity 60% with Otuho		6,200	2000	WCD	6,745	0.09%	Nilotic		99.62%
47	LONGARIM (also called NARIM)	Larim, Larimo, Lariim, Nariim, Longarim, Lariminit.	Lexical similarity 74% with Murle, 83% with Didinga		3,600	1983	Fukui	6,315	0.09%	Surmic		99.71%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
48	BANDA, WEST CENTRAL	Golo		Speakers are reported to be bilingual in Ndogo in Sudan. Most no longer speak Golo	3,000	1982	SIL	5,413	0.08%	Niger-Congo	B	99.79%
49	TENNET	Tenet.	Some intelligibility of Murle, Narim, and Didinga (in descending order).	All ages. A strong sense of Tenet ethnic identity. Most Tennet are fluent in Lopit, from which they borrow most of their songs. Many over 20 years old know Toposa, which is used for ox names and a few songs. Many can also understand some Otuho, which is closely related to Lopit. Those with schooling know a little Arabic	4,000	1994	SIL	5,151	0.07%	Surmic		99.86%
50	YULU	Youlou.	Binga, Yulu	Many also use Kresh or Arabic	3,000	1987	SIL	4,703	0.07%	Central Sudanic		99.92%
51	NYAMUSA-MOLO		Nyamusa, Molo. Lexical similarity 84% between Nyamusa and Molo, 70% to 75% with Jur Modo dialect cluster		1,200	1977	Voegelin and Voegelin	2,492	0.03%	Central Sudanic		99.96%
52	GULA	Kara, Kara of Sudan, Yamegi.	Gula (Goula), Nguru (Bubu, Koyo).	Many in Sudan are reported to be bilingual in Kresh or Arabic	1,100	1987	SIL	1,724	0.02%	Central Sudanic		99.98%

	Language	Alternate names	Dialect information and lexical similarity	Language use, bilingualism etc	Population of L1 speakers in Sudan	Date of estimate	Who data from	Population data extrapolated to 2003	% of total population using extrapolated date	Language family	Role	% Cumulative population
53	MO'DA	Gberi, Gweri, Gbara, Muda.	Lexical similarity 64% with Morokodo, 58% with Jur Modo, 41% with Beli, 49% with Bongo, 38% with Baka		600	1977	Voegelin and Voegelin	1,246	0.02%	Central Sudanic		100.00%
								7,209,219				

Table 7 Sudanese language relationships

(Table was compiled by Andrew Persson, SIL-Sudan, revised April 2004. This table is mainly a simplified version of the relevant parts of *The Ethnologue Language Family Index, 2000.)*

KEY:

bold = language of Sudan

underlined = language of South Sudan

AFRO-ASIATIC FAMILY
includes Semitic languages: **Classical Arabic**, **Arabic colloquials** and **Tigre**, Cushitic languages: **Bedawi** (or Beja), and Chadic: **Hausa**

NILO-SAHARAN FAMILY

1. **Berta**
2. **Fur**, Amdang, Mimi
3. Komuz languages: **Gumuz**, **Uduk**, **Komo**, **Opuuo** (or Shita), Kwama
4. Kunama
5. Maban languages: Maba, Marfa, **Masalit**, Kibet, Runga, Karanga
6. SAHARAN LANGUAGES: **Zaghawa**, **Kanuri**, Kanembu, Dazaga, Tedaga
7. Songai, Tadaksahak, Zarma etc.
8. Kadu languages
    A. Central: **Kadugli-Katcha-Miri**, **Kanga**, **Tulishi**
    B. Eastern: **Krongo**, **Tumtum**
    C. Western: **Keiga**
9. EASTERN SUDANIC
    A. Eastern Group
        1. **Gaam** (or Ingessana)
        2. Nara
        3. NUBIAN LANGUAGES
            a. **Dongolawi**-Kenuzi, **Nobiin** (or Mahas-Fiadidja), **Midob**
            b. Hill Nubian languages:
                1. **Ghulfan**, **Kadaru**
                2. **Dair**, **Dilling**, **El Hugeirat**, **Karko**, **Wali**
        4. SURMIC LANGUAGES
            a. Majang
            b. Southeast Surmic languages: Kwegu, Me'en, **Suri**, Mursi
            c. Southwest Surmic languages:
                1. **Murle**, **Tennet**, **Didinga**, **Narim** (or Boya)
                2. **Kacipo**-Balesi
    B. Western Group
        1. **Daju**, **Logorik**, **Shatt** (or Caning)
        2. **Ama** (or Nyimang), **Afitti**
        3. **Tese**, **Temein**
        4. **Tama**, Mararit, Assangori

C. NILOTIC LANGUAGES
1. Eastern Nilotic
a. **Bari**, **Kakwa**, **Mandari**
b. Lotuko-Maa languages:
1. **Otuho**, **Dongotono**, **Lango** (of Sudan), **Lopit, Lokoya**
2. Maasai, Ngasa, Samburu
c. Teso, Karamojong, **Toposa**, Turkana, Nyangatom
2. Western Nilotic
a. **Dinka**, **Nuer**, **Reel** (or Atuot)
b. Lwoian languages:
1. Northern Lwoian:
A. **Mabaan**, **Burun**, **Jumjum**
B. **Shilluk**, **Luwo**, **Thuri**, **Belanda Bor**, **Anuak**, **Päri** (or Lokoro)
2. Southern Lwoian:
A. Adhola, Kumam
B. **Acholi**, Lango (of Uganda), Luo (of Kenya), Alur
3. Southern Nilotic
a. Kalenjin languages:
1. Sabaot, Kupsabiny
2. Endo, Talai, Aramanik, Kalenjin, Kisankasa, Mediak, Mosiro, Tugen
3. Pokoot, Okiek
b. Datooga, Omotik
D. Kuliak Group: Ik, Soo
10. CENTRAL SUDANIC
A. Eastern Group
1. Moru-Ma'di languages:
a. Central Moru-Ma'di languages: **Avokaya**, **Keliko**, Logo, Omi, Aringa, Lugbara
b. Northern Moru-Ma'di language: **Moru**
c. Southern Moru-Ma'di languages: **Ma'di**, **Olu'bo**
2. Lendu, Ngiti, Bendi
3. Mangbetu, Asoa, Lombi
4. Mangbutu, Efe, Lese, Mamvu, Mvuba, Ndo
B. Western Group
1. Bongo-Bagirmi languages:
a. Bongo-Baka languages:
1. **Bongo**
2. **Baka**
3. **Jur Modo**, **Beli**, **Nyamusa**, **Morokodo**, **Moda**
b. Sara-Bagirmi languages: Bagirmi, Naba, Sara, Sar, Kaba, Laka, Mbai, Ngam, Ngambay etc.
c. Furu, **Gula**, **Yulu**
d. Sinyar
2. **Gbaya** (or Kresh)

NIGER-CONGO SUPER-FAMILY

1. Mande Family

2. KORDOFANIAN FAMILY
    A. Heiban Group
        1. West-Central Heiban languages:
            a. **Heiban**, **Laro**, **Otoro**, **Logol**, **Koalib**
            b. **Moro**, **Tira**
            c. **Shwai**
        2. Eastern Heiban languages: **Ko**, **Warnang**
    B. Talodi Group
        1. Talodi proper:
            a. **Talodi**
            b. **Nding** (or Eliri)
            c. **Ngile** (or Masakin), **Dagik**
            d. **Acheron**, **Lumun**, **Tocho**
        2. **Lafofa**
    C. **Katla**, **Tima**
    D. Rashad Group: **Tegali**, **Tagoi**, **Tingal**

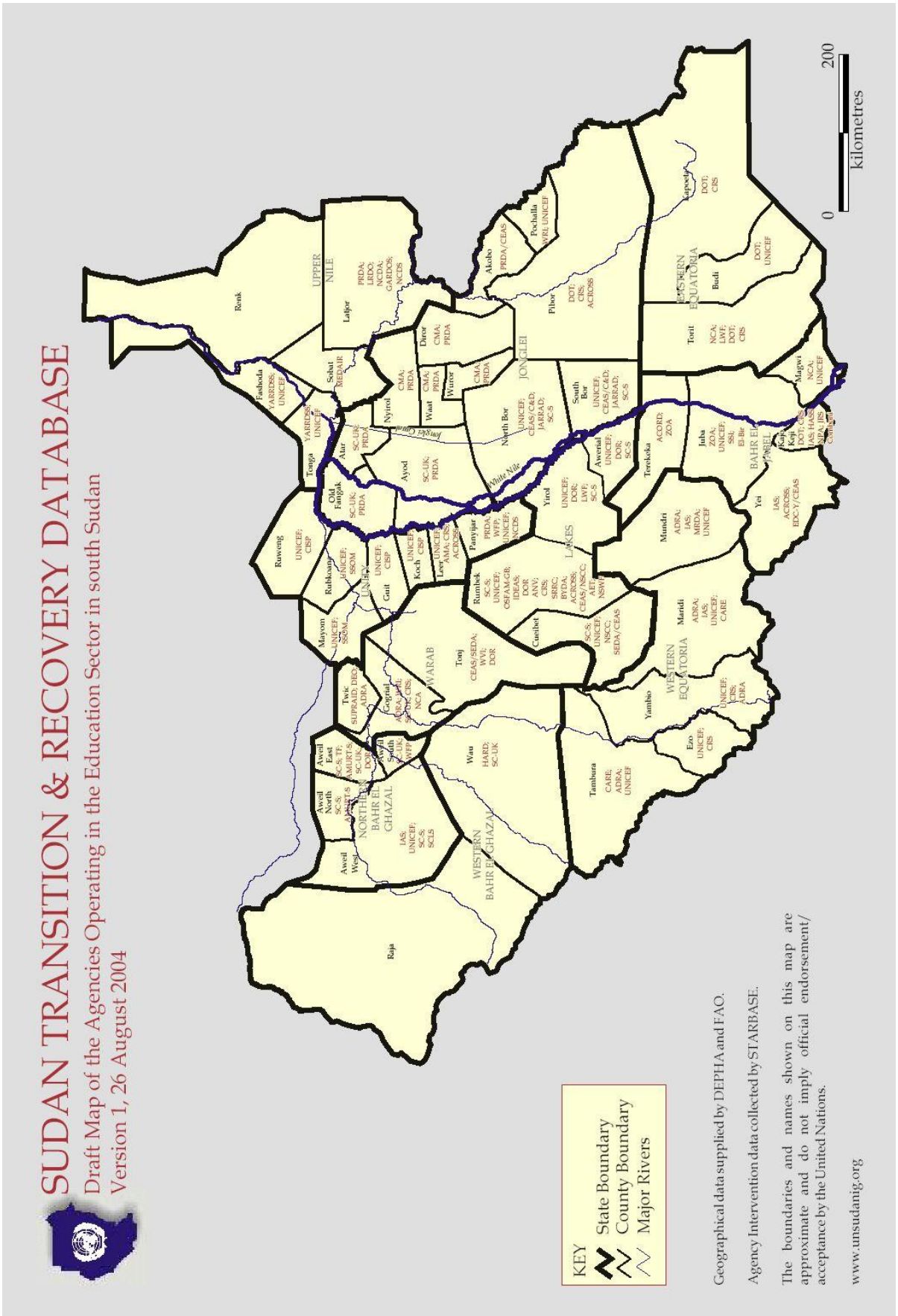
3. Atlantic-Congo Families
    A. Ijoid Family
    B. Atlantic Family (including **Fulfulde**)
    C. Volta-Congo Families
        1. Kru Family 2. Kwa Family 3. Dogon 4. Benue-Congo Family
        5. Northern Volta-Congo Families
            a. Gur Family
            b. ADAMAWA-UBANGI FAMILY
                1. Adamawa languages
                2. Ubangi languages:
                    A. Banda group (including **Banda**)
                    B. Gbaya group (including Gbaya of Cameroon/C.A.R.)
                    C. Ngbandi group
                    D. Sere-Ngbaka-Mba group
                        1. Ngbaka-Mba
                            a. Mba languages
                            b. Ngbaka languages:
                                1. Eastern Ngbaka languages: **Mundu**, Mayogo, Bangba
                                2. Western Ngbaka languages (including Baka of Cameroon)
                        2. Sere languages:
                            a. **Feroge**
                            b. **Belanda Viri**, **Ndogo**, Sere, Tagbu
                    E. **Zande**, Nzakara, Barambu, Pambia

Appendix 6 Organisations working in the education sector in South Sudan

Key to organisations listed on following map:

ACORD Agency for Co-operation and Research in Development	LWF Lutheran World Federation
ACROSS Association of Christian Resource Organisations Serving Sudan	MRDA Mundri Rehabilitation & Development Association
ADRA Adventist Development and Relief Agency	NCA Norwegian Church Aid
AET Africa Educational Trust	NCDA Nasir Community Development Agency
AMA Assistance Mission for Africa	NCDS Naath Community Development Services
AMURT-S Ananda Marga Universal Relief Team - Switzerland	NPA Norwegian People's Aid
BYDA Bahr el Ghazal Youth Development Agency	NSCC New Sudan Council of Churches
C&D Church and Development	NSWF New Sudan Women's Federation
CARE Cooperative for Assistance and Relief Everywhere	PRDA Presbyterian Relief and Development Agency
CEAS Church Ecumenical Action in Sudan	SCLS Save Children's Lives Sudan
CISP Community Initiation Support Programme	SC-S Radda Barnen - Save the Children-Sweden
CRS Catholic Relief Services	SC-UK Save the Children-United Kingdom
COMBONI Comboni Sisters	SEDA Sudan Education and Development Agency
SEM Sudan Evangelical Mission	
DEO Diocese of El Obeid	SRRC Sudan Relief and Rehabilitation Commission
DOR Diocese of Rumbek	SSI Sudan Service International
GARDOS Global Relief and Development Organisation for Sudan	SSOM Southern Sudan Operation Mercy
HASS Humanitarian Assistance for South Sudan	SUPRAID Sudan Production Aid
HARD Hope Agency for Relief and Development	UNICEF United Nations Children's Fund
IAS International Aid Services (Previously International Aid Sweden)	WFP World Food Programme
IDEAS Institute of Development Environment and Agricultural Studies	WRI World Relief International
JARRAD Jonglei Association for Relief, Rehabilitation and Development	WVI World Vision International
JRS Jesuit Relief Services	YARRDSS Youth Agency for Relief, Rehabilitation and Development for South Sudan
LDRO Latjor Development and Relief Organisation	ZOA ZOA Refugee Care
DOC Diocese of Cueibet	

Map 11 Locations of organisations working in the education sector of South Sudan



Appendix 7 Sudanese draft constitution: extract on language

(from SPLM and GoS 2005)

Dated 16th March 2005

8. (1) All indigenous languages of the Sudan are national languages and shall be respected, developed and promoted;

(2) Arabic language is the widely spoken national language in the Sudan;

(3) Arabic, as a major language at the national level, and English shall be the official working languages of the national government and the languages of instruction for higher education;

(4) In addition to Arabic and English, the legislature of any sub-national level of government may adopt any other national language(s) as additional official working language(s) at its level;

(5) There shall be no discrimination against the use of either Arabic or English at any level of government or stage of education;

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