

EXTENT OF LISTENERSHIP TO SOUTHERN SUDAN INTERACTIVE RADIO INSTRUCTION PROGRAMS

RADIO LISTENERSHIP SURVEY REPORT, MARCH 2011

Submitted by:

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Acronyms

AIDS	Acquired Immuno-deficiency Syndrome
BBC	British Broadcasting Corporation
CA	Classic Arabic
CPA	Comprehensive Peace Agreement
DDR	Disarmament, De-mobilization and Re-integration
EDC	Education Development Centre
HIV	Human Immuno-deficiency Virus
LV	Learning Village
Rabea	Radio-based Education for All
SRS	Sudanese Radio Services
SSIRI	Southern Sudan Interactive Radio Instruction

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	v
1. INTRODUCTION	1
1.1. Background to Southern Sudan Interactive Radio Instruction Program.....	1
1.2. SSIRI Radio Listenership Survey Objectives.....	2
2. METHODOLOGY	2
2.1. Survey Design	2
2.2. Survey Areas.....	2
2.3. Survey Population.....	3
2.4. Sample Size determination.....	3
2.5. Sample Selection	3
2.6. Data Collection Methods.....	4
2.7. Data Management and Analysis.....	5
3. PROFILE OF SURVEYED RESPONDENTS AND HOUSEHOLDS	6
3.1. Profile of Survey Respondents	6
3.2. Basic Characteristics of Surveyed Households.....	7
3.3. Radio Ownership among Surveyed Households.....	8
3.4. Language Spoken and Level of Proficiency.....	9
4. LEVEL OF AWARENESS OF SSIRI RADIO PROGRAMS.....	10
4.1. Proportion which has heard of SSIRI programs.....	10
4.2. Differentials in awareness of SSIRI programs	11
4.3. Subject areas heard of under SSIRI programs	13
4.4. Ways community people perceive SSIRI programs	13
4.5. Listenership habits related to SSIRI radio programs.....	14
5. CONSISTENT LISTENERS TO SSIRI PROGRAMS	15
5.1. Level of listenership and geographical distribution	15
5.2. Profile of consistent listeners.....	17
5.3. Estimate of the number of consistent listeners	20
6. SUBJECT AREAS LISTENED TO	21
7. LISTENING PREFERENCES OF SSIRI PROGRAM LISTENERS.....	23
8. AWARENESS OF AND LISTENERSHIP TO RADIO STATIONS IN SOUTHERN SUDAN.....	24
9. RADIO STATIONS ON WHICH SSIRI PROGRAMS HAVE BEEN HEARD	28
10. RADIO STATIONS LISTENED TO AND LISTENING PATTERNS.....	29
11. EFFECTIVENESS OF SSIRI PROGRAMS	32
11.1. Message recall and take-out.....	32
11.2. Knowledge of SSIRI Radio Programs Characters	32
11.3. Reported effectiveness of SSIRI Programs.....	33
12. VIEWS HELD BY LISTENERS REGARDING SSIRI PROGRAM	35
12.1. Perceptions about Learning Village	36
12.2. Perceptions about <i>Rabea</i>	37
13. REASONS FOR THE EXISTENCE OF NON-LISTENERS	37
14. RESPONDENTS' SUGGESTIONS.....	39
15. CONCLUSIONS AND RECOMMENDATIONS	40

LIST OF TABLES

Table 1: Distribution of the sample in the five states visited.....	3
Table 2: Basic socio-demographics of the listenership survey respondents	6
Table 3: Basic characteristics of members in surveyed households	7
Table 4: Radio ownership and other measures of welfare for sampled households	8
Table 5: Commonly spoken languages in the communities visited	9
Table 6: Level of proficiency in speaking and hearing the various languages	10
Table 7: Proportion of people who understand and speak Juba Arabic and English by state	10
Table 8: Awareness of SSIRI radio programs by County visited	11
Table 9: Awareness of SSIRI radio programs by selected socio-demographic characteristics	12
Table 10: Proportion of respondents who spontaneously knew programs topics	13
Table 11: What would come to mind the first time heard of Learning Village and <i>Rabea</i>	14
Table 12: People who had listened to SSIRI programs by age and access to radio	14
Table 13: Proportion of people who had listened to programs for more than 30 minutes	15
Table 14: Profile of people who consistently listen to SSIRI programs	18
Table 15: Results of Logistic Regression analysis for consistent listening to SSIRI programs.....	20
Table 16: Estimated number of people who consistently listen to all SSIRI programs in the 14 counties.....	20
Table 17: Subject areas people have listened to and still listen to	21
Table 18: Reported day of the week SSIRI programs are broadcast	22
Table 19: Reported practices and preferences of SSIRI programs listeners	23
Table 20: Radio stations and proportion of sample that is aware they exist.....	25
Table 21: Radio stations in Southern Sudan and proportion of sample that listens to them.....	26
Table 22: Radio stations on which people report listening to educational programs.....	27
Table 23: Radio stations on which people have heard about SSIRI programs	28
Table 24: Radio Stations on which respondents listen to hear SSIRI Programs.....	29
Table 25: Radio stations in Southern Sudan listened to for the various SSIRI lessons	30
Table 26: SSIRI lessons listened to and reported frequency of listening.....	31
Table 27: Proportion of listeners that recalled being taught the various SSIRI lessons	32
Table 28: Knowledge of SSIRI radio characters and assessment of their performance	33
Table 29: Listeners rating of the Performance of SSIRI Programs in delivering expectations	34
Table 30: Reported benefits obtained by SSIRI programs listeners	35
Table 31: Views held by SSIRI program listeners about the various lessons.....	36
Table 32: Perceptions held about Learning Village lessons	36
Table 33: Perceptions held about <i>Rabea</i> and Learning Village lessons	37
Table 35: Preferred days of the week and time to broadcast SSIRI lessons of non-listeners	39
Table 36: Suggestions provide by respondents to improve Programs	40

LIST OF FIGURES

Figure 1: Percentage of respondents who had heard of SSIRI programs (n=2,191).....	11
Figure 2: Level of listenership to SSIRI programs	16
Figure 3: Percentage of respondents who consistently listen to SSIRI programs by county	16
Figure 4: Percentage of respondents who consistently listen to SSIRI programs by locality (urban/rural)..	17
Figure 5: Percentage of people giving various reasons why some people do not listen to SSIRI programs	39

EXECUTIVE SUMMARY

Introduction

This radio listenership survey commissioned by the Education Development Center, Inc. on behalf of the Southern Sudan Interactive Radio Instruction Program was undertaken in November 2010. The main objective of the survey was to estimate, through projection, the current proportion of the adult population (15+ years) in the SSIRI Program areas who consistently listen to IRI programs. The survey covered 14 counties in five states of South Sudan with a random sample of 2,191 respondents that was proportionately distributed across the counties based on population size of each county.

Key Findings

Awareness of SSIRI radio programs is quite high: About 73% of the respondents had heard about the Learning Village or *Rabea* or both programs. Most (62.2%) had heard about the Learning Village, and 17.3% had heard about *Rabea*. Twelve percent (12%) of the respondents had never heard about any SSIRI programs. Almost similar proportions of respondents in rural (71.9%) and urban areas (73.9%) are aware of the programs. Awareness of the Learning Village (61.7% for urban and 62.7% for rural respondents) was higher than that of *Rabea* (18% among urban and 16.6% for rural respondents). The counties of Kajo-Keji and Lainya had the highest level of awareness (over 90%). Nzara, Magwi, and Torit County (over 82%) had relatively high awareness levels. Jur River and Mundri West County had the lowest levels of awareness of SSIRI programs.

Evidence of having listened to SSIRI Programs: The proportion of individuals who had listened to SSIRI programs was quite high (72%). In this case, 61% had listened to the Learning Village programs, and about 17% had listened to *Rabea* programs. A notable proportion (26%) had heard about the programs but not listened to them. About 88% had reportedly listened to a Learning Village lesson for more than 30 minutes, while 59.1% had listened to a *Rabea* for similar duration.

Continuous listeners to SSIRI Programs are many: Slightly above 66% of those who had listened were still listening to SSIRI programs at the time of the survey. Among them, 52% reported that they were active listeners to the Learning Village programs, while 17.3% were active listeners to the *Rabea* programs. The proportion of respondents who reportedly consistently¹ listened to SSIRI programs was lower. About 39% of all respondents who had listened to SSIRI programs were reportedly consistently listening to the programs, with the bigger proportion (32%) listening to Learning Village programs. However, within each County visited, relatively big proportions of consistent listeners were found, with the exception of Maridi, Mundri West, Malakal and Jur River. Those that had a high proportion of consistent listeners include: Kajo-Keji (91.9%), Lainya (89.8%), Magwi (84.2%), Torit (83.8%), Nzara (81.2%) and Juba (72.8%).

¹In this survey, consistent listeners of SSIRI radio programs were defined as people who listened to the entire lessons broadcast from start to the end at least once a week.

Consistent listeners of SSIRI programs are a mixed group: The groups of consistent listeners includes individuals who are educated and those with no education at all, young and old, married and non-married, employed and unemployed. People who consistently listen to SSIRI programs are evenly distributed by age and gender, although more males (40.6%) listened to the programs than females (32.3%).

Determinants of consistent listening are varied: Persons in households with a radio were three times more likely to consistently listen to SSIRI programs than those without a radio in the household. Likewise, urban residents, the married, people who understand English and Juba Arabic were more likely to consistently listen to SSIRI programs. People who had never heard of SSIRI programs were mostly those who did not have access to a radio (52.2%) and those who had just migrated to those states. With regard to day and time of the day preferred for broadcast of SSIRI programs by non-listeners: 35.2% preferred Sunday while others preferred Monday (16.7%), Friday (16.4%) and Saturday (14.5%).

Over 400,000 individuals consistently listen to SSIRI Programs: Drawing from the sample and population characteristics, it is estimated that approximately 445,936 individuals or 38.8% (*standard error=0.0104*) of the people in the SSIRI program areas consistently listen to its radio programs. Among them, approximately 31.6% (*standard error=0.009*) or about 363,185 individuals consistently listen to the Learning Village programs, while 8.8% (*standard error=0.006*) or about 101,140 people consistently listen to *Rabea* programs.

Radio stations known to broadcast SSIRI Programs: Radio Miraya was the most frequently mentioned source of SSIRI programs. Over 81% and 95% of respondents, who knew about the Learning Village and *Rabea* programs respectively, had heard them on Radio Miraya. And one in every three respondents (33.3%) who knew about the Learning Village programs reported that they had also heard similar programs on Spirit FM. Several other radio stations were also mentioned as sources. Over three quarters (75-85%) of listeners for the lessons under Learning Village, and over 60% for the *Rabea* subject lessons, reported that they always have clear radio signals. Less than 5% reported that they had experienced poor radio signals at the time lessons were broadcast.

In order to improve effectiveness of the programs and reach out to more people in Southern Sudan, it was suggested that:

- The target population is provided with radio sets to enable them listen to the programs. This is consistent with the finding that majority (96%) of people who consistently listen to SSIRI programs are from households that had access to a functional radio.
- Mobilize and sensitize the general community about the relevance of the SSIRI programs. Partly, the reason why there are many people who have heard about SSIRI programs but have not listened to them is because they have not been sensitized on their importance. Stimulating more listenership calls for triggered demand for the lessons.
- Work together with existing radio stations to expand the coverage for the programs. Efforts should be made to boost the signal reach for the existing radio stations that broadcast SSIRI programs. Findings revealed that majority of radio stations except Radio Miraya are limited to mostly and in some instances to only the counties where they are located.

1. INTRODUCTION

1.1. Background to Southern Sudan Interactive Radio Instruction Program

Interactive Radio Instruction (IRI) is a learning system that has become an option for improving education quality in primary school classrooms in developing countries around the world. IRI works to integrate the elements of teaching and learning by building on resources that are already available in the context of the existing education structures. IRI programs build upon resources such as the local curriculum, local languages, songs, and games. Studies on Interactive Radio Instruction demonstrate various benefits of IRI. Notably, because IRI can be broadcast to large audiences across a country, the cost per learner is often low in comparison with other options for improving the quality of instruction. In addition, IRI is a proven effective strategy for reaching children and youths who do not have access to formal schooling, and a significant number of ‘secondary’ audiences also benefit from the radio lessons. IRI programs such as the Southern Sudan Interactive Radio Instruction (SSIRI) have also emerged as an effective means of supporting teacher development, in addition to the original focus on the learner.

Started in 2004, SSIRI is a collaborative initiative implemented by EDC through the Ministry of Education in Southern Sudan with financial assistance from the United States Agency for International Development (USAID). The goal of SSIRI is to support efforts to improve access and quality of education in Southern Sudan and the three areas. The intended beneficiaries of SSIRI are primary school learners in Grade 1-4, primary school teachers, and individuals- youths and adults who dropped out of schools and have limited access to formal education. Three programs have been developed to meet the education needs of each of the groups: Learning Village, Radio-based Education for All (*Rabea*) and Professional Studies for Teachers (PST). *Rabea* is a series of interactive radio-based programs intended to teach English, improve literacy and numeracy skills of adult learners and youths who have dropped out of school.

SSIRI together with the Ministry of Education produces and disseminates three *Rabea* programs: *Rabea* for Beginners (or *Rabea B*), *Rabea* Intermediate, and *Rabea* Advanced. *Rabea* also includes Civic Education on issues pertinent to the people in Southern Sudan such as the Comprehensive Peace Agreement (CPA), Disarmament, Demobilization, Re-integration (or DDR), and HIV/AIDS. *Rabea* is based on the syllabus of the Adult Basic Education program of the Ministry of Education. *Rabea* lessons are transmitted via live FM broadcasts or pre-recorded (onto CDs or in mp3 format) and are delivered with accompanying audio players (Digital Devices) to groups of out-of-school learners both youth and adults.

Rabea, like any the other IRI programs is delivered in a participatory learning arrangement where groups of learners are led by a facilitator who is guided by a Facilitator’s Guide and a radio teacher. *Rabea B* also suggests civic education topics for the facilitator and learners to discuss after the broadcast. *Rabea B1* (60 lessons) targets Accelerated Learning Programs (ALP) of the Directorate of Alternative Education System level 1 learners, and *Rabea B2* (60 lessons) targets ALP level 2 learners.

1.2 SSIRI Radio Listenership Survey Objectives

The purpose of this study was to accurately estimate the proportion of the adult population (15+ years) in Southern Sudan who consistently listen to SSIRI programs. Specifically, the survey seeks to:

- a) Estimate the number of people who consistently listen to SSIRI programs;
- b) Develop a profile of individuals who listen to the SSIRI programs;
- c) Assess the level of awareness of the SSIRI programs in Southern Sudan;
- d) Assess people's perceptions and views on the SSIRI programs;
- e) Assess the clarity of the signals of the FM radio stations broadcasting SSIRI programs; and
- f) Provide feedback for improving the effectiveness of SSIRI programs

2. METHODOLOGY

2.1 Survey Design

A cross-sectional survey design was adopted in executing this radio listenership survey. A three-stage cluster sampling approach was used to draw the sample. The study used quantitative data collection and analysis techniques to answer research questions, and more specifically to estimate the number of adults (15+ years) who consistently listen to SSIRI programs, their views and perceptions on SSIRI programs. Through the same approach, detailed profiles of individuals who listen to the programs as well as their suggestions for improving effectiveness of the SSIRI programs were obtained.

2.2 Survey Areas

The survey was conducted in fourteen counties located in five states in Southern Sudan where the Interactive Radio Instruction intervention is implemented. The counties include:

- Central Equatoria state: **Juba, Kajo-Keji, Yei and Lainya counties,**
- Eastern Equatoria state: **Morobo, Torit and Magwi counties,**
- Western Equatoria state: **Yambio, Nzara, Maridi and Mundri counties,**
- Western Bahr el Ghazal state: **Jur River and Wau counties**
- Upper Nile state: **Malakal county.**

The fourteen counties were each stratified along two major variables i.e. the rural and urban divide.

2.3 Survey Population

The study population comprised all people (male and female) aged 15+ years, residing in rural and urban areas in the 14 counties of Southern Sudan where SSIRI has rolled out its activities. The total population aged at least 15 years in the 14 counties was 1,149,319 (table 2).

2.4 Sample Size determination

Kish and Leslie's sampling formula was used to determine the sample size for this study (Appendix 1). The optimum sample size for survey obtained was 2,200. Sub-samples for the counties comprising the intervention areas were derived using the probability proportionate to size (PPS) approach (Appendix 1). Table 1 below indicates the sub-samples obtained from each county.

Table 1: Distribution of the sample in the five states visited

State	County	Population (Aged 15+ years)	Number of respondents	Percent
Central Equatoria	Yei	114,054	216	9.9
	Morobo	55,648	107	4.9
	Kajo-Keji	102,977	196	8.9
	Lainya	51,162	98	4.5
	Juba	234,737	441	20.1
Eastern Equatoria	Magwi	95,180	177	8.1
	Torit	56,463	104	4.7
Western Equatoria	Yambio	92,459	163	7.4
	Nzara	44,490	69	3.1
	Maridi	48,997	97	4.4
	Mundri West	19,604	84	3.8
Upper Nile	Malakal	72,223	129	5.9
Western Bahr el-Ghazal	Wau	88,820	171	7.8
	Jur River	72,505	139	6.3
Total		1,149,319	2191	100.0

2.5 Sample Selection

Multi-stage sampling procedures were used to select households from which survey respondents were eventually drawn. The procedures included stratification, cluster and simple random sampling techniques. The survey covered all the 14 counties in which the intervention had been rolled out. In order to obtain a representative sample, each county was stratified into urban and rural areas due to the heterogeneous nature of their population on various variables. The state towns, Payam hosting county headquarters and other towns in each county constituted the urban areas. The rest of the Payams in the county were considered to be rural for purposes of this survey. Therefore, two separate lists of Payams for rural and urban areas were compiled to form sampling frames.

In each selected County, two (2) Payams (one rural and another urban area) were randomly selected using a lottery method. This led to a total of 28 Payams included in the survey in the 14 counties located in five States.

The household was the primary sampling unit (PSU). Therefore, villages were randomly selected from each of the 28 Payams using the sampling frame of all villages in each Payam compiled with the assistance of the Payam administration during data collection. The number of villages selected depended on the sub-sample for the county since every village was supposed to provide 25 respondents. Finally, a total of 25 households were randomly selected from each village using a systematic random sampling technique. Interviewers were instructed to follow one household selection pattern: starting from the Sultan's house within each village with the interviewers moving into different directions and to select every third household until the required number was obtained. In the selected households, a screening exercise to determine eligible household members preceded the selection of respondents. In each household, the enumerators made a list of all eligible household members including those not presently at home but were to return to the house that evening of the survey.

2.6 Data Collection Methods

Quantitative data were collected using a structured questionnaire. The consultant in consultation with EDC staff designed the questionnaire, which included both closed and open-ended questions. The questionnaires were pretested in a selected community in Juba County outside the study area prior to their finalization. The questions in the questionnaire (attached) covered the following topics:

- Background characteristics of the respondents
- General Awareness about Radio Stations in Southern Sudan
- Awareness and listening to SSIRI Radio Programs
- Knowledge of SSIRI Radio Programs Characters
- Message Recall and take-out
- Effectiveness of SSIRI Radio Programs in Education
- Perceptions and views about SSIRI programs and
- Suggestions to improve programming for SSIRI programs

A team of Research Assistants fluent in the local languages of the various communities in Southern Sudan was identified and trained to conduct the face-to-face interviews. Eight study teams were formed, and each team allocated a supervisor. In total, 56 interviewers of Southern Sudanese origin conducted the survey. The Supervisors participated in the main training held in Juba for 4 days, 3rd- 6th November 2010. The training included lectures, practical demonstrations, and role-play in small groups as well as one day of field practice and pretest of questionnaire.

The pre-test was used to gather information on: ease or difficulty of statements, comprehension, and confidence in response, level of discomfort and social desirability. About 32 questionnaires were completed during the pre-test. On the fourth day, the questionnaire was adjusted based on the feedback from the pre-test.

Each supervisor working together with the EDC state staff recruited and trained interviewers in the survey areas. The number of interviewers was determined basing on the number of questionnaires to be collected by the team. Eight data collection teams consisting of a supervisor and 4 interviewers conducted fieldwork starting on 8th November 2010. Fieldwork was completed in the first week of 22nd November 2010. Fieldwork supervision was coordinated by SEDC: four coordinators visited teams to offer them technical guidance on sampling and interviewing issues. During data collection, the interviewers together with the Payam administration randomly selected Bomas included in the study.

2.7 Data Management and Analysis

All questionnaires were manually edited in the field to ensure that all inaccuracies and incompleteness were addressed immediately. The responses in the filled questionnaires were further examined and edited in office to ensure consistency and accuracy of the data. After developing a coding frame, responses to open-ended questions were assigned numeric codes.

Data entry modules were developed using a statistical package known as EPI-INFO. The modules included all the necessary checks to minimize any possible errors during data entry point and eliminate any other errors that could have remained during data editing. A double data entry system was employed to ensure a higher degree of accuracy in the data. After completing data entry, frequencies were generated and examined for any outliers and other suspicious results in different variables. All data were exported to Statistical Package for the Social Scientist (SPSS 19) in which data analysis was done. In SPSS, all missing values in the data were system-defined, represented as a dot (.). The missing values mainly included 'no answer', 'not applicable' and in some cases 'don't know' responses to some questions.

Statistical analysis was systematically performed, beginning with univariate analysis for describing the sample, followed by bivariate analysis to allow for comparison of two variables to determine their significance relationship, and finally, multivariate analysis to control for confounding effects among variables. Frequencies were generated for all categorical variables and descriptive statistics including means, median and standard deviation for continuous and discrete variables. For bivariate analysis, chi-square statistic was mainly employed to determine relationship and/or associations between two categorical variables. Since the dependent variable of interest (whether or not consistently listening to SSIRI Radio programs) was treated as a dichotomous (yes or no), logistic regression was employed to assess variables net effect to consistent listening after controlling for the effects of other variables. The covariates in the logistic regression analysis included categorical and continuous variables.

The number of people (15 years and above) who consistently listen to radio program in the 14 counties was determined by multiplying the adult population and the proportion (p) that consistently listen. The population proportion (P) was estimated using the proportion (p) of adults reported as consistently listening to radio programs in the study sample represented by the formula below.

$$p = \frac{x}{n}$$

$$\text{With the error (e) = } \sqrt{\frac{pq}{n}}$$

Where p = sample proportion for consistent listeners
q = 1 - p
x = number of respondents consistently listening to radio programmes
n = total survey sample

The estimation of p is based on the fact that the normal can be used to approximate the binomial distribution when np and nq are both at least 5. Thus, using the estimated sample proportion, we obtained the estimate for number of people who consistently listen to the radio program by multiplying the estimate (p) and the total population in the 14 counties.

3 PROFILE OF SURVEYED RESPONDENTS AND HOUSEHOLDS

3.1 Profile of Survey Respondents

Table 2 provides a summary of the socio-demographic characteristics of the respondents. Slightly more than one half (52.5%) of the respondents were at least 30 years. (48%) of the respondents were Catholics, closely followed by Protestants (30.3%). The other religious denominations constituted small proportions of the sample. The survey findings also show that about one third (30.3%) were currently in school at the time of the visit, the bigger proportion (69.7%) were out of school. 52.5% of the respondents were not involved in paid labor.

Those employed were engaged in a wide range of activities ranging from farming (16.7%), trade (14.9), and a good proportion was working for government either as teachers or civil servants (26.8%). This survey drew most of its respondents from urban areas (about 53%) including Juba City and State towns in the surveyed areas. This was primarily due to the fact that the rollout of the SSIRI project has been more focused on the state towns. And since the study was intended to estimate the number of people who consistently listen to all SSIRI programs in Southern Sudan, the selection of survey respondents were mostly limited to project implementation areas.

Table 2: Basic socio-demographics of the listenership survey respondents

Characteristic (N= 2,194)	Number (n)	Percent (%)
Age in years		
15-19	264	13.1
20-29	692	34.3
30-39	561	27.8
40 and above	498	24.7
Gender/sex of respondents		
Male	1719	78.5
Female	471	21.5
Religious affiliation		
Christian –Catholic	1040	48.0
Christian –Protestant	656	30.3
Christian –Coptic	50	2.3
Christian –Pentecostal	137	6.3
Muslim	102	4.7
Non-religious	71	3.3
Others	111	5.1
Schooling Status		
Currently in school	604	30.3
Out of school	1388	69.7
Employment status		
Employed or carries out paid labor	954	47.5
Unemployed	1056	52.5
Main occupation or source of income		
Farmer	174	16.7
Trader/sales/business/transport	155	14.9
Production (e.g. tailor)	44	4.2
Service business (e.g. hotel, hairdresser, mechanic)	92	8.8
Teacher	132	12.7
Health worker	84	8.1
Manager/administrator	85	8.2
Civil servant	195	18.7
Others	80	7.7

3.2 Basic Characteristics of Surveyed Households

In the 2,191 households surveyed, there were a total of 10,840 people. This denotes an average family size of 5 people per household. The average size of households in urban areas (5.1) is slightly larger than that of rural areas (4.9). Majority of the household members were between 15 and 34 years old (52.7%). Children of school-going age (5-14 years old) constituted almost a quarter (21.1%) of the total members in the households surveyed (Table 3).

Table 3: Basic characteristics of members in surveyed households

Average household size	5.0	
Urban	5.1	
Rural	4.9	
Characteristic	Number	Percent
Gender	(n)	(%)
Male	6045	55.9
Female	4769	44.1
Age in complete years		
1-4	792	7.3
5-9	1083	10.0
10-14	1202	11.1
15-19	1802	16.6
20-24	1580	14.6
25-29	1394	12.8
30-34	947	8.7
35-39	711	6.5
40-44	530	4.9
45-49	326	3.0
50+	492	4.5
Marital status		
Never married	6169	57.1
Married	4225	39.1
Separated/divorced	218	2.0
Widow	188	1.7
Relationship to head		
Head	1902	17.5
Spouse/partner	1749	16.1
Son/daughter	4904	45.2
Brother/sister	1741	16.0
Other	561	5.2
Highest level of education		
No education	2747	25.4
Primary 1-4	2122	19.6
Primary 5-8	1960	18.1
Junior	729	6.7
Secondary 1-2	1113	10.3
Secondary 3-4	1465	13.6
University/Tertiary	511	4.7
Vocational	162	1.5
Schooling background		
Arabic only	3296	35.2
English only	3655	39.0
Both English and Arabic	2412	25.8
Listen to Radio		
Yes	8287	78.4
No	2285	21.6
<i>Proportion of people who listen to Radios by place of reside</i>		
Urban	4509	54.4
Rural	3778	45.6

Further, it was found that among household members who had been to school, little differences existed in terms of their schooling background, almost equal proportions had attended either Arabic or English schools. Over 36% of them had attained a highest level of education of post primary as indicated in the Table 3. With regard to relationships shared by household members, it was found that majority of homes were nucleus in nature, mostly spouses and their children with few members from the extended family. Access to radio in the household was reportedly high, over three quarters of the household members (78.4%) were reported to be listening to radio. Comparison of radio listeners in the households by rural and urban revealed no differences of statistical significance, although slightly more (54.4%) of listeners reside in urban areas.

3.3 Radio Ownership among Surveyed Households

Survey findings revealed that 80.9% of all sampled households own a radio, although not all households had functional radios. About a tenth (11%) of households that reported owning a radio, had dysfunctional sets at the time of visit, the remaining 89% had fully functional radios. Further, not everybody has access to a radio even in households where a radio exists: survey findings revealed that in 17.2% of households, only the household heads have access to the radio, in 28% it is only adults who are entitled to access the radio. This means that we find non-restricted access to a radio in only half of the households with a radio (Table 4).

Table 4: Radio ownership and other measures of welfare for sampled households

Characteristic	Number	Percent (%)
<i>Items owned in household</i>		
A radio	1693	80.9
A clock	923	49.6
A mattress	1923	91.4
A television	553	29.7
A refrigerator	216	12.1
A cooker	212	11.9
Bicycle	941	48.9
Motorcycle	589	32.2
Motor vehicle	280	15.9
<i>Functionality of Radio</i>		
Owns functional radio	1474	89.0
Radio is dysfunctional	183	11.0
<i>Persons with access to Radio in Household</i>		
Everyone	832	54.8
Only household head	261	17.2
Adults only	425	28.0
<i>Persons without Radios but have access to radio</i>		
Yes, have access to radio	585	72.2
No access to radio	225	27.8
<i>Ownership of radio that persons, without radio, access</i>		
Neighbor	311	53.7
Workmates	29	5.0
Community radio	23	1.0
Other	157	7.2
<i>Main type of fuel used to cook in the household</i>		
Charcoal	1084	50.2
Firewood	896	41.5
Electricity	67	3.1
Liquid petroleum gas (Gas)	51	2.4
Kerosene / Paraffin	23	1.1
Straw / shrubs / grass	14	0.6
Dung	9	0.4
Biogas	8	0.4
<i>Ownership of the following livestock and poultry</i>		
Chicken	1170	57.4
Goat	940	47.8
Cow	385	20.6
Sheep	373	20.0
Ducks	321	17.6
Donkeys	64	3.6
Camels	22	1.2

Further, findings revealed that although about 20% of sampled households did not have a radio of their own, they still had access to a radio. Among households without a radio, 72.2% reported to have access to a radio either from the neighborhood (about 54%), workplace (5.0%) or public place (1%).

3.4 Language Spoken and Level of Proficiency

Juba Arabic is the commonly spoken language in the SSIRI project implementation areas. Nearly half the sample (46.2%) reported that local Arabic is the most commonly used language in their communities (Table 5). Juba Arabic is reportedly spoken by more than three-quarters (78.5%) of all respondents covered in this survey. English follows this at 60.8% and Classic Arabic by about one quarter of the sample (21.9%).

Table 5: Commonly spoken languages in the communities visited

Characteristic		Number	Percent (%)
Language used in Village	Local Arabic	967	46.2
	Bari	363	17.4
	Azande	164	7.8
	Baka	30	1.4
	Acholi	96	4.6
	Shiluk	42	2.0
	Other	429	20.5
Languages Spoken	English	1335	60.8
	Juba Arabic	1723	78.5
	Classic Arabic	480	21.9
	Swahili	109	5.0
	Dinka	404	18.4
	Nuer	78	3.6
	Bari	273	12.4
	Other	1042	47.5
Understanding	English	1343	61.2
	Juba Arabic	1837	83.7
	Classic Arabic	520	23.7
	Swahili	102	4.6
	Dinka	424	19.3
	Nuer	93	4.2
Most understood language	English	305	14.2
	Juba Arabic	508	23.6
	Classic Arabic	135	6.3
	Swahili	18	0.8
	Dinka	304	14.1
	Nuer	51	2.4

Juba Arabic is also the most understood language among the various languages spoken and/or used in disseminating information in Southern Sudan. Over 80% of the respondents acknowledged that they understand Juba Arabic when used in a communiqué. Almost 3 out of 5 (61.2%) reported understanding English. Higher levels of proficiency in speaking and hearing, are especially reported for the first two i.e. Juba Arabic and English. As can be seen in Table 6, less than a quarter of the sample report to be poor in speaking Juba Arabic: 46.3% reported to be good at speaking Juba Arabic while another 33.8% speak it excellently.

Equally sizable proportions of the respondents reported high levels of proficiency in hearing Juba Arabic: 34% reported that they hear it excellently, 46.6% rate themselves to be good while only 12.4% and 7% reported being fair and poor at hearing Juba Arabic respectively.

Table 6: Level of proficiency in speaking and hearing the various languages

Characteristic		Excellent	Good	Fair	Poor
		(%)	(%)	(%)	(%)
Speaking	English	20.7	36.8	15.5	26.9
	Juba Arabic	33.8	46.3	12.2	7.7
	Classic Arabic	14.5	9.6	8.3	67.5
	Swahili	2.5	2.4	2.7	92.3
	Dinka	20.9	2.2	1.0	75.9
	Nuer	5.1	0.9	0.7	93.2
Hearing	English	21.2	37.1	15.2	26.5
	Juba Arabic	34.0	46.6	12.4	7.0
	Classic Arabic	15.0	8.6	8.8	67.6
	Swahili	1.9	2.7	2.6	92.8
	Dinka	22.0	1.9	0.9	75.2
	Nuer	5.1	1.0	0.6	93.2

Comparison of data by state with regard to the two most commonly used languages (Juba Arabic and English), revealed no statistically significant differences between the proportions of those who speak and understand each language. As can be seen in Table 7, sizable proportions (above 65%) speak and understand Juba Arabic. Similarly, almost equal proportions speak and understand English.

Table 7: Proportion of people who understand and speak Juba Arabic and English by state

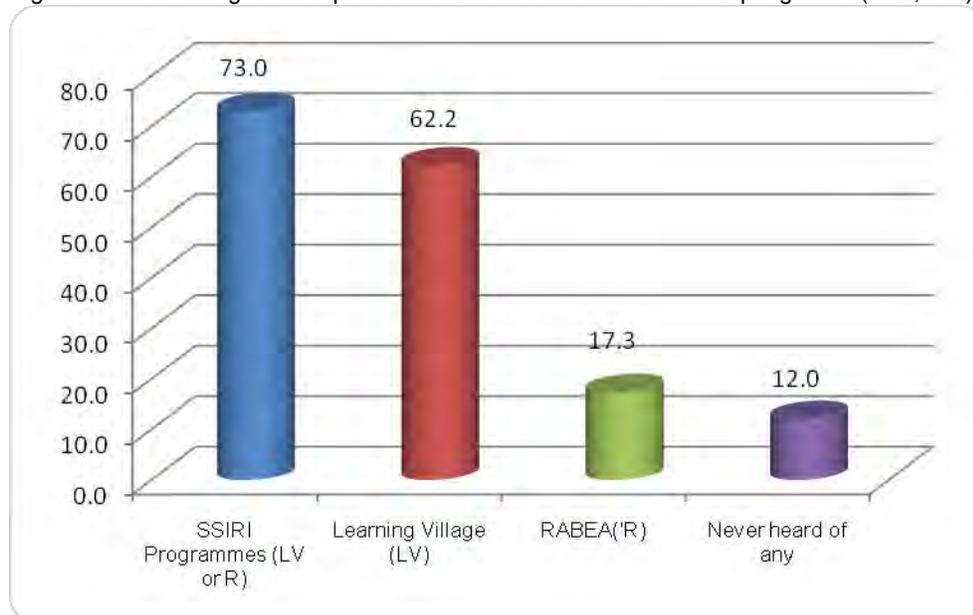
Opinions	Central Equatoria	Western Equatoria	Eastern Equatoria	Western Bahr-el Ghazal	Upper Nile
	%	%	%	%	%
Juba Arabic					
Understands	86.7	95.6	78.2	66.3	78.3
Speaks	82.6	91.6	78.2	58.3	52.7
English					
Understands	69.0	57.3	63.2	44.0	39.5
Speaks	69.7	58.8	61.1	41.7	45.7

4 LEVEL OF AWARENESS OF SSIRI RADIO PROGRAMS

4.1 Proportion which has heard of SSIRI programs

Awareness about the Southern Sudan Interactive Radio Instruction radio programs was quite high. Almost three-quarters of the respondents had heard about either Learning Village or *Rabea* or both radio programs (Figure 1). Nearly two-thirds of the sample (62.2%) reported having heard about the Learning Village program while another 17.3% had heard about the *Rabea* program. Only about a tenth (12%) had never heard of any of the two programs.

Figure 1: Percentage of respondents who had heard of SSIRI programs (n=2,191)



4.2 Differentials in awareness of SSIRI programs

In order to determine the level of awareness of the two programs: Learning Village and *Rabea*, respondents were asked whether or not they had heard about any of the two Southern Sudan Interactive Radio Instruction programs. The level of awareness of the two programs was analyzed according to background characteristics of the respondents. Results showed that awareness of the two programs was almost the same among respondents in the urban and rural areas. The highest level of awareness was observed in the counties of Kajo-Keji and Lainya with over 90% each. Nzara, Magwi and Torit (over 82%) followed closely. The counties of Jur River and Mundri West had the lowest level (less than 50%) of awareness of the two programs (Table 8)

Table 8: Awareness of SSIRI radio programs by County visited

County	All SSIRI Programs		Learning Village		<i>Rabea</i>	
	Number	%	Number	%	Number	%
Yei	149	69.0	139	64.4	10	4.6
Morobo	81	75.7	67	62.6	14	13.1
Kajo-Keji	184	93.9	149	76.0	41	20.9
Lainya	91	92.9	82	83.7	15	15.3
Juba	329	74.6	233	52.8	96	21.8
Magwi	150	84.7	150	84.7	1	0.6
Torit	89	84.8	83	79.0	8	7.6
Yambio	117	71.8	115	70.6	42	25.8
Nzara	62	89.9	62	89.9	36	52.2
Maridi	69	71.1	67	69.1	6	6.2
Mundri West	40	47.6	38	45.2	2	2.4
Malakal	70	54.3	64	49.6	12	9.3
Wau	113	66.5	77	45.3	66	38.8
Jur River	55	39.6	37	26.6	31	22.3

As can be seen from Table 8, study respondents in all the counties visited were more aware of Learning Village programs than *Rabea*. For instance, in the counties of Kajo-Keji and Lainya, 76.0% and 83.7% of respondents respectively reported to be aware of Learning Village programs but only 20.9% and 15.3% respectively reported to be aware of *Rabea*. The trend is the same for all counties visited.

In terms of locality, findings revealed that awareness of SSIRI radio programs is equally the same in both rural and urban areas, for instance, 73.9% of respondents in Juba city and the State towns and 71.9% in rural areas reported to be aware of all the programs. Again awareness was more for Learning Village programs (61.7% among urban and 62.7% for rural respondents) as opposed to *Rabea* programs (18% among urban and 16.6% for rural respondents). With regard to age, gender and marital status of respondents, findings revealed slight differences in levels of awareness about the two SSIRI Radio Programs (Table 9).

Table 9: Awareness of SSIRI radio programs by selected socio-demographic characteristics

Characteristic	All SSIRI Programs		Learning Village		RABEA	
	Number	%	Number	%	Number	%
Age in complete years						
15-19	202	76.5	82	31.1	28	10.6
20-29	520	75.1	455	65.8	111	16.0
30-39	418	74.5	341	60.8	108	19.3
40+	348	69.9	291	58.4	104	20.9
Gender						
Male	1286	75.2	1096	64.1	316	18.5
Female	303	65.6	257	55.6	64	13.9
Marital status						
Never married	268	74.4	228	63.3	66	18.3
Married	1214	73.1	1039	62.6	286	17.2
Separated/Divorced	60	74.1	49	60.5	15	18.5
Widowed	52	63.4	42	51.2	13	15.8
School background						
Arabic	387	63.4	306	50.2	106	17.4
English	579	82.2	515	73.2	114	16.2
Both Arabic and English	546	82.9	458	69.5	152	23.1
Highest level of Education						
No education	247	52.1	209	44.1	49	10.3
Primary 1-4	149	75.6	126	64	33	16.8
Primary 5-7	222	78.7	200	70.9	39	13.8
Junior	125	67.9	100	54.3	29	15.8
Secondary 1-2	206	79.2	163	62.7	55	21.2
Secondary 3-4	378	83.8	320	70.9	105	23.3
University/Tertiary	200	82.0	183	75	48	19.7
Vocational	65	74.7	55	63.2	21	24.1

Major differences in levels of awareness were observed across respondents' school background and highest level of education attained. As seen in Table 9, awareness of SSIRI programs was higher among respondents who either attended English teaching schools or both Arabic and English but not Arabic teaching schools: 63.4% of respondents with Arabic schooling background compared to 82.2% and 82.9% of either English or both reported being aware of SSIRI programs.

Further, notable differences in awareness existed between respondents with no education at all and those who had attained some level of education. Levels of awareness of *Rabea* were generally low (10-25%) even among these groups of respondents.

4.3 Subject areas heard of under SSIRI programs

Among survey participants who had heard about the SSIRI programs, knowledge of the subject areas or lessons broadcast on radio was quite high. For instance, 71.5% of respondents spontaneously indicated that mathematics lessons were one of the subject areas covered under the Learning Village program. Another 75.7% spontaneously mentioned English, and 39.3% mentioned subject areas like de-mining and HIV and AIDS. Among the *Rabea* programs, the commonly spontaneously mentioned topic was the Comprehensive Peace Agreement (CPA): 83.5% of respondents knew about the CPA. 69.1% of the respondents spontaneously mentioned Mathematics and English lessons. 68.3% of the respondents spontaneously mentioned subject areas like Disarmament, De-mobilization and Re-integration (Table 10).

As seen from Table 10, only about a tenth of the sample did not know any of the subject areas broadcast on radio under the SSIRI programs even after being prompted. They acknowledged that they had never heard about the SSIRI radio programs on any of the radio stations they listen to. Comparison of data revealed that almost all people who had never heard about the SSIRI programs were people from households without access to a radio. They included households, which did not have a radio of their own and also reported having no access to other persons' radios.

Table 10: Proportion of respondents who spontaneously knew programs topics

Lessons aware of	Spontaneously	After prompting	Never heard of
	%	%	%
<i>Lessons aware of under Learning Village</i>			
Mathematics lessons	71.5	17.7	10.8
English lessons	75.7	18.8	5.5
De-mining/HIV	39.3	27.7	33.0
<i>Lessons aware of under Rabea</i>			
Mathematics/English	69.1	16.1	14.7
Disarmament, De-mobilization, Re-integration (DDR)	68.3	22.1	9.5
Comprehensive Peace Agreement	83.5	13.2	3.3
<i>Rabea</i> general literacy lessons	40.0	50.0	10.0

4.4 Ways community people perceive SSIRI programs

Titles of the two SSIRI programs (*Learning Village* and *Rabea*) were reported to be captivating and precise. This has most likely enabled a large number of individuals to relate easily to the educational programs. Forty-nine percent (49.1%) of respondents who reported to know about the Learning Village program indicated that the first time they heard the word 'Learning Village' they thought that it was an education program. For an equally substantial proportion of the respondents (40.8%), what came to their minds was that it was an educational program for primary schools. About a tenth (9.4%), thought that it was a program for adults who had not gone to school. Their interpretations were spot-on, because the Learning Village is an education program meant to complement classroom instruction for primary 1-4. Substantial proportions of respondents made similar interpretations in regard to *Rabea* (Table 11).

Table 11: What would come to mind the first time heard of Learning Village and *Rabea*

What came to mind on hearing program	Number	Percentage
	(n)	(%)
<i>Proportion who say the first time they heard the word Learning village, what came to mind was that it is an:</i>		
Educative program	664	49.1
Educational program for primary schools	551	40.8
Program for adults who have not gone to school	127	9.4
Other	9	0.7
<i>Proportion who say the first time they heard the word RABEA, what came to mind was that it is an:</i>		
Educative program	210	43.8
Educational program for primary schools	99	20.6
Program for adults who have not gone to school	154	32.1
Other	17	3.5

4.5 Listenership habits related to SSIRI radio programs

The survey findings revealed that about 72% of the respondents had listened to either the Learning Village or *Rabea* programs. The proportion of respondents who had listened to the Learning Village program was 61%, representing over 90% of all people who had heard about the Learning Village programs. About 17% reported that they had listened to *Rabea*- representing about 61% of all those who had heard about *Rabea*. However, there was a notable proportion (26%) that heard about the programs but never listened to them.

Table 12: People who had listened to SSIRI programs by age and access to radio

Indicator	Ever heard		Age in years				Access to Radio	
	Number	Per cent	15-19	20-29	30-39	40+	Owns radio	None
	(n)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Ever listened to:								
Learning villages	1332	91.3	31.8	32.4	34.4	31.1	35.5	12.8
RABEA	390	60.8	6.4	8.4	8.7	11.4	10.2	2.5
Never listened to any	378	26.0	-	-	-	-	-	-

Comparison of data by age revealed no differences of statistical significance in the distribution of people who had listened to SSIRI programs in Southern Sudan. The only variations were between people who reported to have listened to Learning Village programs as opposed to *Rabea*. As seen in Table 12, reported listenership for Learning Village programs averages about 32% across all ages. There is no difference of statistical significance between respondents in the age range of 15-19 and those of the 30-39 year old that reported having listened to the programs. However, significant differences were observed with respect to access to a functional radio: the findings revealed that it was mostly respondents from households that owned a radio who reported having listened to either Learning Village or *Rabea* programs.

Regarding the duration of listenership, findings of this survey affirmed existence of quality listenership for the SSIRI programs. The respondents were asked to indicate how long they listen to the radio programs a day. Findings revealed that among people who had listened to Learning Village programs, 88.4% had listened to the programs for more than 30 minutes.

However, the proportion that reported having listened to the *Rabea* program for more than 30 minutes was lower (59.1%). This implied that many *Rabea* listeners had never listened to a whole program/lesson broadcast under the *Rabea* programs. Individuals, who reported never having listened to a whole program, cited various reasons (table 13). The table shows that the bigger proportion of respondents reportedly does not listen to the programs because they are broadcast during busy hours (14.4%).

Table 13: Proportion of people who had listened to programs for more than 30 minutes

Indicator	Number (n)	Per cent (%)
Listened to Learning Village program for more than 30 minutes	1261	88.4
Listened to RABEA program for more than 30 minutes	398	59.1
<i>Reasons for not listening to Learning Village or Rabea for 30 minutes</i>		
Lesson /program too long	88	4.3
Broadcasts at busy hour	306	14.4
Broadcasts very late at night	24	1.0
Other	64	3.1

Another slightly prominent reason given for not listening to the SSIRI programs was that the lessons are too long (4.3%). 1% of the respondents reported that the programs were broadcast very late at night making it difficult for them to listen to the entire program. However, according to SSIRI project staff, all programs were broadcast during the day or at least during the early part of the evening, and not late in the night as some respondents claimed. It is possible that these individuals were referring to radio programs other than those broadcast by SSIRI.

5 CONSISTENT LISTENERS TO SSIRI PROGRAMS

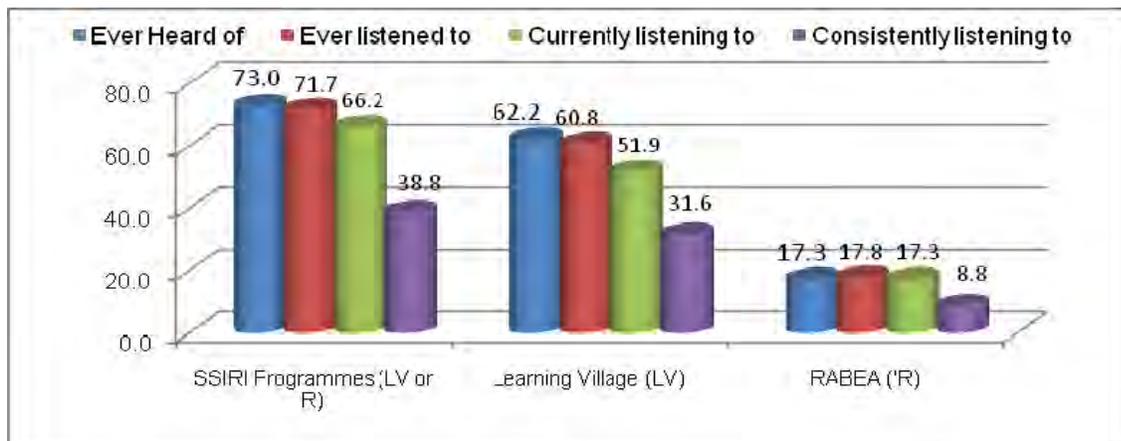
5.1 Level of listenership and geographical distribution

The SSIRI radio programs have a large listenership base within the project implementation areas. The findings of this survey revealed that two-thirds (66.2%) of all respondents who had listened to any of the two SSIRI program were currently listening to the programs. These respondents (66.2%) reported that they were currently listening to either Learning Village or *Rabea* programs at the time the survey was conducted. With the biggest proportion being listeners of Learning Village programs. About 52% reported that they were listening to Learning Village radio programs at the time of the survey.

The listeners to *Rabea* programs who had maintained their listenership were 17.3% of everyone who had ever listened to SSIRI programs. However, the proportion of respondents who reported consistently² listening to SSIRI programs is generally low. As shown in Figure 2, only 38.8% of all respondents who had ever listened to SSIRI programs reported that they consistently listen to all SSIRI programs.

²In this survey, consistent listeners of SSIRI radio programs were defined as people who listened to the entire lessons broadcasted from start to the end at least once every week in last 4 weeks.

Figure 2: Level of listenership to SSIRI programs



However, analysis of the survey data by County revealed fairly impressive findings regarding consistent listenership. Within each county visited, a substantial proportion of consistent listeners were found with the exception of Maridi, Mundri West, Malakal and Jur River. In the other Counties, the majority of respondents had reportedly sustained their listenership to the radio programs. Those that had a high proportion of consistent listeners include (figure 3): Kajo-Keji (91.9%), Lainya (89.8%), Magwi (84.2%), Torit (83.8%), Nzara (81.2%) and Juba (72.8%).

Figure 3: Percentage of respondents who consistently listen to SSIRI programs by county

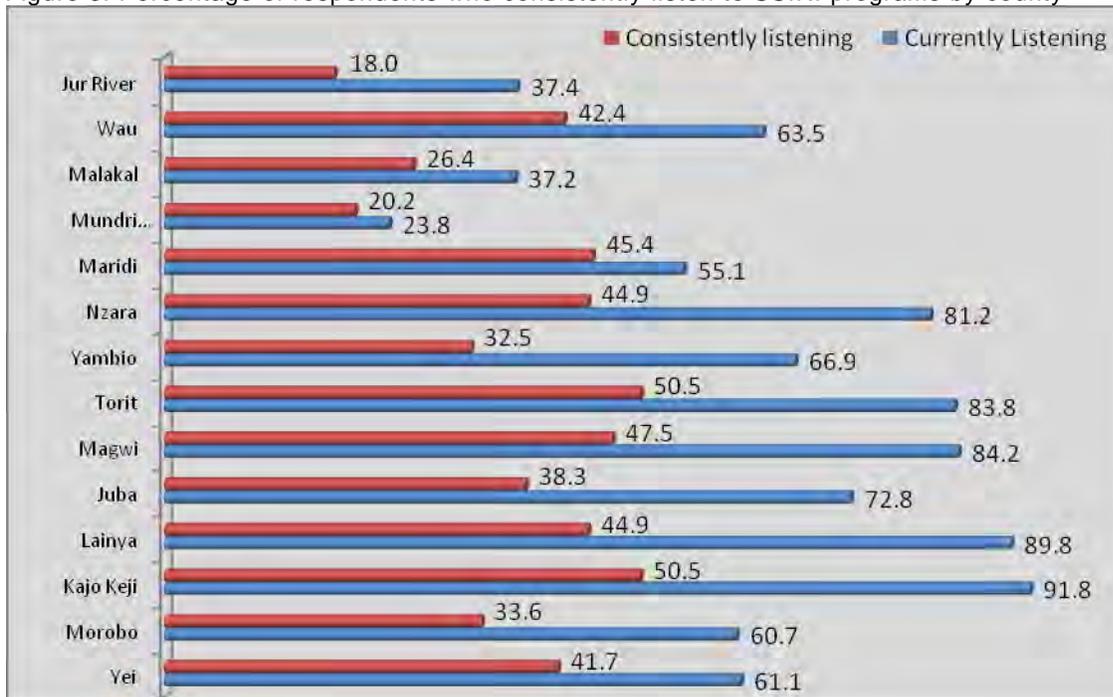
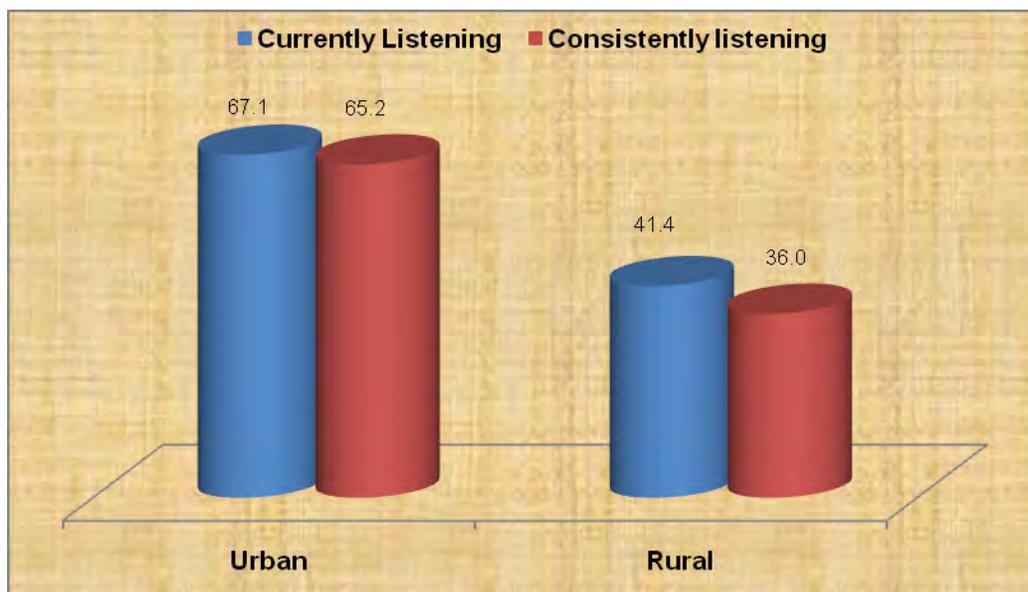


Figure 4: Percentage of respondents who consistently listen to SSIRI programs by locality (urban/rural)



Currently Listening: chi-square=0.93 df=1 p=0.34 **Consistently listening:** chi-square=6.6 df=1 p=0.01

Project implementation areas with the biggest proportion of consistent listeners of either *Rabea* and/or Learning Village programs included Kajo-Keji (50.5%), Torit (50.5%), Magwi (47.5%), Maridi (45.4%), Lainya (44.9%), Wau (42.4%) and Juba (38.3%). In the other counties including Yei, Morobo, Yambio, Nzara, Mundri West, Malakal and Jur River, the proportion of consistent listeners was less than 35% of all people who reportedly sustained listenership to SSIRI programs. Consequently, there were significant variations in the proportions of people who consistently listen to SSIRI programs according to county ($p < 0.000$). Analysis of data by state also revealed significant differences. The proportion of individuals who consistently listen to SSIRI programs was significantly higher in Eastern Equatoria (59.6% of sample of listeners) and Central Equatoria (55.4%), compared to Upper Nile (38.0%), Western Equatoria (40.7%) and Western Bahr el-Ghazal (47.3%).

5.2 Profile of consistent listeners

In terms of profile³, consistent listeners of SSIRI programs are a varied group: they include both educated and people with no education at all, young and old, married and non-married, employed and unemployed (Table 14). Consistent listeners to SSIRI programs are evenly distributed by age and gender, although there are slightly more male (40.6%) than female (32.3%) consistent listeners. There were no statistically significant differences in the distribution of consistent listeners of SSIRI programs in Southern Sudan across age. But, a notable difference in consistent listening exists between those who own a radio (44.1%) and those who do not (15.2%).

³Profiles of consistent listeners to SSIRI programs were derived from comparisons of data by the various socio-demographic characteristics of respondents.

It was notable that people with access to radios were prominent consistent listeners, implying that accessibility to a radio related directly to level of listenership to SSIRI programs. Further, the biggest proportion of the consistent listeners was observed among teachers, which implies that they were listening in order to acquire skills that would help them improve their teaching hence the attaining the program's ultimate objective of complementing classroom instruction.

Table 14: Profile of people who consistently listen to SSIRI programs

Characteristic	No of respondents (N)	Currently Listening		Consistently listening	
		Number (n)	Percent of N (%)	Number (n)	Percent of N (%)
Age in complete years					
15-19	264	176	66.7	97	36.7
20-29	692	479	69.2	271	39.2
30-39	561	389	69.3	236	42.1
40+	498	307	61.6	200	40.2
Gender					
Male	1719	1165	68.1	694	40.6
Female	471	277	60	149	32.3
		<i>chi-square=10.9 df=1 p=0.00</i>		<i>chi-square=10.6 df=1 p=0.00</i>	
School background					
Arabic	610	356	58.4	203	33.3
English	704	523	74.3	304	43.2
Both Arabic and English	660	495	75.1	285	43.2
		<i>chi-square=53.2 df=2 p=0.00</i>		<i>chi-square=17.3 df=2 p=0.00</i>	
Highest level of Education					
No education	475	227	47.9	131	27.6
Primary 1-4	197	129	65.5	66	33.5
Primary 5-7	282	196	69.5	108	38.3
Junior	184	114	62	77	41.8
Secondary 1-2	260	193	74.2	99	38.1
Secondary 3-4	451	345	76.5	205	45.5
University/Tertiary	244	184	75.4	128	52.5
Vocational	87	55	63.2	33	37.9
		<i>chi-square=110.4 df=7 p=0.00</i>		<i>chi-square=55.6 df=7 p=0.00</i>	
Religious affiliation					
Christian –Catholic	1040	752	72.3	434	41.7
Christian –Protestant	656	410	62.5	260	39.6
Christian –Coptic	50	38	76	14	28
Christian –Pentecostal	137	91	66.4	41	29.9
Muslim	102	66	64.7	36	35.3
Non-religious	71	7	9.9	7	9.9
Other	111	78	70.3	53	47.7
		<i>chi-square=123.9 df=6 p=0.00</i>		<i>chi-square=40.2 df=6 p=0.00</i>	
Understands well					
English	1344	1049	78.1	605	45
Juba Arabic	1839	1268	69	765	41.6
Classic Arabic	520	366	70.4	222	42.7
Swahili	102	75	73.5	40	39.2

Dinka	424	255	60.1	157	37
Nuer	93	44	47.3	32	34.4
Others	950	623	65.5	382	40.2
Employment status					
Employed	954	688	72.1	408	42.8
Not Employed	1056	641	60.7	391	37
	2010		chi-square=6.9 df=1 p=0.01		chi-square=29.2 df=1 p=0.00
Main occupation					
Not employed	1011	614	60.7	375	37.1
Farmer	174	101	58	63	36.2
Trader/sales/business/transport	155	118	76.1	67	43.2
Production	44	29	65.9	10	22.7
Service business	92	64	69.6	40	43.5
Teacher	132	101	76.5	70	53
Health worker	84	69	82.1	42	50
Manager/administrator	85	69	81.2	45	52.9
Civil servant	195	143	73.3	74	37.9
Other	80	51	63.8	28	35
	2052		chi-square=31.2 df=9 p=0.00		chi-square=55.3 df=9 p=0.00
Household owns a radio					
Yes	1791	1316	73.5	790	44.1
No	401	134	33.5	61	15.2
	2193		chi-square=231 df=1 p=0.00		chi-square=113.4 df=1 p=0.00

Further, it was discovered that people who consistently listened to SSIRI radio programs were mostly those engaged in paid labor (42.8%), and those who belong to households that own radios. Majority of the consistent listeners are living in the urban areas where the radio stations were located.

In order to determine actual characteristics that influence consistent listening to radio among respondents, a binary logistic regression analysis was performed to remove confounding effects among variables that are significantly associated with listening to radio programs. The dependent variable was whether one is an active listener or not. The results (table 17) indicated that those staying in households with a radio were about 3 times more likely to consistently listen than those without a radio in the household but have access to radios elsewhere. Likewise, urban residents, married, those understand English and those who understand Juba Arabic were more likely to consistently listen to SSIRI programs. Therefore, consistent listening is likely to depend on whether one lives in a rural or urban location, radio ownership, the individual understanding of English or Juba Arabic, and marital status of the individual.

Table 15: Results of Logistic Regression analysis for consistent listening to SSIRI programs

Characteristic	Odds ratio	Degree of freedom	Significance
Locality			
Urban	1.269	1	0.017
Rural	1.0		
Availability of a radio in household			
Yes	3.458	1	0.000
No	1.0		
Understands Juba Arabic			
Yes	1.760	1	0.000
No	1.0		
Understands English			
Yes	1.284	1	0.024
No	1.0		
Marital status			
Married	1.706	1	0.043
Not married	1.0		

5.3 Estimate of the number of consistent listeners

The study established that 38.8% of respondents in the survey were consistently listening to SSIRI programs (*standard error=0.0104*). The proportions of consistent listeners for Learning Village and Rabea were 31.6% (*standard error=0.009*) and 8.8% (*standard error=0.006*) respectively. The sample proportions for consistent listeners per county are given in figure 3 above. Using the sample proportions as true estimates for the population proportions, the estimated numbers of people who consistently listen to SSIRI programs in the 14 counties are 445,936 for both Learning Village and Rabea, of the total, 363,185 consistently listen to the Learning Village Programs, while 101,140 consistently listen to Rabea. The number of estimated number of consistent listeners per county is indicated in the table 16 below.

Table 16: Estimated number of people who consistently listen to all SSIRI programs in the 14 counties

No	County	Population (Aged 15+ years)	Learning Villages		RABEA		All SSIRI Programmes (Either or both LV and RABEA)	
			P*(%)	Estimated Population consistently listening	P*(%)	Estimated Population consistently listening	P*(%)	Estimated Population consistently listening
All			All	All	All	All	All	
1	Yei	114,054	40.0	45,622	3.7	4,220	41.6	7,446
2	Morobo	55,648	28.0	15,581	5.6	3,116	33.6	18,698
3	Kajo-keji	102,977	42.3	43,559	8.7	8,959	50.5	22,003
4	Lainya	11,162	40.8	20,874	7.1	7,633	44.9	22,972
5	Juba	234,737	27.2	63,848	11.1	26,056	38.3	89,904
6	Magwi	55,180	47.5	45,211	0.6	33	47.5	5,211
7	Torit	56,463	46.7	26,368	5.6	3,162	50.5	28,514
8	Yambio	24,459	23.9	22,098	11.0	2,700	32.5	8,049
9	Nzara	44,490	28.9	12,858	23.2	10,322	44.9	19,976
10	Maridi	48,997	41.2	20,187	5.2	2,548	45.4	22,245
11	Mundri West	19,604	20.2	3,960	0.0	0	20.2	3,960
12	Malakal	22,223	17.8	12,856	9.3	2,717	26.4	19,067
13	Wau	88,820	28.2	25,047	21.2	18,830	42.4	7,660
14	Jur River	22,505	12.9	9,353	7.9	1,728	18	3,051
	Estimated	1,149,319	31.6	363,185	8.8	101,140	38.8	445,936
	Standard error		0.009		0.0		0.0104	

P*=Proportion of the sample (aged 15+) who consistently listen (at least once everyday and listen up to the end of the lesson) to SSIRI Radio Programs

6 SUBJECT AREAS LISTENED TO

Among the various subject areas broadcast under the *Rabea* programs, the most commonly listened to were topics on disarmament, de-mobilization, re-integration (DDR), and the CPA as well as issues on the referendum for the independence of Southern Sudan. Ninety percent (90.2%) of people who had listened to *Rabea* programs acknowledged that they had listened to those subject areas. Further findings revealed that the majority of them (71.3%) were reportedly still listening to programs about DDR/CPA/Referendum at the time the survey was conducted.

A number of people also had the opportunity to listen to other subject areas or lessons under the *Rabea* programs such as Mathematics or English, general literacy, de-mining and HIV and AIDS as well as *Rabea* for Beginners although the frequency of listening differs from that of topics on DDR/CPA/Referendum. For instance, less than half (42.6%) of the people acknowledged that they had listened to the Mathematics and English lessons broadcast under the *Rabea* programs. Just about a tenth (11%), had listened to broadcasts about *Rabea* for Beginners. Findings revealed that among them just about half of them continued listening. See Table 17.

Table 17: Subject areas people have listened to and still listen to

Subject Areas /Lessons/programmes	Have ever listened	Most favorite	Still listens to program to date
	(%)	(%)	(%)
RABEA advanced			
DDR/CPA/Referendum	90.2	60.2	71.3
Mathematics/English	42.6	22.1	61.4
General literacy	27.7	12.6	55.5
De-mining/HIV	24.1	12.6	46.8
RABEA for beginners	11.0	5.1	58.1
Learning Village			
DDR/CPA/Referendum	37.0	21.0	64.5
Mathematics	55.1	20.6	55.3
English	64.5	40.2	66.9
English literacy	13.1	6.3	50.3
De-mining/HIV	33.3	16.7	56.3

With regard to subject areas broadcast under the Learning Village programs, the most commonly listened to were English lessons. Over 60% of the people who had ever listened to Learning Village programs, reported that they had listened to English lessons: 40.2% of whom cited it among their most favorite subject areas. Findings further revealed that two-thirds (66.9%) of them were reportedly still listening to English lessons at the time the survey was conducted. English lessons were reportedly followed by Mathematics lessons: 55.1% reported that they had listened to Mathematics lessons and slightly more than half of them (55.3%) were still listening to the lessons at the time of this survey. Similarly, more than half (64.5%) of people who had ever listened to DDR/CPA/Referendum issues were still listening to them at the time of the survey.

Lessons under the Learning Village programs were broadcast Monday through Friday between 9:00AM and 11:00AM for 20 weeks a year while subject areas/lessons under the RABEA programs would be broadcast on Tuesday, Wednesday and Friday between 3:00 and 3:30PM in the afternoon on those respective days. All the different subject areas/lessons (*in both Learning Villages and Rabea*) would be broadcast for a maximum of 30 minutes on a given allotted day in the week. However, the reported days of the week (*by study respondents*) differ from the actual program days. Whereas lessons under the Learning Village were broadcast on a daily basis, majority of respondents cited Monday and Friday as the days of the week on which the various lessons are broadcast. Similarly, very few got the correct time at which lessons are broadcast: the majority mentioned before 9am and afternoon (1pm), yet all lessons are broadcast in the morning from 9:00AM – 11:00AM.

Similarly, the reported days on which *Rabea* lessons were broadcast revealed signs of misinformation among respondents. For instance, the majority mentioned Monday and Friday as the days on which *Rabea* lessons were broadcast yet the days were Tuesday, Wednesday and Friday. As can be seen from Table 18, 26.1% of the people who had ever listened to DDR/CPA/Referendum lessons under the Learning Village programs, reported the broadcast day as Monday while 29.7% reported Friday. An equally big proportion reported the broadcast days for General literacy lessons being Monday and Friday. Further, for the majority of respondents, they reported 3:00PM as the time programs were broadcast.

Table 18: Reported day of the week SSIRI programs are broadcast

Subject Areas /Lessons	DDR/CPA/Ref erendum	Maths/English	General literacy	De-mining/HIV	RABEA for beginners	DDR/CPA/Ref erendum	Mathematics	English	English literacy	De-mining/HIV
	<i>Rabea</i>					Learning Village				
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<i>Day of the week program is broadcast</i>										
Monday	26.1	32.0	21.6	25.0	17.6	20.2	28.1	19.1	14.6	21.9
Tuesday	5.0	9.3	5.9	2.8	5.9	3.7	5.1	3.2	1.2	2.7
Wednesday	9.9	4.0	7.8	8.3	17.6	10.1	5.1	7.1	8.5	9.3
Thursday	8.1	4.0	5.9	5.6	5.9	5.7	4.2	3.9	2.4	9.8
Friday	29.7	32.0	41.2	27.8	47.1	36.4	44.6	50.6	42.7	37.2

As can be seen from Table 18, 28.1% of people who had listened to Mathematics lessons under the Learning Village program, reported the broadcast day as Monday while 44.6% reported Friday. An equally big proportion reported the broadcast days for English lessons being Monday and Friday.

7 LISTENING PREFERENCES OF SSIRI PROGRAM LISTENERS

Among respondents who were reportedly still listening to the various SSIRI programs, very few reported listening to the lessons in the company of a teacher. Findings revealed that less than a tenth (8.7%) always listen to the programs in the presence a teacher. Slightly more (10.9%) reported to sometimes listen to the programs in the presence a teacher. This left more than three-quarters of the respondents (80.3%) who had never listened to SSIRI programs in the presence of a teacher- they always listened without a teacher present.

The practice for the majority of listeners is to listen to the lessons in groups. Findings showed that for all the various subject areas and lessons broadcast under either *Rabea* or Learning Village, over half, and for some particular lessons like general literacy under *Rabea* and mathematics under Learning Village over 70% of listeners acknowledged that they were listening to the lesson in groups. For the majority, the size of the group would be between 1-4 people and 5-9 people. It was rare to find people who listened to SSIRI lessons in groups of 10+ people.

Majority of listeners actually confirmed that they preferred listening to SSIRI lessons in a group setting. As can be seen in Table 19, for almost all lessons broadcast except De-mining and issues of HIV and AIDS, more than 60% of listeners preferred to listen to the lessons in a group setting.

Nearly all listeners were listening to SSIRI programs from the comfort of their homes with their parents, sisters and brothers, or other relatives and friends. However, for the bigger majority they listened to the various lessons in the company of their parents.

With regard to the number of household members that listened to SSIRI radio programs within households with a person who had listened, findings revealed that the majority would be between 1-4 people. In over 70% of households that had a person who had listened to any of the various subject areas and lessons under RABEA and Learning Village, there were between 1-4 other people who had listened to the lessons.

Table 19: Reported practices and preferences of SSIRI programs listeners

Subject Areas /Lessons	DDR/CPA/Ref erendum	Maths/English	General literacy	De-mining/HIV	RABEA for beginners	DDR/CPA/Ref erendum	Mathematics	English	English literacy	De-mining/HIV
	RABEA					Learning Village				
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<i>Proportion that listened to lessons</i>										
Alone	39.2	49.4	26.5	50.0	39.1	36.1	28.8	36.4	40.6	30.6
In group	60.8	50.6	73.5	50.0	60.9	63.9	71.2	63.6	59.4	69.4
<i>Size of group when listened to lesson</i>										
1-4 people	58.7	73.7	59.2	83.3	76.9	60.1	53.1	54.8	41.7	46.4
5-9 people	37.3	22.4	38.8	16.7	23.1	34.2	39.9	38.9	48.6	48.2
10+ people	4.0	3.9	2.0	0.0	0.0	5.7	7.0	6.3	9.7	5.4

Subject Areas /Lessons	DDR/CPA/Ref erendum	Maths/English	General literacy	De-mining/HIV	RABEA for beginners	DDR/CPA/Ref erendum	Mathematics	English	English literacy	De-mining/HIV
<i>Preference when listening to lesson</i>										2
Being Alone	36.4	52.4	22.6	89.7	36.4	37.0	26.8	33.2	38.7	6.0
Be in Group	63.6	47.6	77.4	2.4	63.6	63.0	73.2	66.8	61.3	74.0
<i>Persons normally listened with to lesson/broadcast</i>										
Parents	38.9	45.1	25.0	31.6	50.0	29.5	30.2	31.7	18.3	25.8
Sister/brother	14.7	24.4	19.2	15.8	28.6	21.8	12.7	11.2	15.9	16.7
Other relatives	23.2	13.4	36.5	31.6	7.1	18.6	22.3	24.0	28.0	20.2
Friends	20.9	13.4	9.6	10.5	7.1	22.1	21.5	19.5	28.0	24.5
Teacher/tutor	0.5	2.4	3.8	0.0	0.0	0.7	0.8	1.0	3.7	1.3
Others	1.9	1.2	5.8	10.5	7.1	7.4	13.5	12.6	6.1	11.6
<i>Places where listened to the lesson:</i>										
At home	87.5	88.4	78.5	88.6	91.3	-	85.7	85.7	87.5	87.3
At school	2.6	5.8	4.6	0.0	8.7	-	6.7	5.0	5.0	4.1
Community center	7.1	5.2	9.2	8.6	0.0	-	3.3	4.7	5.8	5.1
Church	0.0	0.0	1.5	0.0	0.0	-	0.3	.8	0.8	1.3
Police station	1.0	0.0	1.5	0.0	0.0	-	0.2	.4	0.0	0.0
Others	1.9	0.6	4.6	2.9	0.0	-	3.8	3.3	0.8	2.2
<i>Number persons in household that listened to lessons</i>										
1-4 people	75.9	81.4	70.8	74.1	70.0	70.3	74.0	72.5	63.5	72.0
5-9 people	21.5	15.9	29.2	22.2	30.0	25.2	22.0	24.8	33.4	25.6
10+ people	2.6	2.7	0.0	3.7	0.0	4.5	4.0	2.7	3.1	2.4

8 AWARENESS OF AND LISTENERSHIP TO RADIO STATIONS IN SOUTHERN SUDAN

There are several Radio Stations broadcasting in Southern Sudan. On average each state in Southern Sudan has at least two radio stations that broadcast in the area. However, everyone in the region does not know them all. In the states where the listenership survey was conducted, there are 16 radio stations that are known to people.

Among the radio stations that people in the SSIRI project implementation areas are aware of, Radio Miraya ranks highest. Over 80% of respondents reported to be aware of Radio Miraya. Also notable proportions of survey respondents reported being aware of other radio stations like, Sudan Radio Services, Spirit FM, Bakhita Radio, Grace FM, Yambio FM, and Magwi FM.

Table 20: Radio stations and proportion of sample that is aware they exist

Radio station	Number (n)	Percent (%)
Bakhita Radio	530	24.2
Grace FM	328	14.9
Miraya FM	1781	81.2
Magwi FM	278	12.7
Spirit FM	544	24.8
Sudan Radio Services	665	30.3
Voice of Eastern Equatoria	262	11.9
Voice of Kajo-Keji	255	11.6
Voice of Love	69	3.1
Wau FM	239	10.9
Yambio FM	317	14.4
Good News FM	68	3.1
SRS FM	84	3.8
BBC	49	2.2
Liberty	102	4.6
Maridi	108	4.9
Others	196	8.9

Listenership to the various radio stations broadcasting in Southern Sudan is generally high. Findings revealed that respondents had listened to almost all the radio stations mentioned. For instance, nearly all respondents (91.8%) who were aware that Radio Miraya broadcasts in Southern Sudan have listened to it. Further, although the other radio stations are mentioned by generally small numbers of respondents, the majority (*over two-thirds*) of those who mentioned the radio stations have listened to them. For instance, out of the 544 respondents who are aware of Spirit FM, 74.6% have listened to it. Similarly, 69.9% of the 530 respondents who are aware of Bakhita Radio have listened to it.

With regard to frequency of listening, findings revealed high levels of listenership for the known radio stations. With the exception of Sudan Radio Services, more than half the respondents who reported having listened to the various radio stations listen to those radio stations on a daily basis. For instance, 78.4% of all people who have ever listened to Radio Miraya, listen to it on a daily basis, 6.4% reported to be listening to radio Miraya 2-3 days a week, 5.1% listen 4-5 days a week while only 10.1% reportedly listen only once a week. Similarly, 70% of respondents who have listened to Grace FM listen to it every day. For Spirit FM it is 69.7%, Bakhita Radio 56.4%, and Magwi 64.5%.

Among Radio Miraya's listeners, slightly over half (58.6%) informed the survey team that they were listening to Miraya on the very day of the survey. Others (23.8%) had last listened to Radio Miraya a day before the research team visited, 10.8% had spent about seven days without listening while a few others had either spent a month (2.8%), three months (1.8%) or six months (2.0%) without listening to the radio. The bigger majority (57.5%) had been listening to Radio Miraya for more than a year by the time of the survey. Twenty-three percent had been listening to Radio Miraya for between one month and 12 months while just about a quarter (27.6%) reported to be new listeners (*had not yet made a month since they started listening to Miraya*). See Table 21.

Table 21: Radio stations in Southern Sudan and proportion of sample that listens to them

	Bakhita Radio	Miraya FM	Grace FM	Magwi FM	Spirit FM	Sudan Radio Services	Voice of Eastern Equatoria	Voice of Kajo-Keji	Yambio FM	Wau FM
<i>Ever Listened</i>	69.9	91.8	80.7	81.9	74.6	77.1	88.8	93.4	72.2	88.9
<i>Frequency of Listening</i>										
Daily	56.4	78.4	70.0	64.5	69.7	39.5	67.0	70.2	57.9	53.8
Once a week	23.8	10.1	11.9	10.5	17.3	38.5	11.2	12.3	28.6	18.8
2-3 days a week	13.1	6.4	11.1	17.3	7.9	12.0	19.1	10.1	4.0	21.5
4-5 days a week	6.7	5.1	7.1	7.7	5.2	10.0	2.8	7.5	9.5	5.9
<i>Most recent time listened</i>										
Today	36.8	58.6	60.6	44.7	55.5	22.2	44.4	53.3	42.4	26.9
Yesterday	25.4	23.8	20.3	25.1	19.0	22.2	32.2	15.4	18.6	36.0
7 days ago	12.0	10.8	14.0	16.7	12.6	29.4	17.1	24.7	14.4	21.5
Past 1 month	10.5	2.8	3.0	7.9	4.8	11.9	4.9	4.4	5.9	7.0
3 months ago	8.0	1.8	0.4	4.2	3.5	7.5	1.0	1.3	9.3	7.0
Past 6 months	7.4	2.0	1.7	1.4	4.5	6.9	0.5	0.9	9.3	1.6
<i>Length of time been listening</i>										
Less than 1 month	20.5	19.4	27.6	18.4	23.1	15.5	21.8	26.9	17.1	26.6
One month	6.6	5.9	7.8	10.6	6.1	6.2	9.7	10.5	10.3	12.5
1-6 months	15.6	9.7	19.8	28.6	16.3	9.6	17.0	19.6	13.7	13.6
7-12 months	8.7	7.5	12.1	10.6	9.9	8.2	8.3	11.4	11.1	9.8
More than 1 year	48.6	57.5	32.8	31.8	44.6	60.5	43.2	31.5	47.9	37.5
Currently listens to radio	4.1	64.2	6.1	5.8	12.1	10.4	6.4	5.7	8.4	7.5
Most favorite radios	2.1	43.2	3.4	3.9	8.5	5.2	4.2	3.0	7.6	5.6
<i>Time signal is clear</i>										
Clear all the time	90.1	94.4	96.4	86.8	91.6	77.9	92.8	98.6	91.4	53.2
Never	4.1	3.1	3.0	4.4	6.6	18.1	4.4	1.4	6.5	41.0
Between 3-6PM	5.9	2.5	0.6	8.8	1.8	4.0	2.8	0.0	2.2	5.8

The results indicated in table 21 also show that the radio signal is clear most of the time: over 90% of Radio Miraya's listeners, Spirit FM, Grace FM and Bakhita Radio acknowledged that the signal is clear all the time.

Overall, Radio Miraya was the most popular radio station among those cited by the respondents. It is also the main source of news and learning for majority of respondents, for instance, 65.2% of the sample reported that it is the radio that they listen to for news. Similarly, 57.2% of the sample listens to the same radio (*Radio Miraya*) whenever they want to listen to educational programs. The other popular radio stations for news and educational programs are Spirit FM and Sudan Radio Services (see Table 22).

When asked to compare frequency of listening to the radio stations that broadcast educational programs, the majority noted that they are listening more to these radio stations compared to a year ago. Among Radio Miraya's listeners, 58.8% reported to be listening more to the radio compared to a year ago, 33% said that their frequency of listening has not changed while only 8.2% reported to be listening less compared to a year ago. It is Grace FM with the biggest rise in frequency of listening; 86.1% reported that they are listening more to the radio (*Grace FM*) compared to a year ago. Yambio FM, Magwi FM and Bakhita Radio closely follow Grace FM.

Table 22: Radio stations on which people report listening to educational programs

	Bakhita Radio	Miraya FM	Grace FM	Magwi FM	Spirit FM	Sudan Radio Services	Voice of Eastern Equatoria	Voice of Kajo-Keji	Yambio FM	Wau FM
Listens to News more on radio	6.0	65.2	6.0	5.1	16.0	14.2	6.3	7.0	8.5	6.9
Listens to educational programs on radio	1.8	57.2	5.8	5.5	11.3	9.3	6.0	7.4	7.5	5.9
<i>Comparing frequency of listening to a year ago for educ. programs</i>										
More	61.7	58.8	86.1	71.2	41.1	38.7	67.4	70.1	86.6	71.3
About the same	14.0	33.0	10.4	21.6	50.4	36.7	15.9	19.2	5.4	20.9
Less	24.3	8.2	3.5	7.2	8.5	24.6	16.7	10.8	8.0	7.8
<i>Frequency of listening to educ. Programs in a week</i>										
Less than a week	19.0	20.1	9.9	17.3	9.5	19.7	18.2	3.1	18.6	39.4
Once a week	69.5	38.8	16.2	25.2	15.8	65.3	26.3	12.3	80.5	50.4
Several times a week	6.7	14.4	20.4	15.0	25.3	7.3	16.1	25.2	0.9	7.9
Daily	4.8	26.6	53.5	42.5	49.4	7.8	39.4	59.5	0.0	2.4
<i>Time spent listening</i>										
Less than 30 minutes	26.3	8.6	12.8	11.1	9.4	32.0	10.9	6.7	32.7	15.9
30 minutes	39.4	34.6	40.4	34.1	19.2	29.1	34.3	40.5	42.7	72.2
30-60 minutes	19.2	23.2	9.9	22.2	20.9	24.0	29.2	24.5	11.8	4.8
1 hour	10.1	16.3	31.2	11.1	8.5	8.6	16.1	25.8	7.3	3.2
More than 1 hour	5.1	17.4	5.7	21.4	41.9	6.3	9.5	2.5	5.5	4.0
<i>Quality of signal of the radio station</i>										
Excellent	64.2	43.0	43.0	73.2	40.9	25.0*	68.6	31.1	40.5	33.9
Good	25.3	45.1	53.5	19.7	40.5	31.0*	28.5	64.6	55.9	45.2
Fair	5.3	10.4	3.5	7.1	15.3	41.3*	1.5	4.3	3.6	11.3
Poor	5.3	1.6	0.0	0.0	3.3	2.7*	1.5	0.0	0.0	9.7

* This can be explained because Sudan Radio Service broadcasts on short wave everywhere except Juba.

The majority of respondents reported that they listen to the radio stations for at least 30 minutes in a day. For instance, 57.8% of Radio Miraya's listeners reported that they listen to the radio for between 30 and 60 minutes, less than a tenth (8.6%) spend less than 30 minutes, the rest spent an hour and more in a day listening to just one radio station i.e. Radio Miraya. And as earlier mentioned, more than three-quarters acknowledge that the radio has a good signal; 43% rate the signal to be excellent while 45.1% say it is just good not excellent.

Similarly, many listeners of Spirit FM and Magwi reported spending many hours listening to the radios. For instance, 41.9% of Spirit FM's listeners reported that in a day, they spend more than an hour tuned-in to the station, although not many rate the signal to be good. The best-rated radio signal among radio-specific listeners is Magwi FM, 73.2% of its listeners reported the radio signal to be excellent, 19.7% said it was good and only 7.1% said it was fair. Nobody reported that the signal for Magwi FM is poor.

9 RADIO STATIONS ON WHICH SSIRI PROGRAMS HAVE BEEN HEARD

As earlier mentioned, SSIRI programs were broadcast on several radio stations located in various project implementation areas. This survey established that the programs i.e. Learning Village and *Rabea* have been heard on all the radio stations where they were being broadcast. The exception was in the proportion of respondents that acknowledged having heard about the programs from a given radio. For instance, Radio Miraya was the most popularly mentioned source of hearing about the SSIRI programs. Over 81% and over 95% of respondents, who knew about the Learning Village and *Rabea* programs respectively, had heard them on Radio Miraya.

Further, 33.3% of respondents (*among those who knew about the Learning Village programs*) reported that they had also heard similar programs on Spirit FM. About 20% had heard the same programs on each of the radio stations of Yambio FM, Sudan Radio Services, Voice of Eastern Equatoria, and Voice of Kajo-Keji. A similar pattern was observed for respondents who knew about *Rabea*. For *Rabea* programs, apart from Radio Miraya, other radio stations associated with high proportions of respondents reported them as their source included Yambio FM (64%), Sudan Radio Services (57%).

Table 23 below indicates a reasonable proportion of respondents who claim that they have heard the Learning Village (20 per cent) and *Rabea* (57 per cent) on Sudan Radio Services (Shortwave). SSIRI only broadcasts these programs on the SRS FM radio station. The indication of listenership on Sudan Radio Services (SW) could be interpreted in two ways. One, that the listeners could have confused SRS FM with SRS SW, especially in areas such as Juba where both have reception, and possibly individuals indicating SRS SW actually listened to SSIRI programs on SRS FM instead. Secondly, in other areas such as Wau respondents could have had trouble distinguishing between South Sudan Radio (government owned radio station) and Sudan Radio Services. However, SSIRI still does not broadcast on South Sudan Radio.

Table 23: Radio stations on which people have heard about SSIRI programs

Radio Stations on which programs were heard	LV	<i>Rabea</i>
	(%)	(%)
Radio Miraya	81.8	95.1
Bakhita Radio	13.9	45.2
Grace FM	13.6	43.7
Magwi FM	19.1	14.6
Spirit FM	33.2	51.7
Sudan Radio Services	20.0	57.3
Voice of Eastern Equatoria	20.3	9.0
Voice of Kajo Keji	21.4	34.8
Voice of Love FM	1.3	3.3
Wau FM	10.0	38.0
Yambio FM	21.1	64.6
Good news	1.8	9.7

It is worth noting that within the different states that were visited, findings revealed that all people who knew either about Learning Village or the *Rabea* programs, had heard about them primarily from the radio stations broadcasting within their areas. It was only Radio Miraya, which was mentioned in all the states visited because of its wide coverage, but the others were basically limited to the states where they were located. It is important to note that coverage for almost all radio stations broadcasting SSIRI programs was limited to the states in which they were located and in some instances to just a few counties in the state.

10 RADIO STATIONS LISTENED TO AND LISTENING PATTERNS

SSIRI programs were broadcast on about 18 radio stations located in various states of Southern Sudan. Findings confirmed that there were many radio stations in Southern Sudan that broadcasted SSIRI programs. As can be seen in Table 24, a wide range of radio stations (*although majority have small numbers*) were cited by survey respondents when asked to mention the radio stations on which they had listened to the SSIRI lessons. The small proportions for some radio stations such as Wau, Yambio, are explained by the sampling approach used-these radio stations are limited to the states where they are located which meant that only the sample from that state cited them. Bigger proportions of respondents consequently cited the radio stations that had wide coverage such as Miraya.

Among all radio stations in Southern Sudan, Radio Miraya was singled-out as the one station where the majority of people tune-in to listen to the educational programs broadcast under the SSIRI programs. As can be seen in Table 24, 81% and 93.4% of people who had listened to Learning Village and *Rabea* programs respectively, reported that they listened to the programs on Radio Miraya. Findings revealed several other radio stations on which listeners to the SSIRI programs got their information from.

Table 24: Radio Stations on which respondents listen to hear SSIRI Programs

Radio Stations people listen to for the lessons	LV (%)	<i>Rabea</i> (%)
Radio Miraya	81.0	93.4
Bakhita Radio	11.2	33.6
Grace FM	11.6	40.0
Magwi FM	18.4	10.0
Spirit FM	32.3	42.3
Sudan Radio Services	19.7	50.8
Voice of Eastern Equatoria	20.0	13.3
Voice of Kajo-Keji	19.6	32.7
Voice of Love FM	2.1	5.0
Wau FM	8.7	37.0
Yambio FM	21.1	57.5
Good news	2.1	13.9
SRS FM	2.1	15.4

Overall, findings reveal that radio stations listened too, varied slightly by the lesson or subject area in question. For instance, under the *Rabea* programs, the biggest number of listeners to Mathematics/English lessons reported listening to Radio Miraya (40.4%), followed by Wau FM (14.7%) and Voice of Kajo-Keji (10.9%) while for the listeners to topics on DDR/CPA/Referendum, they reported Radio Miraya (49.5%) followed by Yambio FM at 8.6%. A similar pattern is observed with lessons under the Learning Village program. However, what stood out was that Radio Miraya was the most listened to radio station among listeners of the various subject areas or lessons under the Learning Village and *Rabea* programs.

Table 25: Radio stations in Southern Sudan listened to for the various SSIRI lessons

	Bakhita Radio	Miraya FM	Grace FM	Magwi FM	Spirit FM	Sudan Radio	Voice of Eastern Equatoria	Voice of Kajo-Keji	Yambio FM	Wau FM
Rabea										
DDR/CPA/Referendum	6.5	49.5	5.8	0.3	2.5	6.8	8.0	2.8	8.6	8.3
Maths/English	5.8	40.4	5.8	0.6	6.4	1.3	7.1	10.9	5.8	14.7
General literacy	6.8	47.9	6.8	1.4	0.0	13.7	9.6	6.8	1.4	2.7
De-mining/HIV	30.0	40.0	10.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0
RABEA for Beginners	11.5	46.2	11.5	0.0	0.0	0.0	19.2	0.0	3.8	3.8
Learning Village										
DDR/CPA/Referendum	4.6	52.8	3.4	1.8	5.2	2.1	5.7	2.7	17.1	3.9
Mathematics	4.0	46.6	5.3	8.7	6.2	2.2	8.2	7.9	4.8	3.4
English	3.8	45.4	5.0	7.6	8.6	1.5	9.0	7.9	4.5	2.7
English literacy	4.7	57.8	2.3	1.6	10.2	1.6	1.6	0.0	14.8	3.1
De-mining/HIV	5.0	60.8	2.2	4.7	5.3	4.4	9.7	0.3	3.3	1.9

With regard to the pattern of listening to SSIRI programs, findings revealed that almost all people who had listened reported that they were listening to the lessons either between 9:00-11:00AM or 3:00-3:30PM which was in conformity with the correct broadcasting times. There was evidence that the majority of people were listening to the lessons frequently. For instance, for all the Learning Village lessons, more than two-thirds of people who reported having listened belonged to the group that would listen to program on a daily basis.

The remaining proportion (between 13-21%) reported that they would listen once a week while the proportion that listened less frequently i.e. once a month and once a year was really small. Similarly, more than half of listeners to *Rabea* subject areas and lessons frequently listened on a daily basis. Further, findings revealed that the majority of listeners would listen to the entire broadcast or lesson from start to the end. For all the lessons under the Learning Village, over 60% of listeners would always listen to the lessons up to the end. This leaves 23-31% who would never complete the lessons and 4-10% who would never go beyond the theme of the lesson.

Table 26: SSIRI lessons listened to and reported frequency of listening

Subject Areas /Lessons	DDR/CPA/Ref erendum	Maths/English	General literacy	De-mining/HIV	RABEA for beginners		DDR/CPA/Ref erendum	Mathematics	English	English literacy	De-mining/HIV
	<i>Rabea</i>						Learning Village				
	(%)	(%)	(%)	(%)	(%)		(%)	(%)	(%)	(%)	(%)
<i>Frequency of listening to lesson</i>											
Once a day	63.6	60.3	48.5	55.6	54.5		75.0	76.2	74.7	70.7	68.8
Once a week	29.6	22.1	30.3	11.1	18.2		19.2	16.9	17.6	13.0	20.8
Once a month	1.8	5.9	6.1	22.2	0.0		0.0	0.3	1.4	5.7	1.6
Once a year	0.3	0.0	0.0	11.1	4.5		0.5	0.0	0.3	1.6	0.3
Less often	4.8	11.8	15.2	0.0	22.7		5.3	6.6	6.0	8.9	8.5
<i>Proportion of lesson/broadcast listened to</i>											
Listened to end	65.4	69.6	73.9	71.4	66.7		70.5	66.0	60.8	61.2	66.9
Listened halfway	30.4	25.4	18.8	0.0	25.0		23.3	28.0	31.4	28.1	25.4
Stopped on theme	3.3	3.6	5.8	28.6	8.3		4.3	4.0	5.2	9.9	5.5
Other	0.9	1.4	1.4	0.0	0.0		1.9	1.9	2.6	0.8	2.3
<i>Quality of radio signal when lesson was being broadcast</i>											
Clear	69.1	71.6	67.6	-	62.5		78.0	85.3	83.9	75.4	76.8
Fair	28.8	24.8	30.9	-	37.5		21.0	14.7	15.7	23.8	22.6
Poor	2.1	3.5	1.5	-	0.0		1.0	0.0	0.4	0.8	0.6
<i>Last time listened to the lesson:</i>											
Today	32.4	47.6	44.1	14.3	45.8		38.3	39.5	38.0	29.1	32.7
Yesterday	31.5	23.8	19.1	42.9	33.3		27.0	21.4	21.7	27.6	23.1
Within one week	19.8	17.5	27.9	14.3	4.2		19.8	19.0	20.7	14.2	20.5
1-3 weeks ago	7.2	4.9	5.9	14.3	0.0		4.8	4.8	6.6	7.9	8.3
3-4 weeks ago	6.3	3.5	1.5	0.0	16.7		3.4	6.1	5.2	4.7	5.8
Over 4 weeks	2.7	2.8	1.5	14.3	0.0		6.7	9.2	7.9	16.5	9.6

Over three quarters (75-85%) of listeners for the various lessons under Learning Village and over 60% for the *Rabea* subject areas and lessons, reported that the radio signal were always clear when the lessons were being broadcast. Very few (less than 5%) reported experiencing poor radio signals at the time lessons were being broadcast. The other proportion observed that the signals would not be entirely clear but fairly clear.

Listenership to the various SSIRI lessons and/subject areas was still high at the time of conducting this survey. For all the Learning Village lessons, a third of listeners reported the day of the survey as the most recent time they had last listened to any one of the lessons. About a quarter for some lessons and slightly over a quarter for others had last listened a day before the survey. The remaining proportion (between 14-20%) reported that they had last listened about a week prior to the survey. The pattern of listenership is similar for listeners to *Rabea* subject areas and lessons, in which majority had either last listened a day prior to research team’s visit or had just finished listening to the lessons that day of the visit.

11 EFFECTIVENESS OF SSIRI PROGRAMS

11.1 Message recall and take-out

The survey shows that SSIRI radio programs have been quite beneficial in facilitating learning, participation in discussion of important issues of governance such as the CPA, referendum and DDR as well as in complementing classroom instruction. A fair proportion of the respondents who had listened to either the *Rabea* or Learning Village lessons acknowledged that the lessons were beneficial to them. The level of effectiveness is reflected in the rate of reported message recall and take-out among listeners. As can be seen in Table 27, information recall for both *Rabea* and Learning Village lessons was quite high. Without prompting, 71.4% of people who had listened to Learning Village lessons recalled listening to lessons about “*Greeting*” i.e. how to greet in the morning, in the afternoon and in the evening. An equally large proportion of listeners to *Rabea* programs (66.2%) also spontaneously recalled listening to a lesson on “*Greeting*”. The rate of reported recall was impressive for many of the topics, subject areas or lessons broadcast.

Table 27: Proportion of listeners that recalled being taught the various SSIRI lessons

Topic recalls being taught	Learning Village		Rabea	
	Spontaneous (%)	Prompted (%)	Spontaneous (%)	Prompted (%)
Greeting	71.4	21.7	66.2	20.2
Asking for names	53.1	33.9	52.1	24.6
Alphabetical letters (sounds)	45.5	32.6	44.7	28.0
Reading words & sentences	34.5	39.9	36.1	28.2
Speaking	56.1	31.7	49.1	28.4
Reading and writing numbers	30.5	35.0	25.4	27.3
Counting numbers	35.3	29.2	28.5	20.0
Addition & subtraction	37.1	28.0	30.7	16.5
Multiplication & division	32.9	27.0	23.6	15.4
Weights & measurements	11.7	19.3	22.1	11.6
Reading the clock	16.2	23.5	19.4	14.0
Labeling	5.1	16.5	19.1	9.0

11.2 Knowledge of SSIRI Radio Programs Characters

The high reported rates of message recall could be attributed to the program design. It should be remembered that for instance, the lessons under the Learning Village program were delivered in an engaging manner by Southern Sudanese actors who portrayed characters that lived in a fictional learning village.

Findings reveal that the lessons were delivered in an engaging manner. This was reflected in the high knowledge levels regarding SSIRI radio program characters for both the *Rabea* and Learning Village lessons. The most commonly remembered character in the Learning Village broadcasts was Madame Roda: 56.5% reported remembering her among the characters. The other most remembered radio characters were Khemis, and Mimi and Bobo: these were remembered by 21.9% and 19.4% respectively (Table 28). With regard to *Rabea* programs, the most commonly remembered characters were Keji and Kaka: 39% and 32.8% respectively.

Table 28: Knowledge of SSIRI radio characters and assessment of their performance

Radio characters	No. of Respondents (n)	Percent (%)
<i>Proportion of respondents that remembers Radio characters for learning villages programs</i>		
Mimi & Bobo	268	19.4
Khemis	302	21.9
Jessica	228	16.5
Madame Roda	781	56.5
Other	181	12.7
<i>Proportion of respondents that remembers Radio characters for Rabea programs</i>		
Kaka	139	32.8
Adwok	87	19.5
Ayen	81	17.2
Chike	44	10.0
Jada	90	20.3
Jok	60	12.8
Keji	188	39.0
Others	31	6.9
<i>Proportion of respondents that thought Radio characters were eloquent or easy to understand</i>		
Eloquent	1385	94.9
Not eloquent	74	5.1
<i>Assessment of English language used in the SSIRI lessons</i>		
Easy to understand	796	57.3
Fairly easy	540	38.8
Difficult to understand	54	3.9

The program characters were greatly appreciated by the listeners for their eloquence, which reportedly has made it easy for the listeners to understand with ease the lessons broadcast. Findings revealed that 94.9% of all people who had listened to the SSIRI radio programs acknowledged that the radio characters were eloquent. More than half (57.3%) of the people who had listened to the broadcasts reported that the English language that was used in the SSIRI lessons was easy to understand. Another 38.8% reported that the English language that was used was fairly easy to understand. This implies that only 3.9% found the English language used difficult to understand.

11.3 Reported effectiveness of SSIRI Programs

Effectiveness of the various subject areas and lessons under the SSIRI radio programs was reflected in the high proportion of people who had listened to the lessons. They acknowledged that the lessons or subject areas had either fully or fairly fulfilled their personal and educational goals and ambitions. As seen in Table 29, 67.5% of people who had listened to mathematics and English lessons under *Rabea* acknowledged that it had fully fulfilled their personal goals and ambitions. Similarly, 59.5% acknowledged that it had fully fulfilled their educational goals and ambitions.

With regard to people who had listened to lessons focusing on the issue of DDR, CPA and the referendum of Southern Sudan under learning villages, 70.3% acknowledged that it had fully fulfilled their personal goals and ambitions. Similarly, 66% acknowledged that it had fully fulfilled their educational goals and ambitions.

Table 29: Listeners rating of the Performance of SSIRI Programs in delivering expectations

Subject Areas /Lessons	DDR/CPA/Ref erendum	Maths/English	General literacy	De-mining/HIV	RABEA for beginners		DDR/CPA/Ref erendum	Mathematics	English	English literacy	De-mining/HIV
	Rabea						Learning Village				
	(%)	(%)	(%)	(%)	(%)		(%)	(%)	(%)	(%)	(%)
<i>Extent to which listeners personal goals/ambitions were fulfilled by lessons</i>											
Fully	65.3	67.5	39.8	53.8	40.5		70.3	56.2	53.6	53.3	60.3
Fairly	32.7	29.1	50.0	43.1	54.1		28.1	41.3	43.7	36.7	37.8
Not at all	2.0	3.3	10.2	3.1	5.4		1.6	2.5	2.7	10.0	1.9
<i>Extent to which listeners educational goals/ambitions were fulfilled by lessons</i>											
Fully	46.4	59.5	40.2	54.8	52.6		66.0	50.1	47.8	46.3	53.7
Fairly	45.3	37.3	39.1	38.7	34.2		31.2	46.8	48.6	42.9	42.1
Not at all	8.3	3.3	20.7	6.5	13.2		2.8	3.1	3.7	10.9	4.1
<i>Listeners rating of the performance of lessons in delivering expectations</i>											
Very poor	5.9	2.7	5.8	0.0	0.0		3.5	1.3	2.0	4.8	1.9
Poor	4.1	2.7	4.7	1.6	0.0		1.4	1.5	1.2	4.8	2.2
Neither	12.9	5.4	11.6	14.3	15.8		5.4	4.5	3.8	5.5	6.9
Good	64.2	68.0	61.6	61.9	55.3		65.5	69.4	65.5	55.5	62.6
Very good	12.9	21.1	16.3	22.2	28.9		24.2	23.2	27.6	29.5	26.4
<i>Amount of interest held about the lessons</i>											
Not interested	7.4	4.7	3.5	4.7	12.8		1.2	2.7	2.0	10.6	2.7
Undecided	10.3	9.3	15.1	12.5	10.3		7.4	3.1	3.3	11.9	4.6
Interested	82.4	86.0	81.4	82.8	76.9		91.4	94.2	94.8	77.5	92.7
<i>Extent to which lessons held attention:</i>											
Not at all	3.9	2.7	9.3	3.2	10.3		1.4	2.7	2.2	9.9	1.9
Fairly well	20.6	19.3	26.7	19.0	23.1		23.7	14.0	12.3	14.5	14.9
Well	41.2	45.3	31.4	44.4	23.1		42.7	54.3	46.7	40.1	44.3
Very well	34.3	32.7	32.6	33.3	43.6		32.3	29.0	38.8	35.5	38.9

The extent of effectiveness of the information from the *Rabea* and Learning Village lessons is further reflected in the listeners' rating of the lessons in delivering expectations. Findings presented in table 31, showed that over three-quarters of listeners, in their rating, indicated that the lessons had delivered to their expectations. According to them, the lessons were explicitly good, a few (<10 per cent) had a varying view. This is also reflected in the proportions that acknowledged that they were fully interested in the lessons and that the lessons had a strong captivating effect enabling them to hold listeners' attention for the entire period of the broadcast. There was reported near universal acknowledgement among listeners of Learning Village lessons, that the lessons were really interesting. For all the subject areas and lessons under *Rabea* and Learning Village, over two-thirds (66%) of listeners acknowledged that the lessons were interesting and would hold their attention throughout the broadcast.

Perceived benefits drawn from the lessons by SSIRI listeners were another measure used to determine extent of effectiveness of the programs. Findings revealed that the programs were to a great extent effective. For instance, the fact that 65.1% of listeners reported having learnt how to speak English from listening to the lessons showed how effective the programs were. Further, more than half (52.1%) of Learning Village listeners had reportedly attained higher proficiency in English, a credit they attributed to listening to the English language lessons. See Table 30.

Table 30: Reported benefits obtained by SSIRI programs listeners

Benefits obtained	Learning Village	<i>Rabea</i>
	(%)	(%)
Learnt how to speak English	65.1	34.1
Improved my English proficiency	52.1	31.8
Improved competency in mathematics	47.9	33.6
Improved teaching skills	36.4	18.7
Active participation in Peace Process	39.5	56.2
I know my rights better	33.8	42.3
Others	4.2	1.3

With regard to *Rabea* programs, several listeners credited the program for their active participation in the Peace process. Actually more than half (56.2%) reported that listening to *Rabea* programs enabled them actively participate in the peace process. Further, about 42.3% were proud that they knew their rights as a result of the lessons they had listened to under the *Rabea* program.

12 VIEWS HELD BY LISTENERS REGARDING SSIRI PROGRAM

To further confirm the level of effectiveness associated with SSIRI programs in improving people's skills and facilitating learning, a wide range of views on the various subject areas and lessons were sought from people who had listened to them. A comment was sought on whether the listeners found the lessons to be lively and interesting, slow or too fast, educative among other things.

As seen in Table 31, SSIRI program listeners had a wide range of views about the lessons broadcast. But what prominently stood out was that a sizeable proportion of listeners felt that the lessons were lively and interesting except for lessons on de-mining and HIV and AIDS, as well as *Rabea* for Beginners. Only about 3% indicated that the topics or lessons were boring. Several others (*between 11-37%*) held strong beliefs in the lessons: they acknowledged that the lessons were educative except, again, for lessons on de-mining and HIV and AIDS as well as *Rabea* for Beginners. However, several listeners were non-committal on issues like whether the lessons were too slow or fast, too long, entertaining or boring. Several others were unsure whether the lessons were relevant and detailed enough for the listeners.

Table 31: Views held by SSIRI program listeners about the various lessons

Subject Areas /Lessons	DDR/CPA/Ref erendum	Maths/English	General literacy	De-mining/HIV	RABEA for beginners		DDR/CPA/Ref erendum	Mathematics	English	English literacy	De-mining/HIV
	Rabea						Learning Village				
	(%)	(%)	(%)	(%)	(%)		(%)	(%)	(%)	(%)	(%)
Lively	13.6	7.9	6.9	3.3	2.3		10.5	20.6	26.8	-	8.1
Slow	2.1	2.3	1.5	1.3	0.0		1.2	4.7	4.5	-	1.8
Fast	9.2	5.9	4.4	1.8	2.3		4.6	9.2	9.2	-	4.5
Interesting	23.6	12.6	14.1	6.2	3.6		11.7	27.9	28.8	-	13.1
Educative	23.8	11.5	13.1	5.9	4.1		14.9	33.0	37.5	-	19.3
Has good presenters	23.1	8.2	10.5	4.6	4.4		10.8	20.9	24.9	-	13.2
Boring topics	2.6	1.0	1.5	1.3	1.3		2.1	2.4	3.2	-	1.4
Detailed	8.2	1.5	2.6	2.1	1.8		6.7	5.1	6.9	-	5.6
Informative	19.7	7.2	6.7	4.6	3.1		15.3	6.1	11.0	-	12.0
Has fun	6.7	2.6	2.3	2.1	3.6		2.6	8.6	14.5	-	5.0
Easy to understand	16.7	10.8	11.8	5.9	4.9		8.9	21.7	34.7	-	13.0
Entertaining	7.4	4.9	3.8	2.8	1.5		5.1	13.7	16.0	-	9.3
Relevant	7.2	3.6	1.5	3.1	1.5		5.2	9.1	11.5	-	6.5
Too long	1.0	0.5	0.0	0.5	0.3		1.1	3.1	1.9	-	1.1

12.1 Perceptions about Learning Village

This study sought to establish the various opinions held by people who had either heard or listened to the various SSIRI radio programs about the effectiveness of the programs in improving people’s skills, facilitating learning, participating in discussion of important issues of governance such as the CPA, referendum and DDR as well as in complementing classroom instruction.

Findings revealed that overall: there was nearly universal acknowledgement of the positive impact SSIRI programs had had on the listeners. For instance, 91.3% of people *who had heard about Learning Village* acknowledged that the lessons had helped students in Southern Sudan to improve their spoken English. Further, nearly 90% acknowledged sharing the opinion that the Learning Village lessons had greatly helped weak students to understand Mathematics and English. An equally big proportion (86.4%) agreed that the various lessons broadcast under Learning Village had greatly expanded their knowledge levels on various issues. See Table 32.

Table 32: Perceptions held about Learning Village lessons

Statement	Agree (%)	Uncertain (%)	Disagree (%)
Learning Village	%	%	%
Learning Village programs have helped teachers improve their teaching skills	87.4	10.4	2.2
Learning Village programs have expanded my knowledge	86.4	11.8	1.8
Learning Village programs have helped weak students to understand mathematics and English	89.8	6.9	3.4
Learning Village programs have helped students improve their spoken English	91.3	5.9	2.9

12.2 Perceptions about *Rabea*

Similar to Learning Village programs, *Rabea* programs were also highly appreciated in Southern Sudan. For instance, more than 80% of respondents who had heard of the *Rabea* were in agreement that *Rabea* programs had brought about increased participation of people in community activities such as community meetings and mobilization. With regard to *Rabea*'s contribution to people's understanding of the CPA, there was near universal agreement on the important role the program had played: 94% were in agreement that *Rabea* lessons had improved people's understanding of the CPA.

Further, to demonstrate the importance associated with SSIRI radio programs, more than 90% of people who had heard about SSIRI programs were in total agreement with the observation that *Rabea* and Learning Village lessons were very educative and informative. They shared the same opinion with many others that indeed, the programs had benefited a lot of people in their own communities. 74.8% attributed this to the fact that both programs accommodate both slow and fast learners.

Table 33: Perceptions held about *Rabea* and Learning Village lessons

RABEA	Agree (%)	Uncertain (%)	Disagree (%)
<i>Rabea</i> programs have brought about community participation in the community activities such as community meetings and mobilization	82.3	15.2	2.4
<i>Rabea</i> lessons help people speak better English	82.1	12.2	5.7
<i>Rabea</i> lessons have improved people's understanding of the CPA	94.0	2.9	3.0
<i>Rabea</i> lessons have promoted people's participation in elections	89.7	6.1	4.2
Learning Village/ <i>Rabea</i> programs are very educative and informative	92.5	6.6	1.0
Learning Village/ <i>Rabea</i> programs are very entertaining	85.3	10.2	4.5
Learning Village/ <i>Rabea</i> programs have benefited a lot of people in my community	76.7	18.9	4.4
Learning Village/ <i>Rabea</i> programs are accommodative of both slow and fast learners	74.8	18.6	6.7
Learning Village/ <i>Rabea</i> programs do not reach the people who are in need of its services	76.7	18.9	4.4
Learning Village/ <i>Rabea</i> programs use good characters	86.9	11.3	1.8

However, big proportions (76.7%) of respondents who had heard about SSIRI programs were unhappy about the targeting and coverage of the programs. They believed that the programs did not reach the people who were actually in need of their services.

13 REASONS FOR THE EXISTENCE OF NON-LISTENERS

The Learning Village program model runs a 2-hourly broadcast of various lessons on a daily basis from Monday to Friday between 9:00-11:00AM while *Rabea* is broadcast three times in a week between 3:00-3:30PM for a period of 20 weeks per year. The programs as already highlighted in previous sections of this report were broadcast on several radio stations located in several states within Southern Sudan. However, this did not mean that all residents in those project areas would be aware of the programs. This survey sought to establish the factors that hindered some people from getting to know about the program.

Findings revealed that slightly more than half (52.2%) of survey respondents who had never heard of SSIRI programs were people who did not have access to radio. The remaining proportion was of people who had just migrated to those states. However, the majority (87.3%) expressed willingness to listen to the educational programs broadcast under SSIRI. With regard to subject areas or lessons this category of people would be interested to listen to, findings revealed that the bigger proportion (78.8%) without being

prompted, would be interested in topics on DDR, CPA and the Referendum. This was followed by English and English literacy lessons. But among non-listeners who responded after prompting, the bigger proportion (64%) indicated that they would be interested in Mathematics lessons. This was followed by English literacy and English lessons. See Table 34.

Table 34: Willingness among people who had never listened to SSIRI programs to join

Indicator	No. of Respondents (n)	Percent (%)
<i>Reasons that you have never heard about SSIRI programs</i>		
No access to radio	323	52.2
Just migrated to here	132	21.9
<i>Proportion willing to listen to educational programs on radio</i>		
Willing	412	87.3
Not interested	60	12.7
<i>Subject matter or areas/lessons would be interested in listening to on radio (mentioned spontaneously)</i>		
DDR/CPA/Referendum	295	78.8
Mathematics	94	36.0
English	163	58.8
English literacy	165	55.4
De-mining/HIV	111	40.4
<i>Subject matter or areas/lessons would be interested in listening to on radio (mentioned after prompting)</i>		
DDR/CPA/Referendum	81	21.2
Mathematics	150	64.0
English	108	41.2
English literacy	127	44.6
De-mining/HIV	90	39.3
<i>Anticipated benefits of listening to SSIRI programs</i>		
Improve proficiency in English	256	40.7
Improve my proficiency in Mathematics	120	18.1
Improves teaching skills	130	20.8
Fosters active participation in Peace Process	187	30.6
I know my rights better	93	14.7
Others	56	8.8

With regard to day and time of the day non-listeners preferred for broadcasts, findings revealed varied preferences for the various subject areas or lessons. For instance, about a third (35.2%) preferred Sunday for the broadcast of topics on DDR, CPA and the Referendum while others preferred Monday (16.7%), Friday (16.4%) and Saturday (14.5%). But with regard to mathematics lessons and others like English and English literacy, the same group of non-listeners chose Friday, as the preferred lessons should be broadcast. However, what prominently stood out was that there was nearly no preference for mid-week days i.e. Tuesday to Thursday; the majority their days of preference were Friday, Saturday, Sunday and a few Monday. See table 35.

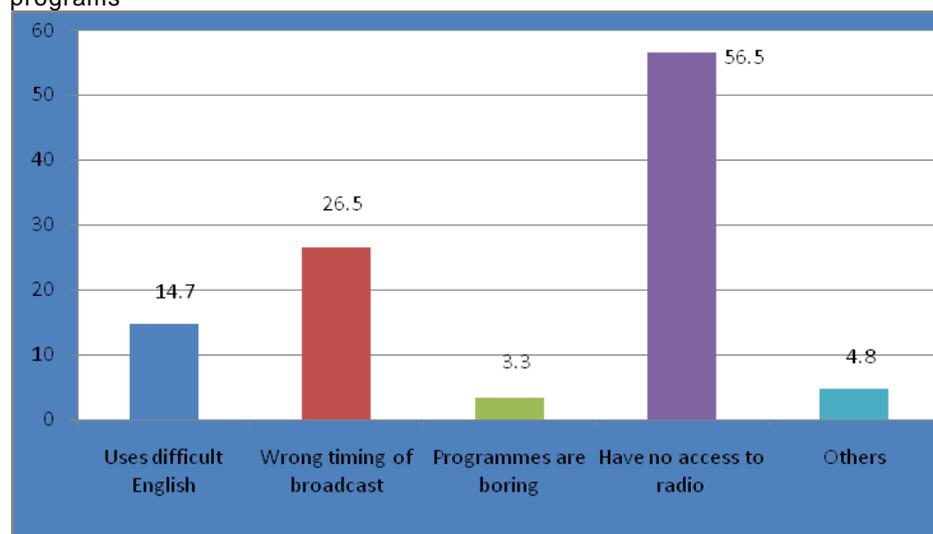
Table 35: Preferred days of the week and time to broadcast SSIRI lessons of non-listeners

Subject Areas /Lessons	DDR/CPA/ Referendum	Mathematics	English	English literacy	De- mining/HIV
	(%)	(%)	(%)	(%)	(%)
<i>Preferred day of the week to broadcast lesson</i>					
Monday	16.7	21.9	15.4	7.1	13.9
Tuesday	4.3	3.9	5.6	4.0	3.5
Wednesday	3.4	9.4	8.6	4.0	3.5
Thursday	2.5	2.3	4.9	3.0	2.1
Friday	16.4	27.3	24.7	23.2	6.9
Saturday	14.5	7.0	12.3	15.2	16.7
Sunday	35.2	11.7	15.4	22.2	41.0
Daily	7.1	16.5	13.0	21.2	12.5

14 RESPONDENTS' SUGGESTIONS

The survey also sought reasons from the respondents as to why some people did not listen to SSIRI programs. As shown in the figure 5 below, the respondents' main reason is that some people lack access to radio (about 57%). Almost 1 of every 6 respondents thinks that use of complicated English during the programs as well as broadcasting the programs when busy with responsibility prevented some people from listening to the programs.

Figure 5: Percentage of people giving various reasons why some people do not listen to SSIRI programs



Respondents were requested to provide suggestions intended to improve both Learning Village and *Rabea* radio programs (table 36). The suggestion given by the highest number of respondents was the issue of distributing radios to the community so as to increase access to the radio programs. The respondents also expressed the opinion that SSIRI programs could be broadcast by other radios within their localities, which either have better signal or are favorite to some people (6%). Other suggestions included community mobilization and sensitization, improved signal and coverage especially in rural areas, using simple English during the programs and increasing the duration of the programs that is more than 30 minutes in case of Learning Village and more than 1 hour for *Rabea*.

Table 36: Suggestions provide by respondents to improve Programs

Suggestion	Learning Village		Rabea	
	Number	Percent	Number	Percent
Provide radios to people in the community	459	33.5%	75	21.1%
Have more radio stations broadcast the programs	95	6.9%	23	6.5%
Increase the duration of the radio programs	73	5.3%	18	5.1%
Improve on the signal in some implementation areas	66	4.8%	14	3.9%
Use simple English during the programs	65	4.7%	39	11.0%
Broadcast the programs at an appropriate time	56	4.1%	25	7.0%
Broadcast the programs in local languages	87	6.3%	25	7.0%
Educate people on the importance of the programs	42	3.1%	11	3.1%
Extend programs to rural areas in Southern Sudan	36	2.6%	10	2.8%
Extend the programs to where there are no FM radios	28	2.0%	12	3.4%
Present programs during evening hours	20	1.5%		
Active representation	16	1.2%		
Incorporate more drama and songs in the programs	15	1.1%		
Advertising more on the radio stations	14	1.0%		
Creating some entertaining topics	13	.9%		
Open English schools	13	.9%		

15 CONCLUSIONS AND RECOMMENDATIONS

Based on the sample for the study, SSIRI programs, particularly Learning Village, have greatly contributed to improved proficiency in English and participation in topical issues critical for the development of Southern Sudan. The programs have been effective in improving people's skills, facilitating learning, participation in discussion of important issues of governance such as the CPA, referendum and DDR as well as in complementing classroom instruction.

The survey has established that there was high level of awareness of the SSIRI programs (73% of the respondents) in the 14 counties reached by the project at the time of the survey. A higher proportion of respondents were reportedly aware of Learning Village (62.2%) relative to RABEA (17.3%). In addition, listenership to SSIRI programs was also found to be quite high. While about 72% of the respondents had reportedly listened to SSIRI programs, 66.2% were still listening to the programs at the time of the survey and 38.8% were consistently listening to SSIRI programs by the survey time (31.6% for learning villages and 8.8% for RABEA). Based on the sample estimate, it was therefore estimated that about 445,936 people were consistently listening to SSIRI programs in the 14 counties with 363,185 people listening to learning villages and 101,140 people listening to RABEA. The majority of the people who were reportedly consistently listening to SSIRI programs at the time of the study were reportedly married or cohabiting, urban dwellers, clearly understanding either Juba Arabic or English or both, and staying in households with radios but not accessing radios elsewhere such as neighborhood.

A very high percentage (over 95%) of respondents who have listened to SSIRI programs reportedly had clear radio signals and less than 5% reported experiencing poor radio signals at the time lessons were being broadcast.

In order to improve effectiveness of the programs and reach out to more people in Southern Sudan, here are some suggestions:

- The target population is provided with radio sets to enable them listen to the programs. Findings revealed that majority (96%) of people who consistently listen to SSIRI programs are from households that had access to a functional radio.
- Mobilize and sensitize the general community about the relevance of the SSIRI programs. Partly, the reason why there are many people who have heard about SSIRI programs but have not listened to them is because they have not been sensitized on their importance. Stimulating more listenership calls for triggered demand for the lessons.
- Work together with existing radio stations to expand the coverage for the programs. Efforts should be made to boost the signal reach for the existing radio stations that broadcast SSIRI programs. Findings revealed that majority of radio stations except Radio Miraya are limited to mostly and in some instances to only the counties where they are located.

APPENDIX 1: SAMPLE SIZE DETERMINATION

For populations that are large, Kish and Leslie's sampling formula has been used to determine the sample size for the surveys. The formula is as follows

$$n = \frac{(z_{\alpha/2} + z_{1-\beta})^2 p(1-p)}{d^2}$$

Where n is the desired sample size,

Z= standard normal deviate, corresponding to (1- α)% confidence level

= Level of significance

(1- β) = Statistical power

d= Variance of the estimate

p= Sample proportion (p) of people who listen to SSIRI programs.

To determine the necessary sample size, there is a large population (more than 10,000) but that the variability in the proportion of Sudanese listening to radio programs is not known; therefore, assume p=.5 (maximum variability). Suppose we desire a 95% confidence level, statistical power of 80% and $\pm 2.1\%$ precision. The resulting sample size is 2,177, which is about 2,200.

Sample size calculation per county using population proportionate allocation-to-size (PPS) methodology

The number of respondents obtained from each county was determined using proportionate allocation-to-size methodology. In this methodology it is assumed the fourteen counties in southern Sudan with population size of N_1, N_2, \dots, N_{14} will provide samples of sizes n_1, n_2, \dots, n_{14} respectively. Thus, the allocation of respondents per state will be proportional if

$$n_i = \frac{nN_i}{N}$$

Where n_i is the sample size of the i^{th} state

n is the total sample size

N_i is the population of the i^{th} state

N is the total population of eligible people for the 4 States