

FD-BAL-109

655-0028

SUDAN

Literacy TRAINING

Project PAPER

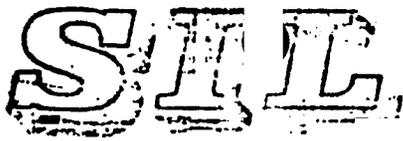
FY 78

**SUDAN**

**Summer Institute of Linguistics:**

**Literacy Training in Local Languages in Southern  
Sudan**

**Project Number: (650-0028)**



# Summer Institute of Linguistics

Washington, D.C. Office • 1800 K Street, N.W., Suite 631 • Washington, D.C. 20006 • (202) 785-2441

June 22, 1978

Mr. Morris McDaniel  
AFR/DR/EAP-NS  
Room 2350  
21st and Virginia Avenue NW  
Washington, DC 20523

Dear Morris:

In my absence, I am assigning my special assistant, Mr. Paul Kaufman, to expedite follow-up on the steps involved in writing the PIOT as per your suggestion. Unless there are major modification requirements, Mr. Kaufman is authorized to act on my behalf.

I will address here the official SIL response to the issues raised in the PID approval message transmitted to USAID/SUDAN regarding the SIL Literacy Training Project:

Item #3. The issue here is not only cost effectiveness but also the strong feeling held by government education officials that initial education should be in the mother tongue. This is the same feeling that native Americans have expressed and also Spanish speaking Americans in their desire for bilingual education programs. Our experience in forty years of language work indicates the most effective and efficient route to bilingual education is via first learning the vernaculars.

Item #3-b. The differentiation between role a and role b languages is based on the amount of linguistic work that has already been done and existing use of a written alphabet plus the potential for a particular language to be used to reach other related languages. This is the reason that the classification does not follow the population of the language groups.

Item #3-c. We have raised the issue of the Arabic alphabet with the Southern Regional Ministry of Education several times and they are adamant in using the Roman alphabet. I believe that the Ministry of Education also represents the general

Mr. Morris McDaniel  
June 22, 1978  
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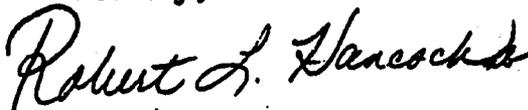
public which would reject the use of an Arabic alphabet for writing their local language. One must keep in mind that the South fought for 17 years to retain its cultural identity and to avoid Arabization, the issue of Roman versus Arabic script is a part of that total concern for retaining Southern cultural identity.

Item #3-d. The possibility of acquiring prefabricated buildings which would be erected in the Sudan seems very unlikely now based on cost estimates received. Thus, it is almost certain that we will go with local construction.

Item #3-e. Jim Magnason from Waxhaw is now in the Sudan drawing up plans for the buildings. He should finish his work about the end of June and the plans should be available then for review.

I'm also enclosing a revised cover, budget and evaluation plan. Thank you for your helpfulness in this consideration. I will be returning to my office on July 5.

Sincerely,



Robert L. Hancock  
SIL/US Government Liaison

RLH:nb

Enclosures

cc: J. Holtaway

AGENCY FOR INTERNATIONAL DEVELOPMENT <b>PROJECT PAPER FACESHEET</b>		1. TRANSACTION CODE <input type="checkbox"/> A = ADD <input type="checkbox"/> C = CHANGE <input type="checkbox"/> D = DELETE <input checked="" type="checkbox"/> A		PP 2. DOCUMENT CODE 3
3. COUNTRY/ENTITY Sudan		4. DOCUMENT REVISION NUMBER Original <input type="checkbox"/>		
5. PROJECT NUMBER (7 digits) 650-0028		6. BUREAU/OFFICE A. SYMBOL: AFR      B. CODE: 06		7. PROJECT TITLE (Maximum 40 characters) SIL-Literacy Training
8. ESTIMATED FY OF PROJECT COMPLETION FY 81		9. ESTIMATED DATE OF OBLIGATION A. INITIAL FY: 78      B. QUARTER: 4 C. FINAL FY: 79      (Enter 1, 2, 3, or 4)		

10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$1 - )

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	433		433	817		817
(GRANT)	433		433	817		817
(LOAN)						
OTHER U.S. 1. 2. SIL	677		677	2,677		2,677
HOST COUNTRY	22		22	249		249
OTHER DONOR(S) UNDP	2		2	32		32
<b>TOTALS</b>	<b>1,134</b>		<b>1,134</b>	<b>3,375</b>		<b>3,375</b>

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY 78		H. 2ND FY 79		K. 3RD FY 80	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) ED	612	610		433		247		137	
(2)									
(3)									
(4)									
<b>TOTALS</b>				<b>433</b>		<b>247</b>		<b>137</b>	

A. APPROPRIATION	N. 4TH FY		Q. 5TH FY		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULED				
	O. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN					
(1)							<table border="1" style="width: 50px; height: 50px; margin: auto;"> <tr> <td>MM</td> <td>YY</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	MM	YY		
MM	YY										
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<b>TOTALS</b>											

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

1 = NO  
 2 = YES

14. ORIGINATING OFFICE CLEARANCE		15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION									
SIGNATURE Gordon Pierson <i>John W. Pierson</i>		<table border="1" style="width: 100%; height: 40px;"> <tr> <td>07</td> <td>10</td> <td>3</td> <td>78</td> </tr> <tr> <td>06</td> <td>20</td> <td>2</td> <td>78</td> </tr> </table>		07	10	3	78	06	20	2	78
07	10			3	78						
06	20	2	78								
TITLE AID Representative		DATE SIGNED									

SOUTHERN REGIONAL MINISTRY OF EDUCATION

AND

THE SUMMER INSTITUTE OF LINGUISTICS

OPERATIONAL PROGRAM GRANT PROPOSAL

PROJECT TITLE: LITERACY TRAINING IN LOCAL LANGUAGES IN SOUTHERN SUDAN

PROJECT LOCATION CENTER: JUBA, SUDAN

PRIVATE VOLUNTEER ORGANIZATION: SUMMER INSTITUTE OF LINGUISTICS  
JUBA, SUDAN

MAILING ADDRESS: SIL, P.O. Box 44456  
NAIROBI, KENYA

CONTACT PERSONS: MR. YITHAK WEL LUAL  
DIRECTOR, REGIONAL MINISTRY  
OF EDUCATION  
JUBA, SUDAN

DR. JOHN BENDOR-SAMUEL  
SIL AFRICA AREA DIRECTOR  
INSTITUTE OF LINGUISTICS  
Box 7271, ACCRA NORTH,  
GHANA, WEST AFRICA

MR. ROBERT L. HANCOCK  
DEVELOPMENT ASSISTANCE SERVICES, INC.  
WASHINGTON, DC 20006

TOTAL OPG REQUEST: \$817,400 (3 YEARS)

## I. PROJECT PURPOSE AND DESCRIPTION

The overall purpose of the project is to reorient education in Southern Sudan to the development needs of the rural majority and to bring the quality of education up to standard norms for the primary grades. This is part of a general program to provide the trained manpower necessary for Southern Sudan to raise levels of agricultural production, nutrition, health and participation in civic life of the rural population.

Personnel of the Summer Institute of Linguistics will provide technical assistance to the Southern Regional Ministry of Education to enable it to use local languages as the medium of instruction in the first four years of primary education for rural students. It will cover both the preparation of literacy materials and the linguistic analysis necessary as a prerequisite to the development of such material. During the three-year project period pre-primers, primers, and post-primer material will be produced in 16 languages and 48 Ministry of Education personnel will receive training in the preparation of local language materials.

The proposed AID assisted project, covering a period of three years, is part of a ten year project begun in 1976 by the Summer Institute of Linguistics (SIL) at the request of the Southern Regional Ministry of Education. The project involves a major commitment of SIL personnel to a program of training Sudanese personnel, linguistic analysis of local languages, and the

preparation of literacy materials for children and adults. It is anticipated that 30 literacy and linguistic staff of SIL plus 7 to 10 support personnel will be involved in the project.

The project is focused on meeting the development needs of 3.3 million rural Southern Sudanese who are speakers of one or more of the 53 local languages found there. The project aims at providing basic literacy skills, creating an affirmative change in individual self-image, and developing positive changes in behavior patterns toward development which will enable the participants to effectively benefit from companion agricultural and health programs. It will be carried out in an environment where the rudiments of infrastructure are just beginning to be established, where even the minimal governmental services that did exist were severely disrupted from 1955 to 1972 by hostilities and where educational services, unadapted to the needs of the rural majority reach only a quarter of the school age population. The most direct project beneficiaries will be 15,000 students who are expected, during the project period, to use the pre-primers, primers, and post-primers produced by the project. By 1985 it is estimated that the number of students using the materials will be 150,000. A very conservative estimate of the number of adults who will achieve functional literacy by 1985 by using project created materials is 15,000.

A comprehensive analysis of education in Southern Sudan was completed in 1976 by F. H. Garvey-Williams, a UNESCO educational

planning advisor and L. R. Mills, an International Labor Organization (ILO) manpower consultant. This study and recommendations on teacher education in Southern Sudan made by R. Gardner, a British Overseas Development Ministry consultant, identified the critical shortage of trained manpower in Southern Sudan and recommended a program to reorient education to the development needs of the rural majority and for significantly upgrading its quality through a program of curriculum development and teacher education. The program for accomplishing this involves a number of inter-related parts, a key component of which is the Ministry of Education-SIL project in local languages.

Briefly summarized the components are the following:

A. A series of 30 integrated rural education centers in the Southern Region which will provide primary education, adult literacy and non-formal education primarily in agriculture and health. These centers are counting on using the local language materials produced by the SIL project for both primary education and adult literacy. The centers are being financed by the World Bank through IDA with technical assistance from UNESCO.

B. A Teacher Education and Curriculum Development Center for the Southern Region located at Maridi composed of three departments: local languages, curriculum development, and teacher education.

The department of local languages which will be developed as part of the SIL project, will prepare primary education materials in the local languages and literacy materials for adult education. In addition, it will be responsible for the analysis of local languages and the promotion of written materials in those languages.

The curriculum department will prepare new school materials, new syllabuses, and introduce new teaching techniques with the aim of designing a curriculum to meet the practical needs of the majority of students. Along with the teacher education department it will organize in-service training programs linked to the introduction of new courses and techniques. A primary and junior secondary teacher training institute, also located at Maridi, will provide opportunity for interchange with curriculum development personnel and its facilities will be used during vacation periods for in-service training courses. The World Bank through IDA has plans for providing the additional facilities needed at Maridi for these three departments. The British Overseas Development Ministry is planning to provide technical assistance for the Curriculum Development Center.

The SIL project to provide literacy materials in local languages, the Curriculum Development Center at Maridi and the integrated rural education centers, then, constitute a major effort to redirect education to meet the needs of the largely rural population to provide a significant improvement in quality

and to make education available to more people.

Due to the high degree of monolingualism in the local languages, the High Executive Council of the Southern Regional government in 1975 formally recognized the need to use local languages as the medium of instruction during the first four years of primary education. Although there were some primers in a few local languages available, these were recognized as inadequate to meet the needs of the schools. Subsequently, the Regional Ministry of Education identified nine languages (Bari, Dinka, Kresh, Lotuko, Moru, Ndogo, Nuer, Shilluk, and Zande) to be used as the medium of instruction in the region. These were identified as role "A" languages. Since then, another fifteen languages (Acholi, Anuak, Baka, Banda, Songo, Didinga, Feroge, Jur Beli, Jur Luo, Kakwa, Kaliko, Madi, Mundu, Murle and Toposa) have been identified as role "B" languages. In these languages literacy materials will be produced, but a decision has not been made yet on using them as a medium of instruction in rural primary schools.

In cooperation with the Ministry of Education, SIL has identified a comprehensive set of phases for the project. These phases, which are given in detail in the implementation section, encompass the entire project to which SIL has made a commitment to the Ministry of Education, rather than just the three year period that is primarily in focus in this proposal to AID. There are a total of thirteen phases in the project implementation

plan. Phase one covers the linguistic prerequisites which must be completed prior to the preparation of literacy materials. Phases two through ten cover the preparation of the preliminary materials, its testing and revision, subsequent preparation of trial editions through the final editions and the necessary testing and teacher training. Formal project evaluation is included in phase eleven. The development of bridge materials between the local languages and Arabic and English constitutes phase twelve. Phase thirteen covers the preparation of adult literacy materials.

Preliminary activities for the project were started in 1976. By June of 1977 phase 2, the training of literacy writers, was begun with four languages participating. The period encompassed by this proposal to AID is from 1979 to the end of 1981. By early 1979 SIL will have 27 literacy and linguistic personnel working on the project in addition to its supporting staff of 8.

During the three year project period, it is proposed to take all nine of the role "A" languages into phase 7 which is the final testing period for the primers. Three role "B" languages also will advance to phase 7. Four other role "B" languages will be taken into phase 5, the stage at which a trial edition of the primers is ready to be tested in an expanded program in each language area.

At the end of the AID project in 1981, the following conditions are expected to exist:

- a department of local languages, capable of producing basic educational materials in local languages will be functioning as part of the Curriculum Development Center at Maridi.
- 48 Ministry of Education personnel will have received training in the preparation of local language materials.
- the project will have demonstrated the feasibility of implementing a program of instruction in local languages for all rural primary schools in the Southern Sudan.
- 35,000 primary students will have been taught to read their mother language.
- students and adults in the test groups will have demonstrated a positive change in self-image and new behavior patterns oriented toward development.
- a drop out rate in the first year of primary will be reduced by 50% for schools using the local language program.
- pre-primers, primers and post-primers will have been prepared for 10 local languages.
- vocabulary lists will have been compiled for 16 languages and a general analysis of the grammar done for 11 languages.

## II. PROJECT BACKGROUND

### A. Country Background

With a land area of 967,500 square miles, Sudan is Africa's largest country. Total population is estimated at 16.8 million resulting in a low density of 17 people per square mile. In topography and climate Sudan is the natural bridge between equatorial Africa and the arid desert lands of the Middle East. Much of the western and northern regions of the country consist of sparsely inhabited plains and savanna containing short grasses, brush and a few small trees. The climate is hot the year around, and rainfall generally less than a few inches a year. The southern part of the country has increasing vegetation which turns into tropical forests near the southern borders. The country straddles several temperate zones which offer access to plentiful water resources. Twenty million acres are now used in agriculture, but an estimated 200 million acres are arable land and many foresee Sudan as important for providing food supplies for the region. Sixty million acres of pasture land are sparsely settled and only partially utilized by traditional herdsmen.

The peoples represent a complex of cultures and languages. Arabic groups representing three-fourths of the population live in the north and central part of the country. The southern population is primarily composed of Negroid groups. Eighty-five percent of the population lives in rural areas. The per capita

gross domestic product for Sudan as reported in UN statistics is U.S. \$134 in 1971.

Sudan's principal resources are agricultural. Although efforts are being made to diversify its cash crops, cotton and cottonseed account for approximately 50 percent of the export earnings. Another large export crop, sold almost exclusively to the United States is gum arabic, with Sudan producing four-fifths of the world's supply. Grain sorghum is the principal food crop, and wheat is grown for domestic consumption and increasingly for export. There is vast livestock-producing potential, and large numbers of live animals, particularly camels and sheep are exported to Egypt and other Arab countries.

The inadequate transportation system and the high cost of hauling agricultural products over great distances are major hindrances to economic development. Presently, the country's transportation facilities consist of one railroad with a feeder line supplemented by river steamers, the Sudan Airways, and some 900 miles of paved or graveled roads.

Industrial development is limited and consists principally of the processing of agricultural products and various light industries located at Khartoum North. No exploitable minerals have been discovered in significant quantities. Intensive explorations for oil along the Red Sea coast and in a 500,000 square kilometer inland area are under way, but so far none has been found. Pending electrification of various dams, there is no

source of cheap power.

Southern Region. The six provinces comprising the Southern Region include 250,000 square miles or about one-fourth of the Sudan. This land area is larger than any one of the neighboring countries of Kenya, Uganda or the Central African Empire. Population estimates vary, but most tend to agree on a figure below four million people. Juba, the largest city in the region with a population of about 70,000, is the regional capital. Only two other urban centers, Wau and Malakal, have populations over 25,000. Eighty-nine percent of the population lives in rural areas.

Three major ecological zones with distinct economic characteristics can be identified in the Southern Region. The northern parts of the region lie within the central rainlands belt of Sudan. Grain growing is the main activity and there is considerable potential for further extension and development. The flood plains with heavy clay soils which are subject to considerable water-logging and seasonal flooding throughout most of the year, occupy much of the center of the region. Traditional livestock husbandry is the major activity with grazing patterns determined by the seasonal flooding. The southern and south-western areas are more hilly. Here the effects of altitude, topography and climate combine to produce more varied soil conditions and vegetation than found elsewhere. The greater variety of ecological conditions enables a wide range of tropical and sub-tropical crops to be grown and there is

considerable opportunity for development. In addition to the potential for agriculture and animal husbandry, there are opportunities to develop fishery and forest resources.

Administration and economic development of the Region are severely hampered by difficulties of communication and transportation. These result from a number of geographical factors, the size of the Region, and the widely scattered nature of the settlement pattern. From Juba it is 720 miles to the national capital and 1,500 miles to Port Sudan, the country's only seaport. Apart from a spur line going to Wau, there is no railway in the Region. Surfaced roads, except for a few kilometers in towns (3), are non-existent. The South is isolated and landlocked. Difficult terrain hinders links with the rest of the country and neighboring territories. Extensive swamps in the center of the Region and land subject to flooding cut off the road link with the North six to eight months of the year, leaving only air transport and periodic river steamers for transportation.

Northern Sudan and the Southern Region did not come under unified administration until the nineteenth century. Even then, the formal unity existed more in name than in fact. The British administration followed a separate development policy for the South until 1947. Hostilities between the North and the six southern provinces broke out in 1955 and continued for 17 years. The peace agreement which was signed early in 1972 granted the Southern Region autonomy on most internal matters. An elected

representative assembly which has power to deal with regional matters needs the governmental structure for the South.

### 3. Origin of the Project

At the invitation of the Ministry of Education of Southern Sudan, the Summer Institute of Linguistics conducted a language survey of Southern Sudan from November 1974 to April 1975. The survey gathered data on each language to enable comparisons to be made between languages and to test the degree of bilingualism between languages. Fifty-three languages were identified by the survey.

No one language is used throughout the region, though in different areas specific languages tend to predominate. While bilingualism is slowly increasing, it is not to the point where it can solve the language problems of the South. Given the linguistic and cultural diversity in the South, the problem addressed by the survey was what language strategy should be used by the Ministry of Education for its program of basic education.

In making its recommendations to the Ministry of Education, SIL recognized the vital role that language plays in education. Education involves communication and without language there can be no effective communication. Education also encourages creativity and in this again language is vital. SIL's field experience has shown that children learn basic reading skills faster and more easily in their mother language. The same approach is endorsed by UNESCO which produced a report in 1953

recommending the use of vernacular languages in education. More recently, other linguistic and educational scholars have endorsed this position. In a comprehensive report on Education in the Southern Sudan (1976) P. H. Garvey-Williams, a UNESCO educational planning advisor, and L. K. Mills, an ILO manpower consultant, recommended that children commence education in their mother language. SIL experience in other countries has demonstrated that the basic skill of reading can be transferred readily from one language to another and, more importantly, that there are significant psychological benefits resulting from education in the mother tongue. A teacher from the same cultural group can present the child with a model to demonstrate the value of his or her culture and language, thus enhancing self-respect and creating a positive environment for learning.

The survey distinguished two roles that local languages could play in the educational system. One role (role A) was to function as the medium of instruction in the schools. The other role (role B) was more limited -- that of functioning as a means of achieving literacy.

Nine role "A" languages, which are spoken by the larger groups of people, were identified as those which could be used as the medium of instruction in the schools for three to six years. Fourteen role "B" languages were identified for which it was recommended that literacy materials be developed to teach the skills of reading and writing. Meanwhile, students would be taught orally the language to be used as a medium of instruction.

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This could be a role "A" language, Arabic or English. Ideally, all languages not functioning in a role "A" should be used in role "B". Because of the linguistic complexity in the South, the relatively small number of speakers, and a degree of bilingualism with role "A" and "B" languages, it was recommended that literacy materials not be developed at this time in the remaining 30 languages. It was recognized that these survey findings might need to be modified as additional information was uncovered in field work.

Subsequent to the JIL survey, the High Executive Council of the Southern Region adopted the policy of using local languages as the medium of instruction for grades one through four for rural primary schools. Nine languages, role "A" languages, were selected to be used as the medium of instruction in the primary rural schools. Some language analysis had been done on these languages and limited materials existed in published form. It is on these languages that the JIL project with the Ministry of Education is focusing its efforts to develop primers and reading materials during the next few years.

Fourteen other languages, role "B" languages, were identified as those needing more analysis before literacy materials were developed. JIL teams will have begun field work on five of these languages by the end of 1978. This analysis will lay the groundwork for the development of alphabets and the preparation of literacy materials.

### C. Background of SIL

The Summer Institute of Linguistics, Inc. (SIL) is an international scientific and philanthropic organization with field work in 31 countries. The 3,700 members of the organization come from 24 countries although the largest percentage are from the United States. All members are given training in one of the SIL Institutes before beginning work abroad. Work in overseas countries is carried on by subsidiary organizations created by the SIL Board of Directors. This decentralization insures that the programs are adapted to the needs and the environment where they are carried out. In addition to its monitoring role, the International Staff of SIL provides certain administrative services, advanced specialized training and a staff of consultants who are available to field organizations.

SIL's method of financing the costs of maintaining its staff is unique. Individual members are responsible for developing financial support for their own living expenses and for their field work. Most of this support comes from contributions from individuals and churches interested in the work. Support for projects such as this one, is sought from government assistance programs and foundations.

### D. Education in the Southern Region

The information presented in this section is extracted from the report Education in the Southern Sudan prepared by F. H.

Garvey-Williams, UNESCO Education Planning Advisor, and L..R. Mills, ILO manpower consultant.

Within the framework of national aims and policies, the Regional Government has responsibility for the provision, control and administration of education. It is also charged with responsibility for maintaining the languages and traditions of the Region.

The educational system follows a 6-3-3 pattern -- six years of primary education, designed to begin at age 7, followed by three years of general academic secondary education, and then either three more years of higher academic secondary education or four years of higher technical secondary education.

Formal education was introduced to the Region through mission schools and carried on by them until after World War II. The first secondary school was not established in the South until 1948. The requirement to teach Arabic in all schools in 1953 and the subsequent insistence on the spread of Arabic as a language alienated the people in the southern provinces. During the 17-year period of hostilities from 1955 to 1972 education was severely curtailed and came to a virtual halt in many places. Thus nearly a generation has not had the benefit of formal education.

In view of this past, the Ministry of Education is faced with an overwhelming task. There are great demands on it not only to provide educational opportunities considered to be a

basic human right to all people, but also to meet the needs of trained manpower for economic, social and political development. Only 26 percent of primary-age children are enrolled in government maintained primary schools. The literacy rate is estimated as low as 5% of the population. When urban centers are excluded from statistics, the rate for the rural population drops to near zero.

Access to education is widely regarded by parents, pupils and not infrequently by teachers, as a means of escape from the traditional way of life in the countryside, rather than as a means of improving the quality of rural life. Consequently, primary education is largely made to serve the requirements for promotion to the next level of the education system and does little to prepare the majority of children for whom primary will be terminal, for a better life in the countryside where most will remain and where, in the foreseeable future, opportunity for the majority of the population should be found. An ILO/UNDP report states that "virtually every child who enters the primary school hopes -- and the whole organization of the system prompts him to hope -- to move up through the system to the top. Of course, most do not because a series of filter examinations rejects the academically less gifted until fewer than one in fifty who start actually climbs the full ladder. A direct effect of the upward push is to discourage pupils in the education system from considering opportunities afforded by vocational training." To correct this situation, the Ministry of Education has decided to

introduce more practical subjects into all curricula. For rural schools this will involve a great deal of out-of-class work during which the children will practice crop production, gardening, animal husbandry, poultry-keeping and local crafts.

At the present time national syllabuses and textbooks are written in Arabic, which is little known or spoken in the South. Because requiring children to begin their education in an unfamiliar language would seriously disadvantage them, the Regional Government has decided that children should commence their education in the major local language of their home area. The implementation of this decision will require the preparation of pre-primer, primer and post-primer reading material in the major local languages. It was to meet this need that the Regional Ministry of Education entered into an agreement with SIL for technical assistance in the preparation of basic literacy materials and research on local languages.

In order to serve more than the few who continue on to higher education, the primary education system requires that new curricula and new approaches to teacher education be devised. A first requirement is for the development of basic educational packages that will adequately equip the primary school student for a better life in the rural areas. To undertake this large task Garvey-Williams of UNESCO and Mills of ILO, in the report, Education in the Southern Sudan referred to earlier, recommend the development of a curriculum and methodology development center and an in-service teacher education center at Maridi in

western Equatoria province of the Southern Region. The Regional Ministry of Education has adopted this recommendation and the development of the Maridi center is included in Government's six year development plan. SIL plans to use Maridi as the site for its operations so that its activities can be closely coordinated with the Ministry of Education efforts in curriculum development and teacher training.

Construction of the Maridi center by the Ministry of Education was due to begin in the 1977/78 fiscal year. Budget limitations have been so tight that no funds were allocated for the project. Out of a total of \$45 million that was approved for the development budget in 1977/78, only \$5 million was made available for funding approved projects. It is clear that if this project, which is crucial to the reorientation of education in the south, does not receive some external financing it will be delayed considerably or even not implemented. This would have a very adverse effect on the whole Southern educational system and what appears to be a unique opportunity because of the current conditions of the educational system and the desire of the government to reorient educational effort to meet the development needs of the rural majority, might be lost.

The World Bank through IDA now plans a third loan to Sudan which will include funds for the Regional Ministry of Education in the amount of about \$1,000,000 for the Maridi center.

A related project already financed by IDA for Sudan is the development of 40 integrated rural education centers (IRECS). This is an effort to introduce a comprehensive system of basic and non-formal education which would provide an opportunity for life-long education. Thirty of the centers are planned for the Southern Region. The centers have the following objectives:

a. Provide primary education for children of that age group. The program will be especially geared toward the rural environment and is designed to instill positive attitudes toward rural skills and manual work.

b. Provide a wide range of literacy and training for adults oriented to skill development for rural activities. Where possible, this training will be supported by and geared to specific development programs of other ministries and local communities.

c. Provide special training for women including literacy for home economics.

d. Provide a health clinic for preventive care and health education. A seed store is also incorporated for seed distribution.

A team of four persons from UNESCO will provide technical assistance for developing the program content of the IREC training. Since both the primary and adult education programs will use local languages for instruction, the IRECS will rely on

the primers and literacy materials being developed by the Ministry of Education and SIL team. Thus the technical assistance by SIL will be a key component both for the IRECS and the general reorientation of the curriculum for rural schools through the work of the curriculum development center at Maridi.

### III. PROJECT ANALYSIS

#### A. Economic Effects

The immediate direct beneficiaries of the project will be the 35,000 primary school students who will use the new educational materials developed by the project. Subsequent to the three year project period nearly all the rural primary students in Southern Sudan are expected to be beneficiaries of the project. By 1985 the number of students using the materials is estimated to be 150,000. In addition, a very conservative estimate of the number of adults who will achieve functional literacy by 1985 by using project created materials is 15,000. Indirectly the entire rural population of the 24 language groups included in the project, plus those who are bilingual in one of those languages, will benefit from the project. This population is estimated to be 3.3 million in 1978. The direct economic effect of the project will come from providing students with the basic educational skills necessary for them to move from an essentially subsistence non-monetary economy into production oriented agriculture. While training provided in the primary schools is not sufficient to cause this change, it is considered essential if the change is going to occur. The basic education program can provide functional literacy, make the student aware of the larger society, present change as an option, develop basic skills needed for production oriented agriculture and demonstrate to the student the potential for improving his economic condition.

The economic effects of a movement into production oriented agriculture are largely a matter of conjecture because of the diversity of the population benefited by the project. There is general agreement that the land base of Southern Sudan is able to support a great expansion of agriculture. If half of the 35,000 students benefiting from the project by 1981 were stimulated to produce cash income of \$100 each annually over and above what they would have produced without the training by this project, the direct economic impact would amount to \$1,750,000 annually. It is recognized that other inputs will also be necessary to achieve this additional income.

An alternative way of calculating benefits is to use an average wage for an untrained person in rural Southern Sudan. An average yearly wage for such a person is \$120. However, the wage of a person with primary education is about twice that of a common laborer. Using the assumption that 75 percent of the 35,000 students benefiting from the project will earn this wage or be involved in income producing activity equivalent to it and that they will begin to earn this wage starting in 1985, the benefits accruing during a six year period 1985 through 1990, discounted at 8 percent to present value, result in a benefit-cost ratio of 2.46 to 1.

Another direct economic impact of the project will be to significantly increase the economic return on the investment the government of Sudan is currently making in rural education. The budget applicable to rural schools for the 1977/78 year is

Estimated to be \$1,327,000.

Recently collected statistics on the primary school population in the Western Equatoria province for the 1977/78 school year indicate a very high rate of drop outs and a large number of students who repeat grades. As indicated in the data below, Western Equatoria along with Eastern Equatoria are educationally advantaged areas compared with other provinces and thus the rate of drop outs and repeaters is expected to be as high or higher in the other provinces.

Percentage of 7-12 year old population  
enrolled in government schools 75/76

<u>Province</u>	
Bar el Ghazal	12.8
Wak	12.4
Eastern Equatoria	39.6
Western Equatoria	40.8
Upper Nile	26.0
Angai	13.6

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The following table shows the percentage of students in Western Equatoria primary schools that dropped out of school between the 1976/1977 and 1977/78 school years and the number of students repeating a grade in 1977/78.

	<u>Drop Outs</u>	<u>Repeaters</u>
Grade 1	50%	19%
Grade 2	25%	14%
Grade 3	23%	13%
Grade 4	19%	10%
Grade 5	22%	6%
Grade 6		7%

Note that 50% of the first year class dropped out of school during their first year and that in all but one of the remaining years the drop out rate exceeded 22 percent. Information was not gathered on drop outs during the sixth grade. If we add the enrollment of grades 1 to 5 and calculate the percentage of students that dropped out of school in just one year it comes to 41 percent or nearly a fourth of the pupils enrolled in those grades. Students repeating a grade comprise 13 percent of total school enrollment. When the drop out and repeater rates are combined we find that well over a third of the school enrollment either drops out of school or is repeating a grade during the school year. If the above drop out rates are indicative of what is happening to students over a period of time, it means that out of 100 students who begin school only 16 complete sixth year of primary.

There is probably a correlation between academic performance and the drop out rate. Inability to achieve may be a major reason for dropping out of school. There are indications that a high percentage of drop outs do not achieve functional literacy and that the overall impact of the school experience on the child may be negative rather than positive. This can be caused by the student's being confronted by instruction in a foreign language and then his drawing the conclusion that he is unable to learn because he has not acquired any skills in school.

31L experience with other local language groups living in rural subsistence situations has demonstrated a much higher success rate for students and that most students acquire basic reading skills in their first year of schooling. We believe that similar results could be achieved in Southern Sudan with the preparation of good educational materials in the local languages and adequate teacher orientation. We expect that the drop out rate will be cut in half with the introduction of the local language materials produced by the project.

With a few assumptions, a quantitative value can be placed on the expected reduction in the drop out rate. Estimating that 150,000 students will benefit from the use of local language materials by 1985, 24 percent can be expected to drop out of school during a given year under existing conditions. If the student drops out, we will assume that he has not benefited from his schooling. By reducing the drop out rate by half, 18,000 students will remain in school who otherwise would have dropped

out. Assuming that half of these will be able to earn \$120 more per year by completing primary education, waiting until 1980 to begin accumulating benefits, and counting only benefits from 1990 to 1995, and making allowances for paying additional teachers to teach these children, the resulting benefit-cost ratio is 1.74 to 1.

### Non-economic Effects

From the time of its first contact with outsiders, the Southern Region has been exploited economically and dominated by external influences. Due to a number of cultural and historical reasons and the relative size of the South compared to the country's total population, feelings of subjection and inferiority have tended to be perpetuated. SIL experience in other countries has demonstrated that a positive change in self-image results when people are trained to read and write and to produce literature in their language. When the skill of reading and writing which previously may have been surrounded with an aura of mystery is internalized, the individual builds his self-confidence and is better able to relate to others on a basis of equality. This prepares the individual to relate to a majority culture and creates conditions that offer the person a greater opportunity for success in competing economically.

Those who acquire the skill of reading and writing usually are more open to new ideas and develop positive attitudes toward economic development. The success of the individual in mastering one skill (reading and writing) gives confidence to try other skills. This process may be an indirect route to improved economic conditions and yet anyone with experience in development work will acknowledge the importance of attitudes toward innovation. Many are the examples of soundly conceived development projects that have failed because they were not accepted by the people who were to benefit from the project. This is not to imply that promotion of literacy in the mother tongue is a panacea, but it has proved to be of demonstrable value in other countries where it was linked to development programs.

In addition to the important psychological impact anticipated from the introduction of instruction in local languages, it is expected to be a significant factor for improving the quality of education. Reliable data on educational performance is not available, but informal observations indicate that the Southern Sudan is far below accepted norms for both primary and secondary education. A few examples seem to confirm this evaluation. One of the primary teacher training institutes recently offered a summer course in pedagogy for teachers without this training. Of the 90 teachers who showed up for the course, all of whom were senior secondary school graduates, only 30 were able to pass what was described as a simple test of basic

academic skills. The remainder were deemed to need remedial academic courses before they could be given pedagogical training and certified as qualified teachers. Since teaching is considered a desirable profession and the remuneration relatively competitive with alternative employment opportunities, it may be assumed that the 90 represented an average level of academic performance for senior secondary school graduates.

It was noted that a vocational training school in Juba looks for senior secondary school graduates as students when the course being offered requires good reading comprehension and writing ability. Normally a person who had completed primary school would be expected to have these skills.

Finally, an expatriate instructor at one of the primary teacher training institutes with previous experience in other East African countries noted that from his observation academic performance in the sixth year of primary may be 3 to 4 grades lower than actual grade level. If this is true, and there are indications that it is, the Southern Region is getting a very poor return on its investment in education. Part of the reason is undoubtedly a need for better qualified teachers. Another major reason may be the difficulty students have in understanding instruction in a foreign language. Enabling the student to receive four years of instruction in the local language will remove the initial foreign language barrier and build confidence as basic skills are mastered in one's home language. SIL technical assistance in developing local language materials is

essential to achieving this goal.

### C. Statement of Technology

During the past 30 years SIL as an organization has been a leader in the development of descriptive linguistics and literacy, especially in the less developed areas of the world. Pioneering work has been done in the field of bilingual education. This experience as an organization is available as a resource for dealing with problems in the Southern Sudan. Each one of the 21 SIL linguistic and literacy personnel who will be working in the country by the end of 1978 has had the benefit of SIL's training programs. These courses cover descriptive linguistics, literacy techniques, translation principles, cultural and applied anthropology and field techniques.

The methodology for developing literacy materials in the local languages of Southern Sudan has been thoroughly tested in other areas of the world. Its application in the Sudan only requires adaptation to the specific languages of the region. By the end of the project these basic techniques will have been taught to 9 language development officers and 18 writers of local language materials. Each will have had experience in applying them to his or her own local language. As the materials are completed these persons will train classroom teachers how to use them. Experience in other countries has demonstrated that unsophisticated teachers can be trained to use the materials effectively in 3 to 6 weeks.

The rudimentary condition of the transportation and communication system in the South is a constraint on the implementation of the project. To help overcome this, the project includes aviation and radio as a supporting service component. A net of 17 radio transceivers will be utilized to provide communication with key Ministry of Education centers and SIL field personnel. A light five passenger plane, which is an SIL contribution to the project, will be used to facilitate transportation. Experience during early 1978 has demonstrated the need for the plane. The second part of the first cycle of training for four languages was delayed for six weeks due to the unavailability of ground transportation. The availability of the plane will avoid bottlenecks of this type in the future and permit a higher degree of utilization of SIL personnel. Several of the reconstruction and development agencies working in the South are using aircraft in their programs. For the longer range period we expect regional air service to develop, all-weather roads to be constructed, and communication services to improve, thus obviating the continuance of special aviation and radio services.

#### D. Sociological Factors

The existence of a diversity of cultures and languages in the South and the desire of the people to have the opportunity to develop themselves within this context are the primary reasons for undertaking this project. The use of the language of the home to begin formal education builds on the informal training

received prior to school. The preservation of continuity in this experience aids healthy self-development and provides a model through the teacher to stimulate achievement. A child who goes through this process is then better prepared to relate to other cultures in the wider community and the nation.

The target group for the project is the rural population of 24 languages included in the project -- estimated to total 3.3 million. The map of linguistic groups shows the dispersion of the groups throughout the Southern Region. The environmental area varies from tropical rainforest to desert within a zone of 3 to 12 degrees north of the equator. The rural population shares the characteristics of major transportation problems, high percentages of monolingualism and illiteracy, low or non-existent cash income, and a short life expectancy.

The project provides a key component for the Ministry of Education's effort to reorient the basic educational system designed to prepare the majority of students for an improved and more productive life in rural areas where they are most likely to spend the rest of their lives. Providing materials in the local languages creates a positive attitude toward the educational process, enables the student to achieve functional literacy much more rapidly and provides the vehicle for practical education in agriculture, health, basic science and citizenship. All of these are directly related to the improvement of the quality of rural life and the attainment of better health, improved nutrition, and increased purchasing power through more agricultural production.

The project is expected to have a positive effect on the role of women. Women in the language groups are known to be more monolingual than men. Consequently, young girls have little opportunity to learn to read and write now because the schools are either in Arabic or English. With the use of local language materials in the schools they will have a better opportunity for education. By being able to master basic skills much more readily in their own language, they should be stimulated to further education as a result of the success already experienced.

The 30 IRECs that will use literacy materials developed by the SIL project have a component of the program specifically designed for women. It will provide special training for women, including literacy for home economics.

The SIL project director for literacy is a woman and 12 of the total of 17 linguistic and literacy staff now in the country are women. This example will hopefully stimulate greater participation by women at the professional level in education.

#### E. Relationship to Foreign Assistance Act Guidelines

Sudan as a country ranks 27th out of 43 nations in Africa according to United Nations per capita gross domestic product statistics. The Southern region is acknowledged as having the lowest incomes in the country. The project beneficiaries are all poor people who comprise the poorest majority in the South. They are nearly beyond the reach of public services. The economic and non-economic impact of the project on this group has

already been discussed.

The SIL project ties in directly with government plans in the educational sector, including providing the basic language materials needed for the development of 30 IRECs and the general program to reorient rural education. It is also inter-related and coordinated with other foreign assistance being provided to the education sector by the World Bank, UNESCO, UNICEF, and the British ODM.

A number of agriculture and health programs are being carried out in the rural areas of the South. The project will complement these efforts by providing the educational base that they need to be effective and by creating a population with a greater receptivity to new ideas. As literacy expands in the local languages we expect that agricultural and health information will be distributed in the local languages, thus assuring greater understanding and use.

Although during the three year project period only 35,000 students are expected to directly benefit from the project, plans are to extend it to the entire rural population. This is expected to be achieved within six years after 1981. Assuming by that time 50 percent of the rural school age population is in school, the project will directly benefit about 225,000 students.

## F. Institutionalization of the Project

The SIL project originated to meet a felt need of the Southern Region. The High Executive Council indicated this in September of 1975 when it adopted its first resolution on the use of local languages. The agreement between the Ministry of Education and SIL signed January 1976 states a major purpose the training of personnel selected by the Ministry. Thus the project has anticipated from its inception institutionalization of the function in an institute for local languages or a department of local languages.

As of March 1978, nine educational and one administrative staff from the Ministry of Education have been assigned to the project. The salaries of these personnel and related project expenses are being financed from the Government budget. The GOS share of project costs is included as a separate item in the approved six-year development plan budget for 1977/78 to 1982/83. The projections for the six year period are:

1978	\$22,200
1979	56,500
1980	81,500
1981	88,500
1982	91,000
1983	85,000.

These costs average less than seven percent of the projected budget for primary education and are considered within the

financial capability of the GOS. The major cost components are salaries and printing of text books. The salary component will shrink as the major portions of the materials for the local languages are completed.

#### IV. PROJECT DESIGN AND IMPLEMENTATION PLAN

##### A. Implementation Plan

The project will be carried out cooperatively by the Ministry of Education of the Southern Region and SIL. No subgrants are planned and the only contract anticipated is with the Center for Applied Linguistics in Arlington, Virginia for evaluation of the project results. This will be discussed in more detail in the section on evaluation.

The project is in an extremely favorable position to be implemented on schedule. Preliminary arrangements for the project were begun in 1976. Since then 17 literacy and linguistic personnel of SIL have arrived in Sudan and are at work on the project. Five support personnel are also in the country. A detailed implementation plan has been worked out for the overall project. It consists of the following thirteen phases:

##### Phase One - Linguistic Prerequisites.

- A. Linguistic teams from SIL will learn Arabic to facilitate their work in Sudan. A knowledge of Arabic will especially facilitate the design of bridge material from the local

languages to Arabic.

- B. A suitable location for analysis of the local language will be selected taking into account dialect or socio-linguistic factors.
- C. SIL teams will begin language learning and analysis, including:
  - 1. Analysis of the phonological structure of the language;
  - 2. Compilation of comprehensive vocabulary lists.
  - 3. Analysis of the grammatical structure; and
  - 4. Recommendation for orthography.
- D. The linguists and their counterparts will acquaint themselves with the linguistic research already carried out in the language.
- E. Local personnel will be trained to participate in the basic linguistic research as outlined in C.

Phase Two - Training of Literacy Writers

- A. Train two teachers from each of the languages in the principles of constructing pre-primers, primers and post-primers in their own languages.
- B. Survey the literacy materials that are presently available in each language.
- C. Produce the literacy material that will be tested. Experimental copies of the pre-primers, primers and

post-primers will be printed.

- D. Throughout the training program the two counterparts from the Ministry of Education will work closely with the SIL literacy consultants.

#### Phase Three - Preliminary Testing of Literacy Material

- A. Test the newly written teaching materials in two classes for each of the languages.
- B. The consultants' counterparts will be introduced to the procedures for testing such material.

#### Phase Four - First Revision of Literacy Material

- A. Make any modifications to the literacy material that are indicated by the preliminary testing program.

#### Phase Five - Trial Edition

- A. For each language produce a trial edition of the literacy material to be used in an expanded program in each language area.

#### Phase Six - Teacher Training

- A. Conduct three-week training courses in each language to introduce teachers to the trial literacy material and to give them practice in using such material.
- B. Continue training Ministry of Education counterpart staff.

### Phase Seven - Three Year Trial Literacy Program

- A. Use the trial literacy material in 20 classes in each language for a school year.
- B. Extend the trial program to more classes in each language during the second and third years up to a maximum of 60 classes.
- C. Continue the training of the counterpart staff and broaden their experience.

### Phase Eight - Final Revision of the Literacy Material

- A. Make any modifications to the teaching material that are indicated by the trial program.
- B. The counterpart literacy consultants from the Ministry of Education will work closely with the personnel making the final revision.

### Phase Nine - Publication

- A. The final versions of the material for each language will be produced for distribution within the school system.

### Phase Ten - Teacher Training

- A. Conduct three-week training courses for teachers to introduce them to the new material and to give them practice in using it.

- B. Further expand the training and experience of the counterpart staff from the Ministry of Education.

#### Phase Eleven - Evaluation

- A. Progressive evaluation of the literacy materials and their use in the schools. Project consultants and counterparts will make such evaluations at all stages of the project.
- B. Conduct a contrastive evaluation to assess the difference in measurable achievement between pupils using the new material and a control group.

#### Phase Twelve - Bridge Material

- A. Develop bridge material from each language into Arabic and English.
- B. Test these materials in a number of schools.
- C. Modify the bridge material as indicated by test results.
- D. Publish final editions for use in the schools.
- E. Conduct three-week training courses in each language area to introduce teachers to the new material and to give them practice in using it.
- F. Train and broaden the experience of counterpart staff in the use of bridge material.
- G. Evaluate the material - see Phase Eleven.

## Phase Thirteen - Adult Literacy Program

- A. Train writers in the principles of writing literacy materials for adults. Assess and adapt existing literacy materials for adult programs.
- B. Write additional trial adult literacy material.
- C. Conduct a program of testing.
- D. Revise material as indicated by the test program.
- E. Publish final versions.
- F. Train teachers to conduct literacy classes for adults and to use the new material.

It should be noted that phases one through ten are essentially sequential. Phase eleven, evaluation, will be carried on throughout the project, both formally and informally. The development of bridge material between the local languages and Arabic and English, phase twelve, can be done any time after phase five. Phase thirteen, the adult literacy program, can be implemented any time after phase one. Materials developed in phases two through eight for primary education will be helpful in preparing adult literacy materials. During the project period through 1981 adult literacy materials will be prepared as the IRECs are ready to utilize them in their adult programs. In some languages, church organizations and voluntary assistance programs are expected to be active in promoting adult literacy.

The table that follows provides a timed schedule for implementing the first nine phases of the project

LANGUAGES

Phases

	I	II	III	IV	V	VI	VII	VIII	IX
1. Bari		Jun 77 - Jun 78	Jul 78 - Aug 78	Sep 78 - Sep 78	Oct 78 - Apr 79	Apr 79 - May 79	May 79 - Feb 81	Mar 81 - Jun 81	Jul 81 - Dec 81
2. Dinka		" "	" "	" "	" "	" "	" "	" "	" "
3. Lotuko		" "	" "	" "	" "	" "	" "	" "	" "
4. Ndogo		" "	" "	" "	" "	" "	" "	" "	" "
5. Moru		Oct 78 - Jun 79	Jul 79 - Aug 79	Sep 79 - Sep 79	Oct 79 - Apr 80	Apr 80 - May 80	May 80 - Feb 82		
6. Nuer		" "	" "	" "	" "	" "	" "		
7. Shilluk		" "	" "	" "	" "	" "	" "		
8. Zande		" "	" "	" "	" "	" "	" "		
9. Kresh	Apr 78	Oct 79 - Jun 80	Jul 80 - Aug 80	Sep 80 - Sep 80	Oct 80 - Apr 81	Apr 81 - May 81	May 81 - Feb 83		
10. Murle	Mar 78	" "	" "	" "	" "	" "	" "		
11. Jur Luo	Jun 78	" "	" "	" "	" "	" "	" "		
12. Mundu	May 78	" "	" "	" "	" "	" "	" "		
13. Beli	May 78	Oct 80 - Jun 81	Jul 81 - Aug 81	Sep 81 - Sep 81	Oct 81 - Apr 82				
14. Bongo	May 78	" "	" "	" "	" "				
15. 'E' lang.	78	" "	" "	" "	" "				
16. 'B' lang.	78	" "	" "	" "	" "				
17. 'B' lang.	79								
18. " "	79								
19. " "	79								
20. " "	80								
21. " "	80								
22. " "	80								
23. " "	80								
24. " "	80								

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The literacy team to handle the first eight languages listed is already in Sudan and is functioning. Teams for the next six languages have completed or will soon complete Arabic study and begin field linguistic language analysis on the dates shown.

A critical point in the project will be October 1978 when the second cycle is begun with four more languages. The literacy team with its Sudanese counterparts is planning to move from Palotaka where the first course cycle was held to Maridi. This move has been evaluated and determined to be essential because of the logistical problems encountered in working at Palotaka. The group will be moving into temporary facilities in Maridi that are recognized as inadequate. This underscores the importance of having funding available from the grant to develop adequate facilities at Maridi. As soon as SIL is notified of the availability of funding, priority will be given to ordering materials and starting construction. This is essential to the effective functioning of the project.

The major contribution of SIL to the project will be personnel to provide technical assistance. By the end of 1978 we expect 20 SIL staff members to be in Sudan. The major part of the SIL in-kind contribution to the project will have been made by the end of 1978. No difficulties are anticipated in providing the resources committed to the project by SIL.

The proposed disbursement of funds, procurement of commodities and accounting for AID funds will be directly

administered by SIL. Financial reports by cost categories and in a format acceptable to AID will be made quarterly.

The entire project will be carried out under the general oversight of SIL Area Director for Africa, Dr. John Bendor-Samuel. Direct field supervision will be provided by an SIL country director. The literacy team will continue with an SIL director. These personnel will be responsible for monitoring the implementation plan for the project.

Prior AID approval will be needed from AID for SIL to sub-contract with the Center for Applied Linguistics in Arlington, Virginia to evaluate the project. For the possible replication potential this project has elsewhere in Africa, it is important to have a recognized independent organization do the project evaluation. One of the important aspects of the evaluation is to determine the extent and importance of the benefits resulting from improved self-image and the stimulating of positive behavior patterns toward development. The Center for Applied Linguistics has the experience and professional ability to carry out this evaluation.

#### B. Evaluation Plan

Three distinct and separate evaluations will be made of the project as it is implemented. The SIL Area Director for Africa, Dr. John Bendor-Samuel will make informal evaluations two or three times a year of progress in meeting the implementation schedule, the quality of the technical work in literacy and

linguistics, of morale and working conditions of project personnel, and of overall progress in meeting end of project objectives. With 25 years' experience in linguistic and literacy work in SIL, including 15 years in Africa, Dr. Bendor-Samuel has an excellent background for monitoring the project. This evaluation will identify for management, modifications that may need to be made in implementation strategy, resource mix, or in project design. It will also provide a check on the validity of project design assumptions and changes in environmental factors external to, but impinging on targeted results.

A second level of evaluation is built into the implementation phases of the project. This relates primarily to the quality of the educational materials produced and to their acceptance by the project beneficiaries. Since these evaluation procedures are detailed in the implementation section, they will be noted only briefly here. Phase two consists of testing the experimental pre-primer, primer and post-primer materials for 2 or 3 months. Phase five calls for testing the trial editions for a school year. Phase seven is a three year trial of the literacy materials in the primary schools before the final versions of the primary school materials are published. Experience has shown SIL the value of extensive testing to obtain both student and teacher reaction to the materials and to insure that the books are culturally relevant and acceptable. Additionally, in the Sudan there is considerable dialect diversity in the large languages. Testing will show whether the materials are adequately coping

with this diversity.

The third level of evaluation is planned as an assessment of the project by an outside observer. The aim is to determine if the project achieves its planned targets, especially of:

- upgrading the achievement levels for primary grades one and two to standard norms.
- helping students achieve reading and writing skills faster than control groups using existing techniques and materials.
- achieving a positive change in individual self-image and in behavior patterns toward development.

Plans are to sub-contract with the Center for Applied Linguistics (CAL) in Arlington, Virginia to do this evaluation. Initially, CAL will be asked to develop an evaluation plan and to gather baseline data. The evaluation plan will then be reviewed by SIL and AID. Upon reaching agreement on a satisfactory plan, SIL will sub-contract for carrying out the evaluation. Because this project has significant replication potential in Africa, SIL believes it is important to have an independent party do this part of the evaluation.

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Project Title Literacy Training in Local Languages in Southern Sudan

Page 1

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>To provide the trained manpower necessary for Southern Sudan to raise levels of agricultural production, nutrition, health, and participation in civic life for the rural population.</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> <li>1. The drop out rate in first year primary is reduced to 25% from the current rate of 50% or more.</li> <li>2. Drop out rates in grades 2 through 4 are reduced by 40% from current levels.</li> </ol>	<p>M. of E. statistical reports from schools using new local language materials.</p> <p>Same as above.</p>	<p>Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> <li>1. Present teachers will be made available for in-service training to use newly developed materials.</li> <li>2. World Bank funding program of IREC's will develop relevant curriculum in agriculture and health.</li> </ol>

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**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

Project Title Literacy Training in Local Languages in Southern Sudan

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><b>Project Purpose:</b></p> <p>To reorient education in Southern Sudan to the development needs of the rural majority and to bring quality up to standard norms for the lower primary grades.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> <li>1. 85% of children in the trial programs are able to read and understand a simple story in their mother language at the end of the first year of school.</li> <li>2. 70% of the children and adults in trial programs demonstrate a positive change in individual self-image and in behavior patterns toward development.</li> <li>3. 70% of adults who enroll in trial literacy programs achieve functional literacy in 6 months.</li> </ol>	<ol style="list-style-type: none"> <li>1. Test administered by project evaluators.</li> <li>2. Sample survey before and after training.</li> <li>3. Test administered by project evaluators.</li> <li>4. M. of E. statistical reports from schools using new language materials.</li> </ol>	<p>Assumptions for achieving purpose:</p> <ol style="list-style-type: none"> <li>1. Instruction in the local language will lead to faster learning of basic skills.</li> <li>2. World Bank IREC program will develop 30 centers in the South as planned and will use local languages for training children and adults.</li> <li>3. Success in acquiring literacy skills will result in positive attitudes toward other development activities.</li> <li>4. The M. of E. will maintain its commitment to reorient education to development needs.</li> <li>5. It will be possible for the M. of E. to opt for improved quality of education while sacrificing some increase in quantity.</li> </ol>

**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

Project Title Literacy Training in Local Languages in Southern Sudan

Page 3

ARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Outputs:</p> <ol style="list-style-type: none"> <li>To create a department of local languages in the Ministry of Education capable of producing basic educational materials in local languages.</li> <li>To produce pre-primers and primers and post-primer materials in 16 local languages for use in the education program of Southern Sudan.</li> <li>Primary students who will have been taught to read their mother language.</li> <li>Vocabulary tests compiled and grammar analysis done for local languages.</li> </ol>	<p>Magnitude of Outputs:</p> <ol style="list-style-type: none"> <li>Demonstrated capability for producing local language materials. Trained Sudanese functioning in the following positions: Department head 8 languages development offices 16 writers of local language materials</li> <li>Published copies of pre-primers, primers, and post-primers in 16 languages.</li> <li>35,000 by early 1982</li> <li>By 1981, 16 vocabulary lists and 11 grammar analyses.</li> </ol>	<ol style="list-style-type: none"> <li>Examples of materials produced.</li> <li>Direct observation and evaluation of skills.</li> <li>Visual inspection of Ministry of Education archives.</li> <li>Reports to M. of E.</li> </ol>	<p>Assumptions for achieving outputs:</p> <ol style="list-style-type: none"> <li>Facilities and equipment needed by the department will be available through World Bank and GOS funding.</li> <li>M. of Ed. will have adequate budget for operating costs.</li> <li>Governments Nile press can publish primer materials on schedule.</li> <li>SIL personnel will not experience significant health problems in the villages which will hinder work schedules.</li> </ol>

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**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

Project Title & Number: Literacy Training in Local Languages in Southern Sudan

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><b>Inputs:</b></p> <p><u>GOS</u> counterparts and writers for local language materials budget</p> <p><u>SIL</u> literacy and linguistics personnel support staff</p> <p><u>AID</u> participant training facilities at Maridi. Funding for transportation and publishing books.</p> <p><u>IBRD</u> Funding for Curic Dev. Center facilities at Maridi.</p> <p><u>UNESCO</u> Curic dev. experts in agric. health and women's programs.</p> <p><u>ODM</u> Curic dev. and teacher training experts.</p> <p><u>UNICEF</u> Funding for publishing books.</p>	<p><b>Implementation Target (Type and Quantity)</b></p> <p>See summary of project financing and implementation schedule.</p>	<p><u>SIL</u> reports <u>GOS</u> records</p>	<p><b>Assumptions for providing inputs:</b></p> <ol style="list-style-type: none"> <li>1. Qualified counterparts and writers available.</li> <li>2. Six year plan budget not significantly reduced.</li> <li>3. UNESCO and ODM experts available as scheduled.</li> </ol>

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PROJECT FINANCING

Cost Category	through 1978	1979	1980	1981	Total
<b>1. Field Staff</b>					
GOS	10,000	42,000	68,000	75,000	195,000
SIL	500,000	580,000	610,000	610,000	2,300,000
AID		50,000	45,000	30,000	120,000
<b>2. Training</b>					
GOS	4,000	4,500	4,500	4,500	17,500
SIL	-	2,000	2,500	2,500	7,000
AID	-	7,000	14,000	14,000	35,000
<b>3. Textbook Publication</b>					
GOS	700	4,500	8,500	8,500	22,200
AID	-	17,000	11,000	-	28,000
UNICEF	2,000	10,000	12,000	8,000	32,000
<b>4. JUBA facilities</b>					
SIL	85,000	30,000	25,000	-	140,000
<b>5. Maridi linguistic &amp; literacy center</b>					
SIL	-	5,000	7,000	7,000	19,000
AID	-	230,000	120,000	56,400	406,400
<b>6. Equipment &amp; Reference Books</b>					
GOS	1,000	-	-	-	1,000
SIL	3,000	2,000	2,000	2,000	9,000
AID	-	6,000	5,000	-	11,000
<b>7. Vehicles</b>					
GOS	5,000	5,000	-	-	10,000
SIL	13,000	-	-	-	13,000
AID	-	47,000	-	-	47,000
<b>8. Transportation and travel</b>					
GOS	1,500	500	500	500	3,000
SIL	60,000	3,000	3,000	3,000	69,000
AID	-	12,000	14,000	14,000	40,000

<u>Cost Category</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>TOTAL</u>
9. Communication					
SIL	1,000	1,000	1,000	1,000	4,000
AID	-	15,000	-	-	15,000
10. Evaluation					
AID	-	10,000	10,000	10,000	30,000
11. Administrative overhead					
SIL	15,000	30,000	35,000	36,000	116,000
AID	-	43,000	24,000	13,000	80,000
<b>TOTALS</b>	<b>701,200</b>	<b>1,156,500</b>	<b>1,022,000</b>	<b>895,400</b>	<b>3,775,100</b>
GOS	22,200	56,500	81,500	88,500	248,700
SIL	677,000	653,000	685,500	661,500	2,677,000
UNICEF	2,000	10,000	12,000	8,000	32,000
AID	-	437,000	243,000	137,400	817,400

**Percentage distribution  
of total cost:**

GOS	6.6
SIL	70.9
UNICEF	.8
AID	<u>21.7</u>
	100.0

## EXPLANATION OF PROJECT FINANCING

Each of the eleven cost categories included in the financing plan will be discussed briefly to give further information on the nature of the costs included in the category.

### t. Field Staff

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The SIL contribution represents the value of SIL manpower dedicated to the project. The cost calculation is based on a value of \$20,000 per person year. This is a conservative estimate of the value of trained technical assistance personnel. The reason for using the \$20,000 per person year figure is that it represents a better indication of the real value of the SIL contribution than simply the living allowance which SIL members receive to sustain them in their work.

The following table identifies the SIL staff that will participate in the project. Note that 23 persons are already in Sudan, 6 others are recruited and in training, thus leaving only 9 to be recruited.

The AID financing will provide for hiring a construction supervisor during 1979 and 1980. This cost is estimated at \$20,000 in each of those years. Financing for a literacy consultant with a background in linguistics and psychology is included in 1979 through 1981. This consultant will provide an additional area of expertise in curriculum design and the psychology of learning. At the present time SIL does not have a member available for assignment to the Sudan to cover these functions.

## 2. Training

The GOS contribution represents a combination of direct training costs for counterpart staff and the family living allowance paid by the government for personnel who are involved in participant training. The SIL contribution is for scholarships to be provided for Sudanese personnel at summer training courses conducted by SIL. The AID financing will cover 12 months of short term participant training, primarily in third countries, and 36 months of long term training in bilingual education and applied linguistics at the Masters Degree level in the United States.

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This will cover the cost of publishing pre-primers, primers, and post-primers. The UNICEF contribution is for commodities such as paper, ink, and offset plates needed in the process of printing. The AID and GOS contributions will cover the other

costs of printing and distribution. We anticipate having the books printed at the recently opened Government printing facility in Juba. Good quality equipment is now installed there and technical assistance is being provided by three persons from the Norwegian Church Relief Organization.

#### 4. Juba Facilities

SIL is constructing three staff houses for administrative personnel in Juba. This construction is expected to be completed by the fall of 1978. Four motel-type units for transient housing will be constructed to serve personnel who must be in Juba for short-term assignments to relate to Government officials and those traveling through Juba outside the country. Storage facilities will be constructed to service SIL field locations.

#### 5. Maridi Linguistic and Literacy Center

This funding will provide for the construction of a center that will be of pivotal importance to providing technical assistance to the Government of Sudan. The center will be adjacent to the Ministry of Education Curriculum Development Center at Maridi and two teacher training institutes. The facilities proposed for construction are the following:

Literacy-Linguistic center with two classrooms, a small library, two small seminar rooms, four offices, and ten workrooms which will be used by SIL linguists and their counterparts in the preparation of literacy materials. Estimated cost is \$79,100.

Dormitory housing for fourteen counterpart trainees with a kitchen and dining room. Estimated cost is \$36,300.

Four staff houses for SIL literacy and linguistic consultant personnel. Estimated cost is \$99,500.

Seven transient houses for field staff who will spend three months at Maridi working on literacy materials and giving evening courses. Estimated cost is \$162,500.

For water, either the city facilities will be extended to the land or a well will be drilled. There are several wells in the area and water can be obtained at about 90 meters depth. Drilling equipment is also available. The city water is treated. A cost effectiveness study will be done prior to initiation of construction to determine which of these two alternatives would be preferable. Estimated cost is \$10,000.

The town of Maridi does not have electric power. A 20 to 25 kw electric generator will be installed to provide electricity for evening hours and for essential uses during the day. Estimated cost is \$12,000.

A study of construction alternatives for the Maridi center will be made during the next two months. An SIL architect will be going to Sudan in April for two months to supervise construction at Juba and at the same time will study alternatives for construction at Maridi. The construction of facilities in Maridi is being done by SIL force account using local materials.

However, except for locally-made brick, most of the materials must be imported from Nairobi, Kenya. As an alternative to construction from local materials, we are considering using pre-fabricated aluminum buildings from the United States.

Also included in the Maridi center construction is a shed for the aircraft that will be used for project transportation. The shed is needed to protect the plane from the hot sun and to provide shade for routine maintenance. A fuel storage area will also be built. The estimated cost of these facilities is \$7,000.

#### 6. Equipment and Reference Books

The SIL contribution represents equipment for the SIL administrative offices and equipment such as typewriters, tape recorders and reference books used by the SIL field teams. The AID financing includes \$5,000 for the acquisition of literacy and linguistic reference books and the following office equipment:

- 14 portable typewriters
- 5 filing cabinets
- 1 14 point literacy typewriter
- 4 standard typewriters
- 1 hand operated mimeograph duplicator

All of the above equipment will be used in the preparation of literacy materials.

## 7. Vehicles

The Government of Sudan provided one used vehicle in 1978 and will provide one vehicle for the project in 1979. The SIL contribution represents two vehicles provided for the project in 1977. The AID financing is for the acquisition of four 4-wheel drive vehicles needed for the testing of the literacy materials in rural school locations and for supervision of teachers using these materials. A 5-ton truck is also included in the AID financing. This is based on the assumption that the construction at the Maridi center will be from local building materials. Trucks are not readily available for hire in Maridi and one will be needed for the construction work. If the pre-fabricated building option is selected for the construction of facilities in Maridi, funds for purchasing a truck will be re-programmed for building costs since it is anticipated that the pre-fabricated construction will be more expensive. A decision on the type of 4-wheel drive vehicle to be purchased has not yet been made. Most of the vehicles used in rural southern Sudan are Landrovers. However, the cost of Landrovers has increased significantly and we are evaluating the possibility of using United States vehicles.

## Transportation and Travel

The contribution of GOS represents costs for routine administrative travel associated with the project. The SIL funding in 1978 is for the purchase of a light aircraft with

capacity for 5 passengers. The plane now being used for the project is on loan from SIL work in Cameroon. Purchase of the plane is planned for 1978. Sixty percent of the funds needed for its acquisition are in hand. SIL costs in 1979 through 1981 are for travel that will be paid for by SIL members. The AID financing will primarily cover the operating costs of the aircraft which will be used to transport project members from Maridi to village locations where language analysis and the testing of literacy materials will be done. With the poor road conditions, many of which are impassable during the six to eight month rainy season, and the high cost of motor vehicle operation (now averaging 40 cents per mile), the aircraft is a cost effective solution to transportation problems.

#### 9. Communication

This cost category is exclusively for establishing a radio communication net between the Ministry of Education in Juba, the Maridi Education Center and district centers of education in the south. The communications net will serve both the Ministry of Education and SIL field teams. No effective communication links now exist between the district education centers and Juba. A net of single side band radio transceivers will provide an effective means of communication both for the Ministry of Education and SIL project purposes. The AID funds will be used to acquire these transceivers. The SIL contribution represents the installation and maintenance of this equipment.

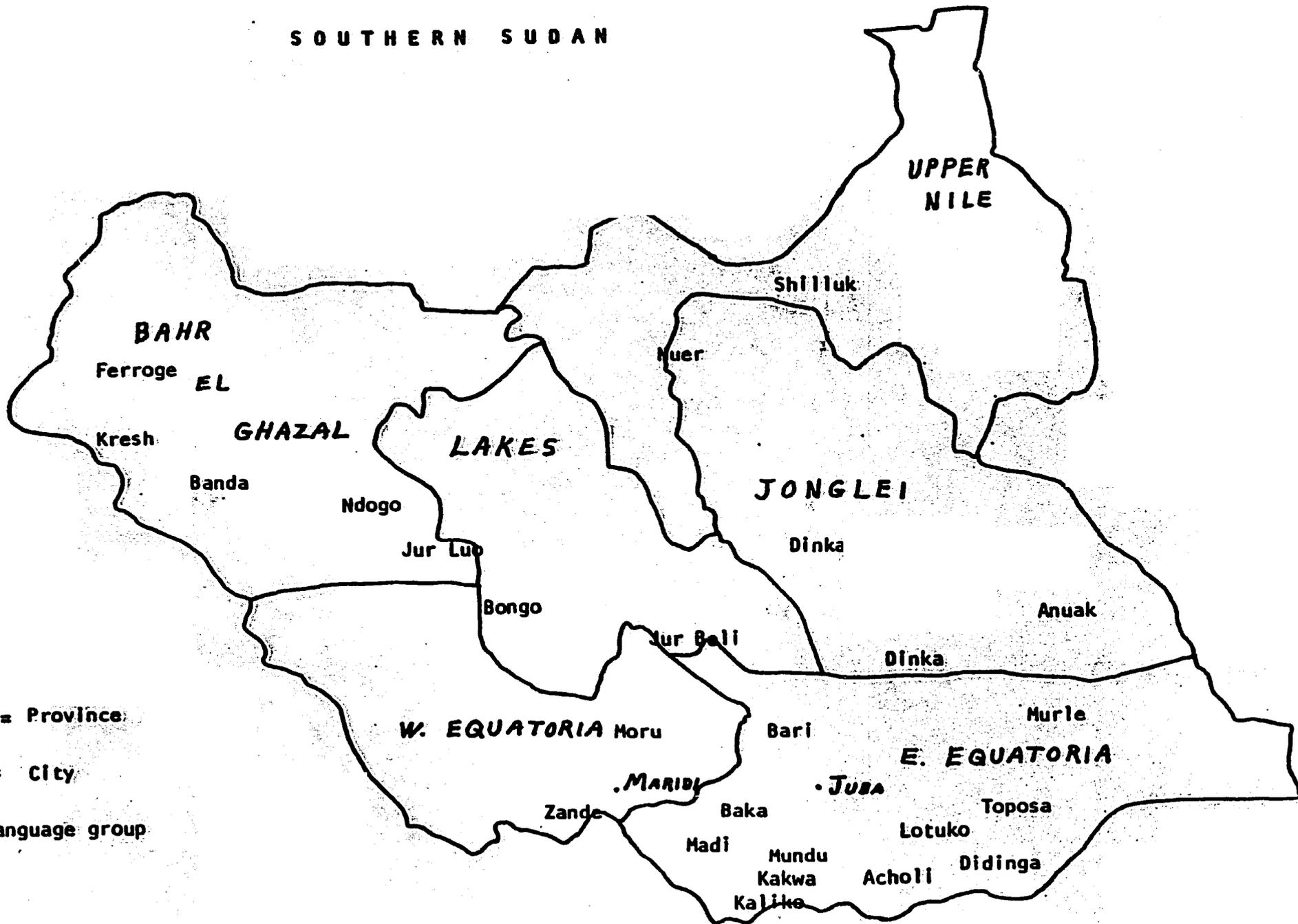
10. Evaluation

As described in the evaluation plan the funds will be used to subcontract with the Center for Applied Linguistics for an evaluation of the project.

11. Administrative Overhead

SIL Administrative Overhead for both the home office and field operations are financed by a charge of 10% on all income received by the Corporation. The AID financing represents ten percent of the AID portion of project costs.

**S O U T H E R N   S U D A N**



ES = Province  
• = City  
• = Language group

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**ESTIMATED POPULATION OF LOCAL LANGUAGE GROUPS  
IN SOUTHERN SUDAN IN 1978**

Bari	226,000
Dinka	1,275,000
Lotuko	132,000
Ndogo	25,000
Moru	68,000
Nuer	525,000
Shilluk	124,000
Zande	236,000
Kresh	16,000
Murle	51,000
Jur Luo	54,000
Bongo	56,000
Jur Beli	22,600
Mundu	10,000
Acholi	27,000
Anuak	14,700
Baka	23,000
Banda	10,200
Didinga	58,000
Ferroge	5,600
Kakwa	40,000
Kaliko	7,000
Madi	18,000
Toposa	<u>138,000</u>
	3,111,700

Other language groups  
which can be served  
by materials in the  
above languages

225,000
<u>3,336,700</u>

**COOPERATION AGREEMENT BETWEEN THE MINISTRY OF EDUCATION  
SOUTHERN REGION OF THE DEMOCRATIC REPUBLIC OF SUDAN  
AND THE SUMNER INSTITUTE OF LINGUISTICS.**

A Cooperation Agreement made between the Ministry of Education, Southern Region of the Democratic Republic of the Sudan (hereinafter referred to as the Ministry) and the Sumner Institute of Linguistics (hereinafter referred to as the Institute).

Whereas the Ministry and the Institute have expressed their desire to cooperate in a project designed to commence formal Education in the Southern Region through initial literacy in the mother-tongue followed by graded transfer to the major languages.

It is hereby agreed between the parties as follows:-

1. The Institute shall

- (1) (a) in case of languages where basic linguistic research has already been undertaken train personnel selected by the Ministry to write the necessary teaching materials and test them;
- (b) in case of other languages carry out basic research and train personnel selected by the Ministry to write the necessary teaching materials, test them and provide the Ministry with copies of the basic research materials,
- (2) prepare transfer materials from each language into the second languages in collaboration with the training personnel selected by the Ministry.
- (3) provide the following personnel:
  - (a) Research personnel:
    - (i) Literacy Consultant,
    - (ii) Linguistic Consultant,
    - (iii) 12 research teams, each team consisting of two linguists.
  - (b) Administrative Staff:
    - (i) Director of the Project,
    - (ii) Director's Secretary,
    - (iii) Personnel Manager,
    - (iv) Business Manager,
    - (v) Administrative Assistant,
    - (vi) Pilot,
    - (vii) Electronics technician.
- (4) be responsible for the expenses of the overseas personnel and the cost of initial research, including such expenses as travel in the areas concerned.
- (5) assist the Ministry in seeking funds for the publication of the literacy and transfer materials.

2. The Ministry shall:-

- (a) be responsible for the expenses of local personnel and the cost of publication of the literacy and transfer material,
- (b) assist the Institute in obtaining:-
  - (i) visas for its personnel,
  - (ii) permission to import necessary equipment duty-free,
  - (iii) permission to operate aviation and radio services.

3. The Ministry and the Institute accord to each other the right to use at cost the following services, depending on their availability

- (a) air and land transportation,
- (b) radio communication network,
- (c) printing and related services.

4. The conclusion of this agreement does not preclude the Institute from collaborating with other organizations such as the Universities of Khartoum and Juba in carrying out its linguistic research and with other interested agencies in the fields of literacy and Bible translation in which members of the Institute also have an interest.

5. It is recognized by the parties that this is a long-term project likely to take a minimum of ten years to complete. Both parties, have the right to terminate the agreement by giving at least one year's notice to the other party.

On behalf of  
the Ministry of Education

On behalf of  
the Sumner Institute of Linguistics.



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INITIAL ENVIRONMENTAL EXAMINATION

Project Country: Sudan

Project Title: Literacy Training in Local Languages in  
Southern Sudan

Funding: FY(s) \_\_\_\_\_ \$ \_\_\_\_\_

Period of Project: 1979 -1981

IEE Prepared by:

Environmental Action Recommended:

Concurrence:

Assistant Administrator Decision:

Approved \_\_\_\_\_

Disapproved \_\_\_\_\_

Date \_\_\_\_\_

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**I. Description of Project.**

The overall purpose of the project is to re-orient education in southern Sudan to the development needs of the rural majority and to bring the quality of education up to standard norms for the primary grades. This is part of a general program to provide the trained manpower necessary for the southern Sudan.

The major outputs of the project will be a team of trained Sudanese personnel and the preparation of literacy materials both for use in primary education and adult literacy.

**II. Examination of Nature and Scope. Magnitude of Environmental Impacts.**

See the attached Impact and Evaluation Form.

**III. Recommended Environmental Action.**

The project will not have a significant effect on the environment, and therefore a negative determination is appropriate.

**I. Description of Project:**

**II. Examination of nature, Scope and Magnitude of Environmental Impacts:**

**(In terms of items on attached Impact and Evaluation Form)**

**III. Recommended Environmental Actions:**

**IMPACT IDENTIFICATION AND EVALUATION FORM**

**Impact  
Identification  
and  
Evaluation 2/**

**Impact Areas and Sub-areas 1/**

**A. LAND USE**

**1. Changing the character of the land through:**

- |  |          |
|--|----------|
| a. Increasing the population.....            | <u>L</u> |
| b. Extracting natural resources.....         | <u>N</u> |
| c. Land clearing.....                        | <u>L</u> |
| d. Changing soil character.....              | <u>N</u> |
| <b>2. Altering natural defenses.....</b>     | <u>L</u> |
| <b>3. Foreclosing important uses.....</b>    | <u>L</u> |
| <b>4. Jeopardizing man or his works.....</b> | <u>N</u> |
| <b>5. Other factors</b>                      |          |

**B. WATER QUALITY**

- |  |          |
|--|----------|
| 1. Physical state of water.....        | <u>L</u> |
| 2. Chemical and biological states..... | <u>L</u> |
| 3. Ecological balance.....             | <u>L</u> |
| 4. Other factors                       |          |

**1/ See Explanatory Notes for this form.**

**2/ Use the following symbols: N - No environmental impact  
L - Little environmental impact  
M - Moderate environmental impact  
H - High environmental impact  
U - Unknown environmental impact**

**C. ATMOSPHERIC**

- 1. Air additives.....     N
  - 2. Air pollution.....     L
  - 3. Noise pollution.....     L
  - 4. Other factors
- 
- 

**D. NATURAL RESOURCES**

- 1. Diversion, altered use of water.....     N
  - 2. Irreversible, inefficient commitments...     N
  - 3. Other factors
- 
- 

**E. CULTURAL**

- 1. Altering physical symbols.....     N
- 2. Dilution of cultural traditions.....     N
- 3. Other factors: Project is expected to have a positive effect by promoting literacy in minority languages and by preserving cultural history.

**F. SOCIO-ECONOMIC**

- 1. Changes in economic/employment patterns.     M      
improved educational preparation for employment
- 2. Changes in population.....     L
- 3. Changes in cultural patterns.....     M      
increased educational opportunities for women

4. Other factors

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G. HEALTH

- 1. Changing a natural environment..... N
- 2. Eliminating an ecosystem element..... N
- 3. Other factors  
Raise educational level for health and M  
nutrition

H. GENERAL

- 1. International impacts..... N
- 2. Controversial impacts..... N
- 3. Larger program impacts..... N
- 4. Other factors

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I. OTHER POSSIBLE IMPACTS (not listed above)

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See attached Discussion of Impacts

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ATTACHMENT E

Literacy Training in Local Languages in Southern Sudan

The proposed evaluation and research to be carried out by the Center for Applied Linguistics consists of two parts -- (1) a critical examination of the instructional materials produced by the SIL group and (2) an empirical assessment of the pedagogical consequences for selected southern Sudanese children of following a program of formal primary instruction via an indigenous language using the materials prepared by the SIL-coordinated group. The work will be conducted in two phases.

In year 1 (September 1 - September 30, 1978), CAL will undertake an in-country field assessment which will lead to the explicit definition of the evaluation plan discussed in the proposal. Only through actual on-site experience can we identify the sites for testing, select the schools to be used, decide how to do the test development, determine who will do the testing and select the predictor or variables to be examined. The product of this field assessment will be an explicit work plan for phase two.

This work will be undertaken jointly by Roger W. Shuy who has worked extensively in the area of education evaluation and Gary A. Cziko who has coordinated a similar evaluation activity in the western state of Nigeria. In addition, Shuy will begin -- with James Duheb Gabjanda, a southerner who is head of the Department of African Languages at the Institute of African and Asian Studies of the University of Khartoum -- the task of critiquing the teaching materials produced to date for Role A languages by the SIL-coordinated group. The major expenses during phase one will be travel-related.

During the second phase (October 1, 1978 - September 30, 1980) CAL proposes to implement the empirical assessment and to continue its critique of the teaching materials as they are developed. In April, 1979 Cziko will become principal investigator and project director for the empirical assessment. He will supervise test development, the recruitment and training of Sudanese personnel, test administration, data analysis and reporting. It is

presently anticipated that classes of children -- some of whom are using and some of whom are not using the SIL materials -- to be tested will be selected from rural and "urban" areas from two different language groups. During the course of this phase the progress of a pilot group of children beginning school in academic year 1979-80 will be followed through grade two while that of a second or follow-up group of children who will begin their schooling in 1980-81 will be monitored through grade one. Every attempt will be made to involve students or staff from the University of Juba or local teacher training colleges in the various aspects of the empirical assessment. A major goal of CAL is to develop the capacity among southern Sudanese to design and implement such a program of empirical evaluation. It is our hope that selected local personnel will demonstrate an interest and ability to continue their formal training either in Khartoum or abroad. Czif will make two trips per year to the Sudan and will spend approximately six weeks per year in residence.

During this second phase, Shuy and James Dahab will continue their critical examination of the teaching materials being produced for Role A languages. It is anticipated that Shuy will visit the Sudan at least once during this period; and that materials will be sent to him for critique at CAL by the SIL group as they are produced.

During the entire life of the project all phases of activity will be continually monitored by Tracy C. Gray Director of the Language and Public Policy Division of CAL and G. R. Tucker, CAL Director who has had extensive experience in the development and implementation of research and evaluation programs overseas. Specifically he has worked as the Language Education Specialist for the Ford Foundation field force in Cairo during 1972-73 and 1976-77. During that time, he was responsible for the Foundation's language activities in the Sudan. In fact he represented the Foundation of the Juba planning meeting in March 1977 which resulted in the formalization of an agreement between the southern regional Ministry of Education and SIL.

SUDAN/SIL BUDGET SUMMARY

	<u>Phase I</u>	<u>Phase II</u>	
		<u>1979-80</u>	<u>1980-81</u>
Salaries	1,477	23,376	25,012
Fringe Benefits	384	6,078	6,503
Consultants Honoraria	2,250	500	500
Field Workers Services	-	2,900	4,350
Field Workers Expenses	-	3,389	4,784
Travel	6,058	9,696	10,642
Other Direct Costs	100		
Communications	-	1,500	1,700
Expendable Supplies	-	3,000	3,300
Computer Services	-	1,500	2,250
Duplication	-	1,300	1,430
Total Direct Costs	10,169	53,239	60,471
Indirect Costs	<u>2,441</u>	<u>16,035</u>	<u>18,009</u>
Total Costs	12,610	69,274	78,480
Fixed Fee	<u>757</u>	<u>4,156</u>	<u>4,709</u>
TOTAL	<u>13,367</u>	<u>73,430</u>	<u>83,189</u>

Literacy Training in Local Languages in Southern Sudan

Phase I

I. SALARIES

Principal Investigator: Shuy, 10 days at 36,000 p.a.	1,385
Secretary: 2 days at 12,000 p.a.	<u>92</u>

II. FRINGE BENEFITS

26% of salaries

III. CONSULTANTS HONORARIA

Cziko: 16 days at \$100/day	1,600
Dajab Gabjanda: 3 days at \$100/day	300
Ministry of Education consultant	<u>350</u>

IV. TRAVEL

Airfare: 1 RT DC-Khartoum-Juba-DC	1,811
1 RT Montreal-DC-Khartoum-Juba-Montreal	1,725
1 RT Khartoum-Juba	300
Perdiem: 14 days at \$82/day	1,148
17 days at \$29/day	493
Airport transportation	81
Local travel	350
Visas, immunizations: 2 at \$75/person	<u>150</u>

V. OTHER DIRECT COSTS

Telephone, postage, duplication, etc.

Total Direct Costs

VI. INDIRECT COSTS

Offsite: 24% of Total Direct Costs

Total Costs

VII. FIXED FEE

6% of Total Costs

TOTAL

Literacy Training in Local Languages in Southern Sudan

Phase II: May 1, 1979 - April 30, 1980

<b>I. SALARIES</b>		
Principal Investigator: Cziko, 1/3FT at 20,820 p.a.		6,940*
Senior Advisors:		
Shuy, 10% at 37,470 p.a.		3,746*
Tucker, 10% at 46,740 p.a.		4,674*
Gray, 10% at 29,160 p.a.		2,916*
Secretary: 20% at 12,490 p.a.		2,498*
Local Coordinator: 50% at 5,204 p.a.		<u>2,602</u>
<b>II. FRINGE BENEFITS</b>		
26% of 20,744		5,401*
26% of 2,602		<u>677</u>
<b>III. CONSULTANT HONORARIUM</b>		
Dajab Gabjanda: 5 days at 100/day		
<b>IV. FIELD WORKERS SERVICES</b>		
Testers: 16 testers x 2 months x 75/month		2,400
Specialists: 10 specialists x 2 weeks x 25/week		<u>500</u>
<b>V. FIELD WORKER EXPENSES</b>		
Testers subsistence: 16 x 62 days x 1.25/day		1,240
Testers local travel: 16 x 62 days x 1.40/day		1,389
Specialists subsistence: 10 x 2 weeks x 25/week		500
Specialists local travel: 10 x 2 weeks x 13/week		<u>260</u>
<b>VI. TRAVEL (costs increased by 10% over current rates)</b>		
Airfare: 3 RT DC-Khartoum-Juba at 1992/trip		5,976
Perdiem: 20 days at 90/day (Khartoum)		1,800
40 days at 32/day (Juba)		1,280
Airport transportation: 3 at 30/person		90
Local travel: 8 weeks at 50/week		400
Visas, immunizations: 2 at 75/person		<u>150</u>
<b>VII. COMMUNICATIONS</b>		
CAL		700*
Sudan:		<u>800</u>
<b>VIII. EXPENDABLE SUPPLIES</b>		
<b>IX. COMPUTER SERVICES</b>		
Keypunching		500
Computer time		<u>1,000</u>
<b>X. EQUIPMENT AND REPAIRS</b>		
CAL		
Sudan:		

Literacy Training in Sudan  
Phase II: May 1979 - April 1980

XI. INDIRECT COSTS

Onsite (marked with asterisk): 36% of 27,145  
Offsite: 24% of 26,094

9,772  
6,263 16

Total Costs 69

XII. FIXED FEE

6% of Total Costs

TOTAL 7

Literacy Training in Local Languages in Southern Sudan

Phase II May 1, 1980 - April 30, 1981

<b>I. SALARIES</b>		
Principal Investigator: Cziko, 1/3FT @ 22,277.	7,426*	
Senior Advisors:		
Shuy, 10% @ 40,082	4,001*	
Tucker, 10% @ 50,012	5,001*	
Gray, 10% @ 31,201	3,120*	
Secretary: 20% @ 13,364	2,673*	
Local Coordinator: 50% @ 5,568	<u>2,784</u>	25,012
<b>II. FRINGE BENEFITS</b>		
26% of 22,228	5,779	
26% of 2,784	<u>724</u>	6,503
<b>III. CONSULTANT HONORARIA</b>		
Dajab Gabjanda: 5 days @ 100/day		500
<b>IV. FIELD WORKERS SERVICES</b>		
Testers: 16 testers x 3 months x 85/mo.	4,080	
Specialists: 10 specialists x 1 week x 27/2k	<u>270</u>	4,350
<b>V. FIELD WORKER EXPENSES</b>		
Testers:		
Subsistence: 16 x 93 days x \$1.38	2,053	
Local travel: 16 x 93 days x \$1.54	2,291	
Specialists:		
Subsistence: 10 x 1 week x \$30	300	
Local travel: 10 x 1 week x \$14	<u>140</u>	4,784
<b>VI. TRAVEL</b>		
Airfare: 3 RT @ 2,191/ trip	6,573	
Perdiem: 20 days @ 99/day	1,980	
40 days @ 35/day	1,400	
Airport transportation: 3 trips @ \$33/trip	99	
Local travel: 8 wks x \$55/wk	440	
Visa, immunization: 2 x \$75	<u>150</u>	10,642
<b>VII. COMMUNICATIONS</b>		
CAL	800*	
Sudan	<u>900</u>	1,700
<b>VIII. EXPENDABLE SUPPLIES</b>		
		3,300

**IX. COMPUTER SERVICES**

Keypunching  
Computer time

750  
1,500

**X. DUPLICATION**

C&L  
Sudan

330\*  
1,100

**Total Direct Costs**

**XI. INDIRECT COSTS**

Onsite (marked with asterisk): 36% of 29,137  
Offsite: 24% of 31,334

10,489  
7,520

**Total Costs**

**III. FIXED FEE**

6% of Total Costs

**TOTAL**

8/7/78

EVALUATION COMPONENT

Variables for Evaluation of Multilingual Literacy

The following list presents a set of candidate variables which might be included in a study of the effects of language -- apart from other elements -- in the education of (rural) poor minority children. Some variables may be relevant at several levels (e.g., national, programmatic), while others might be more salient in one local context than another. Participating settings might wish to select some rather than others, and may wish to add further items not included here. A number of these variables include several potential subvariables, which would have to be "unpacked" in a more detailed specification. It should be noted that in addition to the elements listed below, a considerable amount of background information on the locality is needed for the proper interpretation of the variables and their significance both within and across studies.

I. Demographic Variables

A. Population

1. Composition of population (nationally, locally, school)
2. Distribution and densities of components
3. Income data
4. Occupational data
5. Educational data
6. Rural/urban distribution

B. Languages

1. Number, distribution, relationships
2. Number of speakers (first language, second language) and distribution (monolinguals vs. bilinguals)
3. Literacy rate
4. Correlation with population variables

C. Education

1. Grade attainment by population/language subgroupings (including at-school/family levels)
2. School attrition by subgroupings
3. Achievement data
4. Attendance data
5. School expenditure data (per-pupil; geographic/demographic distribution; multilingual/other program distribution)

## **II. Language Variables**

### **A. Status of language(s) of instruction**

- 1. International, national, local (official, unofficial)**
- 2. Regional/social distribution and status**
- 3. Degree of regional/social differentiation and intelligibility**
- 4. Extent of standardization and development (lexical modernization)**
- 5. Depth of literacy tradition**
- 6. Extent of use and functional (domain) allocation, spoken, written**
- 7. Utilization in mass media**

### **B. Attitudes towards language**

- 1. Towards own language (nationally, locally, in-family)**
- 2. Towards other language(s) (by subgroupings, e.g., age, social class)**
- 3. Towards own/other regional/social varieties**
- 4. Towards bilingualism/multilingualism**
- 5. Valuation of educational, economic, social salience of own/other languages (e.g., perception of job-relevance)**
- 6. Motivations for literacy**

## **III. School and Program Variables**

- A. Language use, status within school (language of administration, instruction, peer informal interaction where pertinent)**
- B. Distribution of languages within curriculum**
- C. Program organization and structure**
- D. Extent and type of bilingual language use in specific instructional contexts**
- E. Language of initial literacy and point of introduction**
- F. Methods of instruction in reading, in second language, in other subjects**
- G. Nature and availability of texts and other materials**
- H. Relation of school to community; source of students; composition of school (sex, age, class, size)**
- I. Community/parent participation in curriculum**
- J. Provision for teacher training and supervision**
- K. Teacher-student ratio; presence of assistants**

#### IV. Teacher Variables

- A. Personal characteristics (scaled)
- B. Origin, ethnic identity, native language, other language(s)
- C. Proficiency in native language of students and other language(s) of instruction, if any
- D. Level of education, professional training (content, time, source)
- E. Extent of training in native language/bilingual instruction (content, time, source, location)
- F. Attitudes towards different ethnic, social, or linguistic groups, if any, in classes
- G. Attitudes towards different languages in school setting, and in society
- H. Extent of use of various languages, by domain
- I. Extent of use of different languages in teaching
- J. Extent of exposure to media, by languages
- K. Availability of teachers' guides, other professional materials

#### V. Student Variables

##### A. Input variables

1. Age, sex
2. Native language, ethnic group, social class
3. Proficiency in language(s) of instruction
4. Extent of exposure to different languages, varieties in school and outside
5. Attitude towards learning and use of native language, other languages in school, and other domains
6. Cultural expectations towards role, responsibilities of children in family, society (by age, sex, class, ethnic group)

##### B. Outcome variables

1. Growth in reading and mathematics skills, measured by (standardized) tests in native language, and second/
2. Attendance rates
3. Attrition rates
4. Grade retention (repetition)
5. Parent satisfaction (including choice of school, if choice possible)

6. Student interest, satisfaction, personal/group valuation
7. Effect on mobility (out-migration)
8. Job placement

Specifically, we propose to identify a realistic list of potentially important predictor variables from among the many suggested above and to examine, using multivariate data analyses, the relationship among these predictor variables and selected criterion variables under the intervening influence of three different educational methodologies.

For example, in the Sudan we will identify school districts in which there are large numbers of rural, poor, linguistic minority students. In each setting we would need to identify children from linguistic minority backgrounds who had participated in a transitional type of bilingual program in which their language had been used as the initial medium of instruction with the gradual introduction of schooling via the language of wider communication (LWC). Other groups of children of similar backgrounds who had for one reason or another entered a public school program in which all instruction had been conducted in LWC would be included in the study. The initial language or dialect of instruction thus becomes an important intervening variable.

As candidates for predictor variables in each of the settings, we suggest the following based on our review of the literature and our personal experience in a variety of countries: (1) the number of native speakers of the mother tongue, (2) literacy rate in the mother tongue, (3) relative ascribed status of the mother tongue versus the national language as perceived by a sample of teachers in the selected schools, (4) the use of the mother tongue in the mass media, (5) the availability of materials in the mother tongue, (6) the existence and quality of the physical facilities used to provide education, (7) the proportion of participating teachers who have completed teacher training programs for mother tongue and/or national language education, (8) the average perceived target language competence of the participating teachers, (9) the proportion of the educational budget in that district specifically devoted to the encouragement of bilingual education programs, (10) the accessibility of the schools to the participating children (e.g.,

the average number of km each child must travel to reach school), (11) the average days of school attendance by participating children in the school year and (12) the average years of schooling completed by parents of participating children. (See Table I)

Criterion variables would be chosen at two levels: within each of the settings and a common core across settings. Within-setting variables would be: (1) average score per class on the primary school certificate or the promotion examinations for each subject where data were available and (2) average retention rate per class over the primary school period. Across settings, two tests would be administered to participating pupils at the end of the primary school program. Pupils would be given: (1) two cloze tests in the appropriate language (one using a multiple choice format; the other, not) and (2) a mathematics test measuring the pupils' ability to carry out basic mathematical computations -- this would be designed in such a way that it represented common curriculum content and was, insofar as is feasible, nonverbal. In addition, average retention rates per class would be calculated. A series of regression analyses would then be calculated both within and across settings (separately, however, for the different language samples) to examine the constellation of factors associated with scholastic success and retention, and more important - to examine whether the profile of factors associated with success was similar for children who have participated in bilingual or in monolingual programs within their respective school districts. Thus, it would be possible to obtain relatively rapidly and relatively inexpensively information about the power of a number of specific variables in predicting academic achievement and school retention for samples of rural, poor, linguistic minority group students from the different settings and to estimate with some confidence whether the existence of a bilingual education alternative in the country differentially affects the students' chances for educational success.

### Phase Two

In addition, it would, of course, be desirable to plan and to implement a longitudinal, empirical evaluation to examine the relationship among academic achievement, school retention, and selected variables for rural, poor, minority language children in selected settings. As researchers have

noted previously (Bilingual Education: Current Perspectives: CAL, 1977), there exists a dearth of carefully conducted, critical, longitudinal evaluations of the effects of various types of bilingual education programs on the school achievement of pupils from various settings. Part of the problem is that such evaluations are notoriously difficult to conduct for several reasons: (1) the vagaries of funding agencies who are unwilling to make initial multi-year commitments, (2) the transience of researchers, and (3) the difficulties of coordinating research efforts across a number of settings. Nevertheless, based on our experiences in conducting research in the Philippines, Haiti, and Nigeria, we can at least begin to outline some of the requirements for an appropriate research design. (See Table II)

The following steps must be undertaken to implement such a study. First, a target testing site must be identified. Select a provincial capital (e.g., Wau) in a relatively isolated rural, poor and linguistically heterogeneous area of the country. Villages with schools would be selected for participation in the study which were situated approximately 25km and 125km to the North, East, South and West of the capital. To the North and South in each of the villages located 25km from the capital, traditional, monolingual control classes would be located. Traditional control classes would also be located to the East and the West in each of the villages at the 125km mark. Bilingual experimental classes which made use of an oral-only approach would be located in the village 125km to the North and 25km to the West while bilingual experimental programs which incorporated literacy training in the mother tongue would be located in the village 25km to the East and 125km to the South. In each town several classes would be selected for study within each school.

Thus, it will be possible to construct a longitudinal study to examine the effects of a variety of educational approaches: (1) monolingual versus bilingual, (2) oral versus literacy training in the mother tongue, (3) the effects of distance from an urban center (and presumably wider use of the national language), and (4) the effects of teacher characteristics on the pupils' achievement as measured achievement measures.

In the first phase of the study, detailed sociolinguistic surveys will have to be undertaken in each of the target communities to investigate the functional allocation of languages in that community, attitudes of parents, government officials, teachers and others towards education in general, vernacular-language education, the aspirations of the parents for their children concerning their educational or occupational futures, etc. The proposed experiments will be spread over a minimum of four school years. The participating children will be selected -- randomly if possible -- and will remain together as a group during the first three primary years. Two groups of children beginning school in successive years will be pretested to determine their baseline or entry level skills and then followed through to the end of primary three, where they will be retested. The initial equating measures will be some type of nonverbal IQ measure such as the Raven Progressive Matrices, as well as measures of their receptive skills in the national language of their country.

The following criteria will have to be satisfied in each of these settings: (1) the existence of national curricula and syllabi, (2) the existence of books in the mother tongue and the national language and their distribution in sufficient quantity for participating pupils, (3) adequate school facilities, (4) trained teachers who were native or fluent speakers of the language in which they were to provide instruction, and (5) ancillary aides as may be required for the successful implementation of the program.

In Phase Two of the study, the following will have to be undertaken: the development of appropriate testing instruments, workshops for both preservice and in-service training for all teachers in both the control and the experimental programs; the development of protocols for the systematic collection of classroom data during the course of the experiment to document that the participating teachers have followed the prescribed methods.

The children in the participating classes will be monitored over the course of the first three years of the primary cycle. At the conclusion of the third year, they will be tested: one half of the pupils in each group will be randomly selected and tested in the mother tongue; an

the other half in the national language. They will also be tested in the following areas: national language receptive and productive language development; arithmetic computation and problem-solving skills, basic science concepts and reading in their respective mother tongues. The data will be processed using an analysis of covariance with the initial entry level scores serving as the covariates. In addition, multivariate and regression analysis will be conducted to assess the effects of the variables on the outcome measures and to examine the data for possible trends from which to draw our conclusions about the effectiveness of the different educational methodologies. A sample time line is given in Table III.

In addition to the program effectiveness study, we also propose a materials evaluation. This will be conducted more subjectively, largely by Gabjanda and Shuy, using both local teacher reaction measures and technical analysis.

Table I  
SCHEMATIC SUMMARY

Predictive or Independent Variables

Criterion or Dependent Variables

1. Native speakers of mother tongue
2. Literacy rate
3. Officially prescribed status of lang.
4. Use of mother tongue in mass media
5. Availability of materials in mother tongue
6. Physical facilities
7. Availability of trained teachers
8. Average target language competence of teachers
9. Bilingual ed. budget
10. Appropriateness
11. Accessibility of schools
12. Attendance rates
13. Education levels of parents

- Modulating (program) Variables
1. Monolingual program
  2. Bilingual program

- within setting:
1. Promotion exams by subject
  2. Class retention to Primary 6

- across setting:
- Separately for language:
1. Cloze tests
  2. Class retention to Primary 6

In each setting:

1. Select 10 rural school districts (i.e., different mother tongues) with classes offered in mono- or bilingual
2. Select, if possible, 5-10 classes--mono/bilingual--for each of the 10 districts
3. Entries, then, represent averages across pupils, within particular treatment condition in particular school district

ANALYSIS:

Regression analyses with dummy variables to examine interaction between predictor and criteria variables

Multivariate analysis: to examine overall interaction of predictor variables and criteria variables

TABLE II

PHASE II-RESEARCH DESIGN

Provincial Capital

	<u>NORTH</u>	<u>EAST</u>	<u>SOUTH</u>	<u>WEST</u>
25km	Traditional Control	Bilingual (lit)	Traditional Control	Bilingual (oral)
125km	Bilingual (oral)	Traditional Control	Bilingual (lit)	Traditional Control

Covariates:

SES  
aspirations  
IQ

Predictive or Independent Variables

1. # native speakers of mother tongue
2. literacy rate
3. relative ascribed status of language
4. use of mother tongue in mass media
5. availability of materials in mother tongue
6. physical facilities
7. proportion of trained teachers
8. average target language competence of teachers
9. bilingual ed. budget proportions
10. accessibility of schools
11. attendance rates
12. education level of parents.

Criterion or Dependent Variables

1. national language ability:
  - receptive
  - productive
2. mathematics:
  - computation
  - problem-solving
3. science concepts
4. reading ability in:
  - mother tongue
  - national language
5. retention rate/attrit

# Best Available Document

Best Available Document

Develop and prepare tests

XXXXXXXXXX

Ship materials to sites

XXXXXXXXXXXXXX

Conduct pretest testing

XXXXXX

Coding & scoring pretest testing  
Collect school yr. education treat-ment data

XXXXXXXXXXXXXX

Develop and prepare tests for final phase

XXXXXXXXXX

Ship materials to sites

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXX

Conduct final testing

XXXXXX

Coding & scoring final testing

XXXXXXXXXXXXXX

Develop analysis and score report & write draft to Victory Group

XXXXXXXXXX

Use final report submit to ASD

XXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXX

Note: This timeline is based on a normal school year of 120 days, beginning in September. This will have to be modified to accommodate the specific in country school schedules.

## SUGGESTED TIME LINE FOR EVALUATION DESIGN

TABLE III

**COOPERATION AGREEMENT BETWEEN THE MINISTRY OF EDUCATION  
SOUTHERN REGION OF THE DEMOCRATIC REPUBLIC OF SUDAN  
AND THE SUMMER INSTITUTE OF LINGUISTICS.**

A Cooperation Agreement made between the Ministry of Education, Southern Region of the Democratic Republic of the Sudan (hereinafter referred to as the Ministry) and the Summer Institute of Linguistics (hereinafter referred to as the Institute).

Whereas the Ministry and the Institute have expressed their desire to cooperate in a project designed to commence formal Education in the Southern Region through initial literacy in the mother-tongue followed by graded transfer to the major languages.

It is hereby agreed between the parties as follows:-

1. The Institute shall
  - (1) (a) in case of languages where basic linguistic research has already been undertaken train personnel selected by the Ministry to write the necessary teaching materials and test them;  
(b) in case of other languages carry out basic research and train personnel selected by the Ministry to write the necessary teaching materials, test them and provide the Ministry with copies of the basic research materials.
  - (2) prepare transfer materials from each language into the second languages in collaboration with the training personnel selected by the Ministry.
  - (3) provide the following personnel
    - (a) Research personnel:
      - (i) Literacy Consultant,
      - (ii) Linguistic Consultant,
      - (iii) 12 research teams, each team consisting of two linguists.
    - (b) Administrative Staff:
      - (i) Director of the Project;
      - (ii) Director's Secretary,
      - (iii) Personnel Manager,
      - (iv) Business Manager,
      - (v) Administrative Assistant,
      - (vi) Pilot,
      - (vii) Electronics technician.
  - (4) be responsible for the expenses of the overseas personnel and the cost of initial research, including such expenses as travel in the areas concerned.
  - (5) assist the Ministry in seeking funds for the publication of the literacy and transfer materials.
2. The Ministry shall:-
  - (a) be responsible for the expenses of local personnel and the cost of publication of the literacy and transfer material,
  - (b) assist the Institute in obtaining:-
    - (i) visas for its personnel,
    - (ii) permission to import necessary equipment duty-free,
    - (iii) permission to operate aviation and radio services.
3. The Ministry and the Institute accord to each other the right to use at cost the following services, depending on their availability
  - (a) air and land transportation,
  - (b) radio communication network,
  - (c) printing and related services.
4. The conclusion of this agreement does not preclude the Institute from collaborating with other organizations such as the Universities of Khartoum and Juba in carrying out its linguistic research and with other interested agencies in the fields of literacy and Bible translation in which members of the Institute also have an interest.
5. It is recognized by the parties that this is a long-term project likely to take a minimum of ten years to complete. Both parties, have the right to terminate the agreement by giving at least one year's notice to the other party.

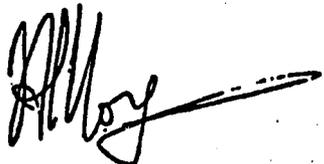
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  - (b) radio communication network,
  - (c) printing and related services.
4. The conclusion of this agreement does not preclude the Institute from collaborating with other organizations such as the Universities of Khartoum and Juba in carrying out its linguistic research and with other interested agencies in the fields of literacy and Bible translation in which members of the Institute also have an interest.
5. It is recognized by the parties that this is a long-term project likely to take a minimum of ten years to complete. Both parties, have the right to terminate the agreement by giving at least one year's notice to the other party.

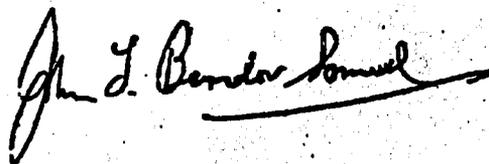
On behalf of  
the Ministry of Education



(signed J.A. Morgan)

Director

On behalf of  
the Summer Institute of Linguistics.



(signed John T. Bendor-Samuel)

Area Director for Africa

**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

Project Title Literacy Training in Local Languages in Southern Sudan

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT
<p><b>Program or Sector Goal:</b> The broader objective to which this project contributes:</p> <p>To provide the trained manpower necessary for Southern Sudan to raise levels of agricultural production, nutrition, health, and participation in civic life for the rural population.</p>	<p><b>Measures of Goal Achievement:</b></p> <ol style="list-style-type: none"> <li>1. The drop out rate in first year primary is reduced to 25% from the current rate of 50% or more.</li> <li>2. Drop out rates in grades 2 through 4 are reduced by 40% from current levels.</li> </ol>	<p>M. of E. statistical reports from schools using new local language materials.</p> <p>Same as above.</p>	<p><b>Assumptio targets:</b></p> <ol style="list-style-type: none"> <li>1. Pres avai to u</li> <li>2. Worl ill in a</li> </ol>

**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

Training in Local Languages in Southern Sudan

OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> <li>1. The drop out rate in first year primary is reduced to 25% from the current rate of 50% or more.</li> <li>2. Drop out rates in grades 2 through 4 are reduced by 40% from current levels.</li> </ol>	<p>M. of E. statistical reports from schools using new local language materials.</p> <p>Same as above.</p>	<p>Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> <li>1. Present teachers will be made available for in-service training to use newly developed materials.</li> <li>2. World Bank funding program of IREC will develop relevant curriculum in agriculture and health.</li> </ol>

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**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

**Project Title** Literacy Training in Local Languages in Southern Sudan

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSU
<p><b>Project Purpose:</b></p> <p>To reorient education in Southern Sudan to the development needs of the rural majority and to bring quality up to standard norms for the lower primary grades.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> <li>1. 85% of children in the trial programs are able to read and understand a simple story in their mother language at the end of the first year of school.</li> <li>2. 70% of the children and adults in trial programs demonstrate a positive change in individual self-image and in behavior patterns toward development.</li> <li>3. 70% of adults who enroll in trial literacy programs achieve functional literacy in 6 months.</li> </ol>	<ol style="list-style-type: none"> <li>1. Test administered by project evaluators.</li> <li>2. Sample survey before and after training.</li> <li>3. Test administered by project evaluators.</li> <li>4. M. of E. statistical reports from schools using new language materials.</li> </ol>	<p>Assumptions fo</p> <ol style="list-style-type: none"> <li>1. Instruction will lead basic skill</li> <li>2. World Bank 30 centers and will us training cl</li> <li>3. Success in will result toward othe</li> <li>4. The M. of l commitment development</li> <li>5. It will be to opt for while incr quantity.</li> </ol>

PROJECT DESIGN SUMMARY  
 LOGICAL FRAMEWORK

Training in Local Languages in Southern Sudan

OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> <li>85% of children in the trial programs are able to read and understand a simple story in their mother language at the end of the first year of school.</li> <li>70% of the children and adults in trial programs demonstrate a positive change in individual self-image and in behavior patterns toward development.</li> <li>70% of adults who enroll in trial literacy programs achieve functional literacy in 6 months.</li> </ol>	<ol style="list-style-type: none"> <li>Test administered by project evaluators.</li> <li>Sample survey before and after training.</li> <li>Test administered by project evaluators.</li> <li>M. of E. statistical reports from schools using new language materials.</li> </ol>	<p>Assumptions for achieving purpose:</p> <ol style="list-style-type: none"> <li>Instruction in the local language will lead to faster learning of basic skills.</li> <li>World Bank IREC program will develop 30 centers in the South as planned and will use local languages for training children and adults.</li> <li>Success in acquiring literacy skills will result in positive attitudes toward other development activities.</li> <li>The M. of E. will maintain its commitment to reorient education to development needs.</li> <li>It will be possible for the M. of E. to opt for improved quality of education while sacrificing some increase in quantity.</li> </ol>

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**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

**Project Title** Literacy Training in Local Languages in Southern Sudan

BRIEF SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><b>Outputs:</b></p> <p>To create a department of local languages in the Ministry of Education capable of producing basic educational materials in local languages.</p> <p>To produce pre-primers and primers and post-primer materials in 16 local languages for use in the educational program of Southern Sudan.</p> <p>Primary students who will have been taught to read their mother language.</p> <p>Vocabulary tests compiled and grammar analysis done for local languages.</p>	<p><b>Magnitude of Outputs:</b></p> <ol style="list-style-type: none"> <li>1. Demonstrated capability for producing local language materials. Trained Sudanese functioning in the following positions: Department head 8 language development offices 16 writers of local language materials</li> <li>2. Published copies of pre-primers, primers, and post-primers in 16 languages.</li> <li>3. 35,000 by early 1982</li> <li>4. By 1981, 16 vocabulary lists and 11 grammar analyses.</li> </ol>	<ol style="list-style-type: none"> <li>1. Examples of materials produced.</li> <li>2. Direct observation and evaluation of skills.</li> <li>3. Visual inspection of Ministry of Education archives.</li> <li>4. Reports to M. of E.</li> </ol>	<p><b>Assumptions for achievement:</b></p> <ol style="list-style-type: none"> <li>1. Facilities and equipment for department will be provided by World Bank and GO.</li> <li>2. M. of Ed. will have sufficient funds for operating costs.</li> <li>3. Government's Nile project will not delay primer materials.</li> <li>4. Health problems in the area will not hinder work schedule.</li> </ol>

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PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Local Languages in Southern Sudan

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EVIDENTIALLY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Availability of Outputs:</p> <p>Demonstrated capability for producing local language materials.</p> <p>Trained Sudanese functioning in the following positions:</p> <ul style="list-style-type: none"> <li>Department head</li> <li>Language development offices</li> <li>Writers of local language materials</li> </ul> <p>Distributed copies of pre-primers, primers, post-primers in 16 languages.</p> <p>Completed by early 1982</p> <p>181, 16 vocabulary lists and 11 grammar books.</p>	<ol style="list-style-type: none"> <li>1. Examples of materials produced.</li> <li>2. Direct observation and evaluation of skills.</li> <li>3. Visual inspection of Ministry of Education archives.</li> <li>4. Reports to M. of E.</li> </ol>	<p>Assumptions for achieving outputs:</p> <ol style="list-style-type: none"> <li>1. Facilities and equipment needed by the department will be available through World Bank and GOS funding.</li> <li>2. M. of Ed. will have adequate budget for operating costs.</li> <li>3. Government's Nile press can publish primer materials on schedule.</li> <li>4. Health problems in villages do not hinder work scheduled.</li> </ol>

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**LOGICAL FRAMEWORK**

Project Title & Number: Literacy Training in Local Languages in Southern Sudan

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANCE
<p><b>Inputs:</b></p> <p><u>GOS</u> counterparts and writers for local language materials budget</p> <p><u>SIL</u> literacy and linguistics personnel support staff</p> <p><u>AID</u> participant training facilities at Maridi. Funding for transportation and publishing books.</p> <p><u>IBRD</u> Funding for Curic Dev. Center facilities at Maridi.</p> <p><u>UNESCO</u> Curic dev. experts in agric. health and women's programs.</p> <p><u>DDM</u> Curic dev. and teacher training experts.</p> <p><u>UNICEF</u> Funding for publishing books.</p>	<p>Implementation Target (Type and Quantity)</p> <p>See summary of project financing and implementation schedule.</p>	<p>SIL reports GOS records</p>	<p>Assumptions for project</p> <ol style="list-style-type: none"> <li>1. Qualified personnel available</li> <li>2. Six year project duration</li> <li>3. UNESCO as scheduled</li> </ol>

**LOGICAL FRAMEWORK**

Training in Local Languages in Southern Sudan.

OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Implementation Target (Type and Quantity)</p> <p>local See summary of project financing and implementation schedule.</p> <p>sonnel</p> <p>es</p> <p>d</p> <p>er</p> <p>c.</p> <p>ng</p> <p>ks.</p>	<p>SIL reports</p> <p>GOS records</p>	<p>Assumptions for providing inputs:</p> <ol style="list-style-type: none"> <li>1. Qualified counterparts and writers available.</li> <li>2. Six year plan budget not significantly reduced.</li> <li>3. UNESCO and ODM experts available as scheduled.</li> </ol>