

THE IMPACT OF ICT ON RURAL DEVELOPMENT IN SOUTH SUDAN

CASE STUDY: RIALBEK INTERNET CAFE

BY

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DECLARATION

I Emmanuel Arieche Deng Arieche do hereby declare to the best of my ability and knowledge that this graduation project is none other than my own original work of my words and that it has never been presented to any university or any other institution of learning before.

Signed by.....

Date; 

Emmanuel Arieche Deng Arieche

BIT/19406/72/DF

APPROVAL

This Graduation project has been submitted with the approval of the following supervisor

Signed.....

Date.....

Ms. Kasuubo Esther

LIST OF ACRONYMS/ABBREVIATIONS

❖ ICT	-Information and Communication Technology
❖ IT	-Information Technology
❖ RIC	-Rialbek Internet Café
❖ GOSS	-Government of South Sudan
❖ RDCA	-Rural Development Community Association
❖ NGO	-Non Governmental Organization
❖ MS	-Microsoft
❖ CD ROM	-Compact Disc for Read Only memory
❖ DVD	-Digital Versatile Disc or Digital Video Disc
❖ UOJ	-University of Juba
❖ At'bara	-Atalabara
❖ Th'piny	-Thongpiny
❖ Ny'kron	-Nyakuron
❖ Ny'kma	-Nyakama

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DEDICATION

This graduation project is dedicated to my late father Executive Chief Mr. Deng Arieche Wol who was certainly sure of what his son is capable of doing although God did not want him to witness the highest level of the job well done, and His extended family in general for their tireless support they had given me right from primary school up to now and beyond. The other people on board for this achievement, are the immediate relatives, colleagues and friends whom we have faced common problems, challenges and all the sort of things along the academic treks that brought me/us to the end of this course, especially Executive Chief Mr. Wek Deng Arieche & Mr. Solomon Mathuc Deng (Brothers), Nyolo Daniel Akol, Santino Bol Muoter, Wol Wol Akoon, Kuel Justin Ayok, Simon Deng Akook (Kampala International University companions), Simon Mou Thiik, Agoth Mabior Achuil, Alponse Athuai Madut Ayom, James Bol Reech (Kakuma Teachers' Training College-companions), Brother Denis from comboni brethren (comboni Parents' Secondary School), Atek Lual Achuil, Chok Deng Malueth, the late Longar Yel Akech, Deng Mayar Arieche, Makuei Akoon Ayok, Ahok Ajiek, Liai Ding Liai (Mabior Amaal & Adet primary schools) and all my brothers, colleagues and friends that I have not mentioned. May God grant them peace and prosperity where ever they are.

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ABSTRACT

The impact of ICT on Rural Development in South Sudan as a new State in the World and in the region needs a lot of efforts in place to improve the challenges facing the entire community in the ICT sector both private and public. The only way to overcome these challenges, is to provides the affected population with the standard services of the ICT and be sensitized on how to beneficially utilize these services. In these circumstances, we are talking about the first-hand information needs. The information needs is widely recognized as a right to any person or group of people. This will also help rural communities to catch up with the world in terms of the access and utilization of the information and the Technology that govern the infrastructure.

Although many cultures and ethics undermine the current ICT revolution, the importance of ICT and the need to access the information remain vital. It is due to this impact that the GOSS is responsible to make aware and sensitize its citizens through public and private sectors so that the people of Juba, its suburbs and other towns in South Sudan, should get these professional services in an efforts to develop the rural communities of South Sudan in which RIC is one of the achievements raised so far.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

ICT which stands for Information and Communication Technology is a generic term used to describe a range of technologies for gathering, storing, retrieving, processing, analyzing, and transmitting information. The term is widely used to encompass all forms of computing systems, telecommunications and networks across the world. The term suits all of the technologies involved in communicating with computers that enables e-knowledge and the reinvention of e-knowledge processes.

South Sudan is an underdeveloped part of Sudan which has just recently broke away and became a new independent State in Africa as a continent and the world as a whole. The country had undergone two decades of civil war that led to its people being left behind in terms of knowledge and technological infrastructure of the ICT, however, with six years of interim period, South Sudan managed to put in place a few ICT infrastructures and now in Juba people are able to access some ICT services in the available Cafes such as Passico, Bilpham Telecom, Thongpiny and Rialbek internet Cafe.

Here, the researcher intended to find out how the ICT has affected the access and utilization of internet services in the suburbs of Juba as an emerging city in the face of the world of advancing technology.

1.1 Background

South Sudan is a new nation that had faced so many challenges during the long war and now facing the developmental challenges in which ICT is one of them. The purpose of this study was to identify the level of access and utilization of internet on rural population living in South Sudan. Rialbek Internet Café was created in order to improve the flow of information to rural people living in Juba Suburb, emphasizing on the remote communities. As Community-based, the RIC project is managed by the Rural Development Community Association (RDCA), which was a registered non-government organization (NGO) associated with the Ministry of Rural Development of the Government of South Sudan (GOSS). With the goal of establishing Internet services stations that can be accessed by the majority of Juba residents (which numbered around 1,000 people), RIC was structured into two parts: RIC Management operating in Thongpiny, and RIC Internet station at Nyakama.

VISION

To transform Rialbek Internet Café (RIC) into first hand information Services Infrastructure

MISSION

To promote the use of Internet to enrich the knowledge of the rural inhabitants in information exchange both locally and globally.

1.2 Problem Statement

Rialbek Café has been facing the problem of lack of customers because the people around are not sensitized about the use of ICT services. Due to that, the café does not have a good turn up by the customers which consequently led to the café generating less money in their daily services.

1.3 Objectives

1.3.1 Main objectives

The main objective of the research is to find out why there is low utilization of ICT services at Rialbek Café in Juba.

1.3.2 Specific objectives

- I. To investigate the low turn up of customers at Rialbek Internet Café.
- II. To determine the reasons why the people in Juba are not accessing and utilizing the Internet services.
- III. To discover the underlying reasons why female customers rarely access and utilize the café.

1.4 Research Questions

- a) How can Rialbek Café improve on the utilization of the ICT services?
- b) How can Rialbek Café increase the turn up of the customers?
- c) How can the people of Juba be sensitized about the use of ICT services?

1.5 Scope of the study

Geographical Scope:

This project had only focused on the people of Nyakama where Rialbek Internet café is allocated as far as this study is concerned. The community around this suburb of Juba City is composed of the GOSS workers, businessmen, Juba university students and the local people.

Content Scope:

The study confined itself to the reasons why there is low utilization of ICT services in Rialbek Café.

1.6 Significance of the study

The study helped the people and the available Cafes to improve on ICT services which had provided them with the following opportunities;

1. Sensitized on use of ICT services
2. Fulfilled the information needs of the people around
3. Increased access, utilization and the turn up for the services
4. Improved money making of the available Cafes.

1.7 Limitations of the study

i. Distance;

The residential Area of the researcher was far away from the location of Rialbek Internet Café; it was therefore up to the researcher to struggle for the means of transport to and from the areas of the study. The cost of travelling was equivalent to 2000 Uganda shillings per day.

ii. Time;

The time was really limited to the researcher due to the fact that, report writing started in the middle of May after the last semester examinations early May, 2011. The researcher had to work hard to ensure that the dissertation is compiled within the one month of the holidays such that it is presented in the early days of June, 2011.

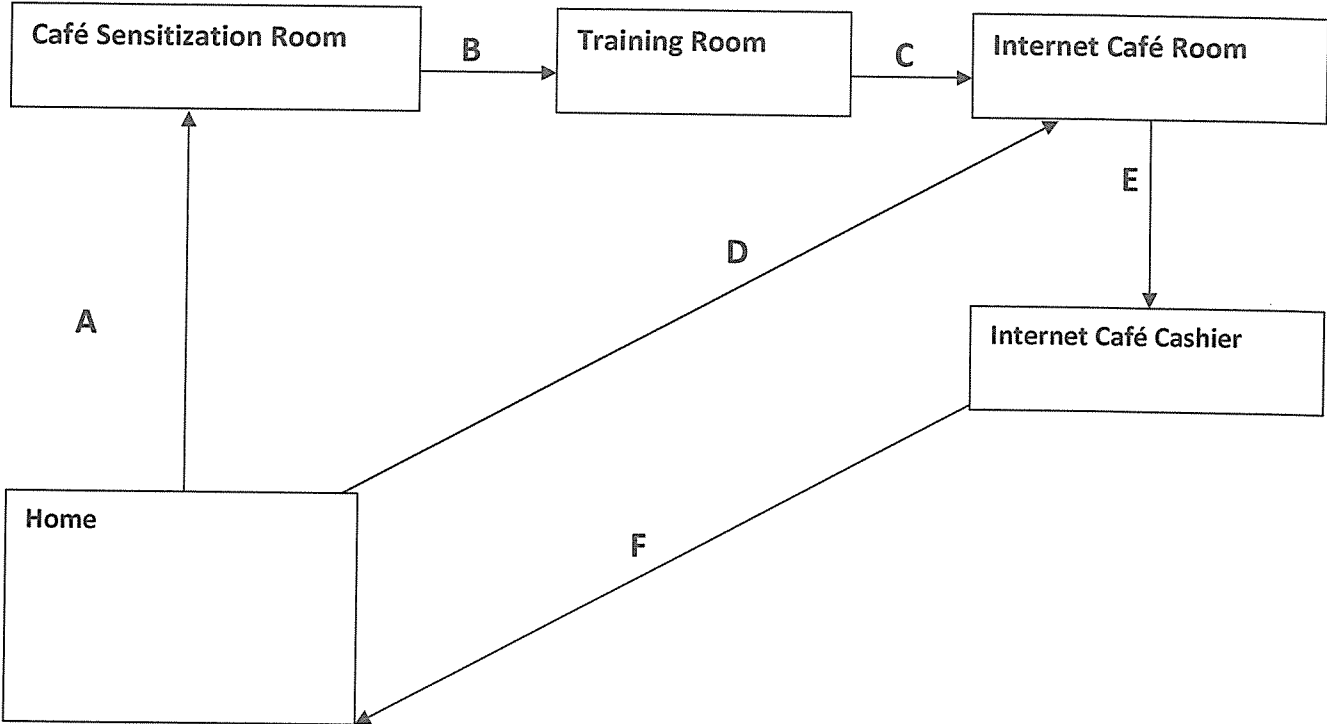
iii. Financial constraints;

The financial constraint was another crucial factor that had jeopardized the process of accomplishing this report because the funds was not enough to carry out the activities as indicated in the budget.

iv. Power problem;

The source of power was one of the biggest problems in the country because the country is relying on the generators since there is no main source of power. The researcher paid the neighbors with a nearby generator to supply power to the laptop computer in order to complete the thesis.

1.8 Conceptual framework



Description of the above diagram

- A)** Customers come from home to Café sensitization room.
- B)** Customers go to Café sensitization room and then to training room.
- C)** Shows customers leaving training room for Internet Café room.
- D)** Customers who are already sensitized and trained come directly from home to Internet Café room
- E)** Customers from Internet Café room must come to Internet Café cashier to pay.
- F)** Shows Customers from cashier back home.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter gave a summary and interpretations of research findings reported by the other researchers in the related ICT impacts on rural development. It also took a deeper look at concepts like ICT, IS, IT related terminologies and the Impact of ICT on Rural Development.

2.1 Information and Communication Technology.

According to Anand Chand & David Leeming (2005) ICT which stands for Information and Communications Technology; is a generic term used to describe a range of technologies for gathering, storing, retrieving, processing, analyzing, and transmitting information. Here the researcher strongly believed that the term is widely used to encompass all forms of computing systems, telecommunications and networks across the world. The term suited all of the technologies involved in communicating with computers that enable e-knowledge and the reinvention of e-knowledge processes.

2.2 Information systems.

According to James (2004) information system referred to any organized combination of people, hardware, software, communication and data sources that disseminate the information in an organization. According to Effy (2002) information system referred to all components that work together to process data and produce information.

Information system is the arrangement of people, data, processes and interfaces that interact to support and improve day-to-day operations in business as well as problem solving and decision making needs of management and users (Whitten, 2001).

Conclusively, Information System refers to a situation which all the components and resources like:- people, hardware, software and communication are organized together in order to produce expected output of a system for a decision making.

2.3 Information Technology.

The term IT represents the various types of hardware and software used in an information system including computer and networking equipments (Gerald 2000).

According to Whitten (2001), IT refers to the contemporary term that describes the combination of computer technology (data, image and voice network).

In conclusion, the term IT refers to the computer technology like printer, plotters, CD ROM, DVD, cables and software like office applications such as Microsoft word, Microsoft Excel, Windows photo viewer and window 7 starter as the operating system that is going to be used to enter data in a Computer.

2.4 The Impact of ICT on Rural Development

According to Anand and David (2005), the impact of ICT on rural development is of great concern to the governments, international humanitarian organizations and the business entrepreneurs. Before you initiate the ICT services, you need to think of environment and the people around so that you would be able to know whether the impact is positive or negative. Therefore, the impact of ICT on rural development was a major concern of the people who were left behind completely and needed improvement on ICT services in order to cope up with constant changes of today's technology.

In relation to the definition above, the impact of ICT on rural development in the two decades war torn region was indeed the sensitization of the local population on the ICT services and having them introduced on how to use the tools involved when dealing with electronic communications.

However, the impact of ICT on rural population differs from one place to another in terms of exposure and that, the impact of ICT on rural development in Uganda could not be compared to that of South Sudan because Uganda as Country was effectively introduced to ICT services since 2000 according to (Enterprise Technology Magazine-Uganda, 2008) which means it is 11 years older than South Sudan in the struggle to establish the services to its people.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter is concerned with methods the researcher had used to get the details of the necessary data, and any other important data needed for the impact of ICT on Rural development in South Sudan. Therefore, methodology here is referred to the techniques that had been used to collect the significant data needed to accomplish this research proposal. It is therefore, of some importance when a good method is used to collect the data, then it becomes easy to analyze.

3.1 Target population

The target population of this research is a population of about one thousand residents composed of both RIC workers and customers as well. Three research methods were used to conduct this study: Interviews, Observation and analysis of the existing data.

3.2 Sample size

A sample of 538 was interviewed from five different residential areas. The sample involved members from all relevant groups in the community: women, young people, students, elderly and key respondents such as community leaders.

Table i: sample size;

Type of respondents	Number
People who currently use or ever used RIC services	251
People who never used RIC services	261
Committee members of the café	21
The operators of the cafe	5
Total	538

3.3 Data Source

The data was collected in the following places in Juba-Nyakama where the RIC is placed and its sub-residences;

1. Nyakama
2. University of Juba
3. Atalabara
4. Kator West
5. Nyakuron
6. Thongpiny

3.4 Data collection Techniques.

The researcher used the methods of data collection such as interviews, the use of existing files and the observation methods because they were cheap and did not expose the respondents to fear.

- a) Interviews
- b) Use of Existing files
- c) Observation

3.4.0 Interviews

Face to face interviews with different set of stakeholders were conducted. The main reasons for selecting the interview methods were its ability to provide in-depth understanding of all the issues involved and an opportunity to derive a great deal of 'rich' data. It was used to collect data from the respondents. Sample questions such as these ones below were used.

- i. What are the problems being faced in making use of this café around here?
- ii. Would you like to be trained on how to access and utilize the internet services?
- iii. What are the problems facing the RIC?
- iv. Is the information access on Internet good?

3.4.1 Observation

The researcher used the method to monitor the common activities of the local people towards RIC and other Cafes. This serves the best conclusion of the whole situation.

3.4.2 Existing Files

The researcher made use of the existing files to extract the important data to identify the problems facing the RIC as well as the community around. Extracting the data from existing files was another good data collection method widely recognized especially when you are dealing with functioning organizations like RIC.

3.5 Data Analysis and Time schedule

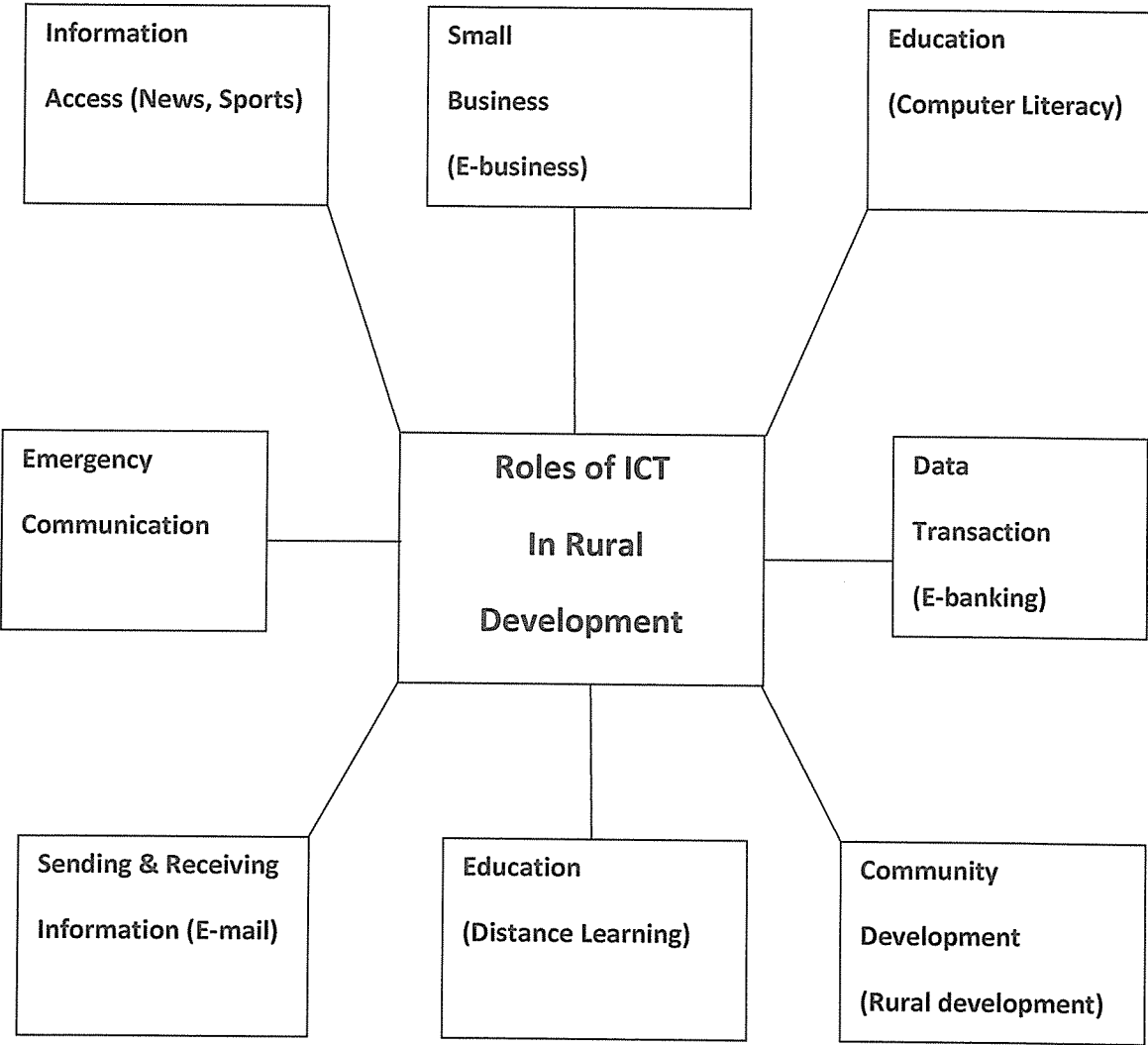
MARCH	APRIL	MAY	MAY/JUNE
14 th to 18 th Submission of the proposal	1 st to 25 th Project data collection began	1 st to 7 th Project data analysis continued	21 st to 28 th Report writing Continued
18 th to 25 th Purchasing of hardware	26 to 31 st Project data collection continued	8 st to 14 th Summarized Project details	29 th to 4 th Summarizing and Conclusion of the Report
26 th to 31 st Setting up hardware & Installation of Microsoft Office 2007/2010		15 th to 20 th Report writing began	4 th to 15 th Submission of the report.

3.6 Performance of the Café

Rialbek Internet café performance in terms of ICT is not hundred per cent because the café lacks a lot of equipment that make a cafe perfect environment. The premise in which the café is located is not a good one for the café’s performance. It is dusty, narrow and uses old computer of Pentium i, ii and iii types of desktop computers.

In order to perform very well in an under-developed areas like Nyakama, one needs to consider the roles of ICT in rural development and the appropriate technology necessary for places like this case study; I therefore avail these roles;

ICT in Rural development and its Roles



3.7 CONCUSION

The methodology chosen made it easy for the data to be collected successfully. The researcher did not face any biasness from the respondents and Café operators as well as the committee members in Juba. The way they had received me and their own perception towards my research revealed that many of the people I had interacted with during the interviews showed their curiosity towards the learning of the new things especially the computer technologies and many other devices.

The other negative impact the researcher had gone through was the problem of the security guards in many government offices in which I had to spend time convincing them to allow me reach the people intended to ask about this project report. It was not easy to correctly explain to the security guards why I should enter into their bosses' office, because many of them are completely illiterate and could not understand what it means in the computer terms.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.0 Introduction

This chapter covered the factors that would be considered when implementing ICT, tools and equipment that would be required for establishing ICT in rural development. ICT has been one of the prime services which needed rapid development and modernization of its services in the rural areas. This would lead to increased expectations to invest in the ICT sector as function prior to increase in the level of ICT in those remote and targeted areas.

4.1 Factors to consider when implementing ICT in Rural Development

4.1.0 Literacy level of a particular community in the rural areas.

It is not always possible and necessary to develop electronic communication system to a community without assessing their education level; therefore it is necessary and one of the factors to consider when implementing the ICT in rural development.

4.1.1 Identification of the right technology

The right technology selecting is another key factor that needed consideration when implementing ICT in rural areas, because one might end up getting the technology which is not appropriate for the environment and the people as well the tools to be used in those areas.

4.1.2 Environment

For one to establish ICT in rural areas, he/she must put into consideration the conducive environment that will be useful for the devices such as computers. This would mean the implementers of the ICT should either rent or construct the premises that enable good environment in order to achieve the ICT implementation in the target rural areas. So the welfare of the environment in which to implement is highly rated as factor to consider when establishing ICT in remote areas.

4.2 Tools and Equipment required for ICT in rural development

4.2.0 Source of power (generator)

South Sudan is a new born country in the world as general, Africa as a continent and East Africa as region, the country has been in crisis since the independence 1956 from British colony, and

particularly the southern part of the country remained underdeveloped since that time. Therefore, South Sudan as an emerging country does not have power source of its own. The government, organizations and companies depend on the generators to run their activities, so if one has to implement ICT in pursuit to develop rural inhabitation, then a generator is one of the tools or other equipment required for the ICT in Rural Development.

4.2.1 Hardware and Software

Tools and other equipment required for ICT implementation in rural development include computers and other electronic devices such as photocopying machines, scanners, printers, network devices, soft wares necessary for the project, cleaning equipment and electronic security systems to help increase the productivity of the organizations.

4.2.2 Sitting Furniture & Teaching Materials

The sitting furniture and the tables for the computers are other important things one would need to put in place when implementing ICT in rural development projects. The computers are delicate materials that need to rest on flat tables as well as the people who operate them need to sit on chairs.

Before implementing ICT on rural areas, it is always the task of the project stakeholders to assess the literacy level of that particular community on computers, but here we are talking of rural development which implies training the beneficiaries is one of the top priorities, therefore, teaching materials are also basic requirements for the ICT implementation.

4.3 Analysis of the Empirical Data

Table1: Services known to respondents in the station amongst the ‘users’

Specify known services	Nyakama	Atalabara	Kator	Thongpiny	Nyakuron	Total	Total/grand total*100%
E-mail, printing	44	52	46	50	45	237	94.4
News	3	0	0	0	0	3	1.2
Facebook	0	0	3	0	0	3	1.2

Typing	2	0	0	0	0	2	0.8
Radio	0	0	1	0	0	1	0.4
No response	4	0	1	0	0	5	2.0
Total	53	52	51	50	45	251	100

The majority of the respondents knew about Emails, typing and printing and they have the bigger percentage meanwhile news, radio and Facebook fell under very low percentage.

Main Reasons for use and non-use of RIC services.

Table 2: Main purposes of using RIC net

Main purpose of using RIC Net	Nyakama	Thongpiny	UOJ	Kator West	Nyakuron	Total	Total/grand total*100%
Communication with family and friends	43	44	49	46	37	219	46.7
Education	16	30	16	16	13	91	19.4
Business purposes	13	14	8	8	13	56	11.9
News	8	1	7	5	3	24	5.1
Learning computers	0	14	1	0	4	19	4.0
Study	2	3	5	1	4	15	3.2
E-business	1	11	0	0	2	14	3.0
Jobs searching	1	2	3	0	3	9	1.9
Travel	4	1	1	0	0	6	1.3

Women's issues	0	3	0	1	0	4	0.9
Sports	0	3	0	0	1	4	0.9
Correspondence	0	0	0	0	3	3	0.6
games	0	2	0	0	0	2	0.4
Others	1	0	1	0	1	3	0.6
Total	89	128	91	77	84	469	100

For their second ranked reason, around 20% indicated education purposes, 47% indicated communication with family and friends, and 12% indicated business purposes. For their third ranked reason, 12% indicated business purposes and 4% playing of games. The interviewees were then asked how many of them were not currently using the RIC services and the reasons for it. The results show that 11% of the population was not currently using Rialbek services according to the data below. Of these, 41% said they had no idea of how to use emails; 26% said they had no message to send; 19% said they had no money and 8% used other means of communication. The 'other means of communication' was cellphones and to (a limited extent) newspaper.

Table 3: The table shows the results of the interview from the interviewees for not currently using Rialbek services in different villages around the café.

Why are you not using RIC now?	Nyakama	University of Juba	Nyakuron	Total	Total/grand total*100%
I don't know	2	7	2	11	40.7
No message to send	6	1	0	7	25.9
No money	2	2	1	5	18.5
Have other means	1	0	0	1	3.7

of communication					
The person to contact has no email	1	0	0	1	3.7
Send message through phone	1	0	0	1	3.7
No Response	1	0	0	1	3.7
Total	14	10	3	27	100

Amongst those that are not currently using RIC services, it was found out that 41% do not know how to operate the services, while about 19% know how to do it but lacks the money to pay for the services and 26% has no message to send or no friends to communicate with. The rest of the means of communication, no e-mails, use phones and no responses have got equal percentages of about 4% each. See table 3 above.

Table 4: Types of services consumed by RIC station

What services do you use?	Nyakama	UOJ	Nyakuron	Kator west	Atalabara	Total	Total/Grand total*100%
Send and receive emails	52	52	51	49	44	248	60.
Send and receive news reports	9	21	22	5	16	73	17.8
Typing	10	18	11	18	11	68	16.6
Search for information	1	5	5	2	3	16	3.9
Others	1	0	0	1	3	5	1.2
Total	73	96	89	75	77	410	100

The RIC groups were also asked to indicate the types of services they deliver to their clients and the results are shown in Table 4, A high proportion of the respondents “(60%) indicated that they use e-mail services, 18% use it for news and 17% use it [or typing services As the results show that the majority of the respondents use the stations to send and receive emails, then we can say that RIC station was almost fulfilling their objective in providing the customers with contact with the outside world via email. This is important because in the absence of other forms of communications, the RIC community email station was the only link with the outside world, either to ensure public services, education, or essential contacts with family and professional peers.

Once again these results indicated that, to some extent one of the objectives of RIC —; To Access the information needs to rural areas — is being met. However, more awareness work is needed to be carried out to promote the ICT service, as majority of the respondents do not use it for lacking knowledge to use it.

Table 5: Likelihood of ‘never use’ or will use RIC in future

Are you likely to use RIC in future?							
Opinions	Nyakama	UOJ	Nyakuron	Kator West	Atalabara	Total	Total/Grand Total*100%
Yes	45	40	20	35	30	170	65.1
No	12	8	6	8	6	40	15.4
No response	14	12	23	1	1	51	19.5
Total	71	60	49	44	37	261	100

Use of Rialbek services by women

One of the aims of the research was to find out the low turn up of women. The results are shown in Table 6. The research findings from the user-log data (recorded over 4 weeks of research) show that on average 25% of users are women. Thongpiny with the highest percentage of women users with 40%, Atalabara with 30%, Nyakuron (16%) and Nyakama (14%).The table 6 below gave the details;

Table 6: Use rate by gender in the RIC services

Residents	Male	Female	Respondents/total*100%
Thongpiny	53(60%)	36(40%)	89
Atalabara	75(70%)	32(30%)	107
Nyakama	68(86%)	11(14%)	79
nyakuron	36(84%)	7(16%)	43

The research findings from the table above showed that the number male users and their percentages very high in each case and the surrounding villages of the Rialbek Internet Services. Reasons of low turn up of women are shown in the tables below. Women's use of Rialbek services varies quite significantly, not only the distance to the station but also the knowledge and time to use the services is really limited.

Table 7: Reasons why women do not use RIC services (multiple responses)

Reasons	Total	Total/Grand Total*100%
Don't know how to operate computers	62	25.4
Too far from my Residence	47	19.3
Do not have the need to use it	46	18.9
Using other types of communication	20	8.2
Not aware of RIC services	9	3.7
Too expensive	4	1.7
Don't like it	2	0.9
Other reasons	54	22.2
TOTAL	244	100

The results showed that 25 % of the women populations do not know how to operate computers, around 19.3% reported that the station was too far from their village and another 18.9% reported that they do not need to use RIC services.

The survey results from the 'customers' revealed that women use RIC services less than men because many of them do not know how to do it, others said they fear their husband for spending much time in the computer places.

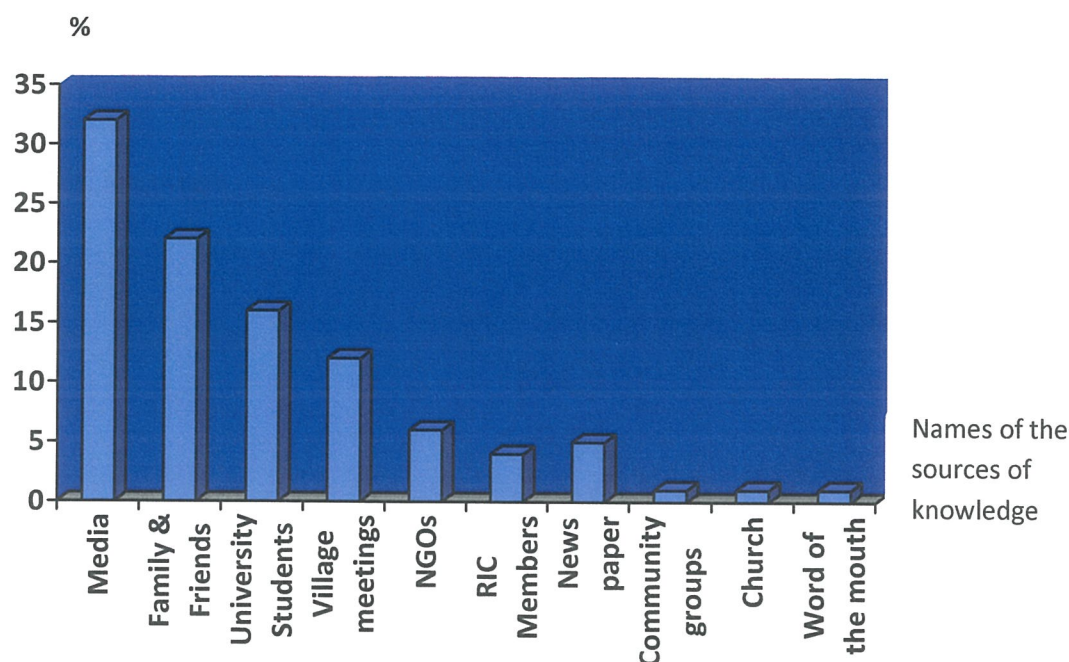
4.3.1 Presentation of Findings

A further question was asked on how users knew about RIC services. The results are shown in the table 8 and the Graph below;

Table 8: How Rialbek customers knew about the Café

SOURCES OF THE KNOWLEDGE	TOTAL	Total/Grand Total*100%
MEDIA	87	32%
FAMILY AND FRIENDS	61	22%
UNIVERSITY STUDENTS OF JUBA	44	16%
VILLAGE MEETINGS	33	12%
NGOs	16	6%
RIC MEMBERS	11	4%
NEWSPAPER	14	5%
COMMUNITY GROUPS	2	1%
CHURCH	2	1%
WORDS OF THE MOUTH	2	1%
TOTAL	272	100%

GRAPH: SOURCE OF KNOWLEDGE ABOUT RIC NET (Table 8: above)

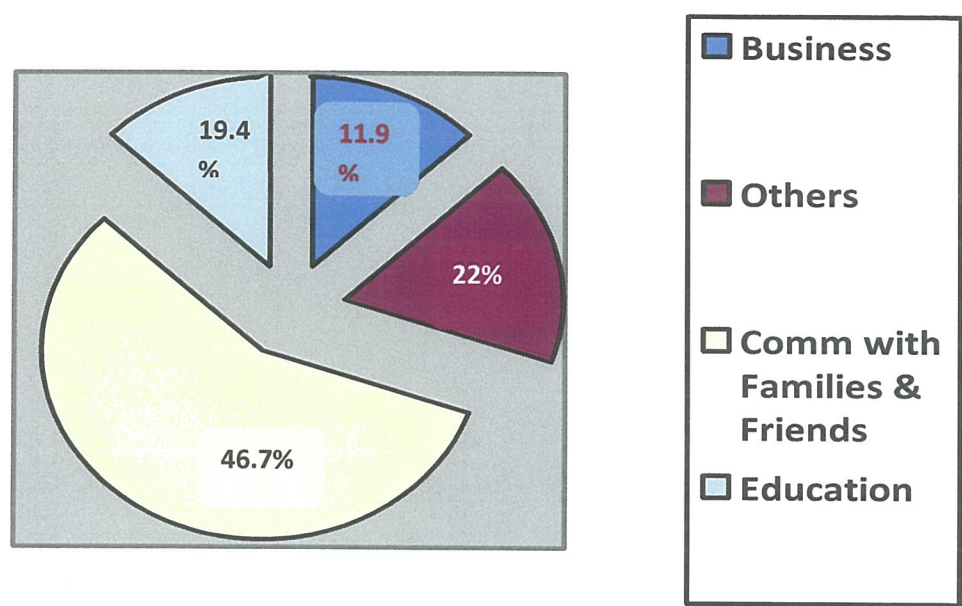


The Rialbek customers learnt about the services from different sources, and the above graph indicated that the media has taken the lead in providing the maximum information about RIC in the community around with 32%, while the families and friends did their best up to 22% of the knowledge sources of RIC services in making their friends and families know about its services.

Others were university of Juba, village meetings, NGOs, newspaper and RIC members with 16%, 12%, 6%, 5% and 4% respectively. The community groups, church and the word of the mouth did not perform very well in delivering the information to people who are supposed to use the RIC services. Their poor delivery of the knowledge sources resulted into poor percentage of which the community groups, church and the word of the mouth obtained one percent (1%) each according to the bar graph above.

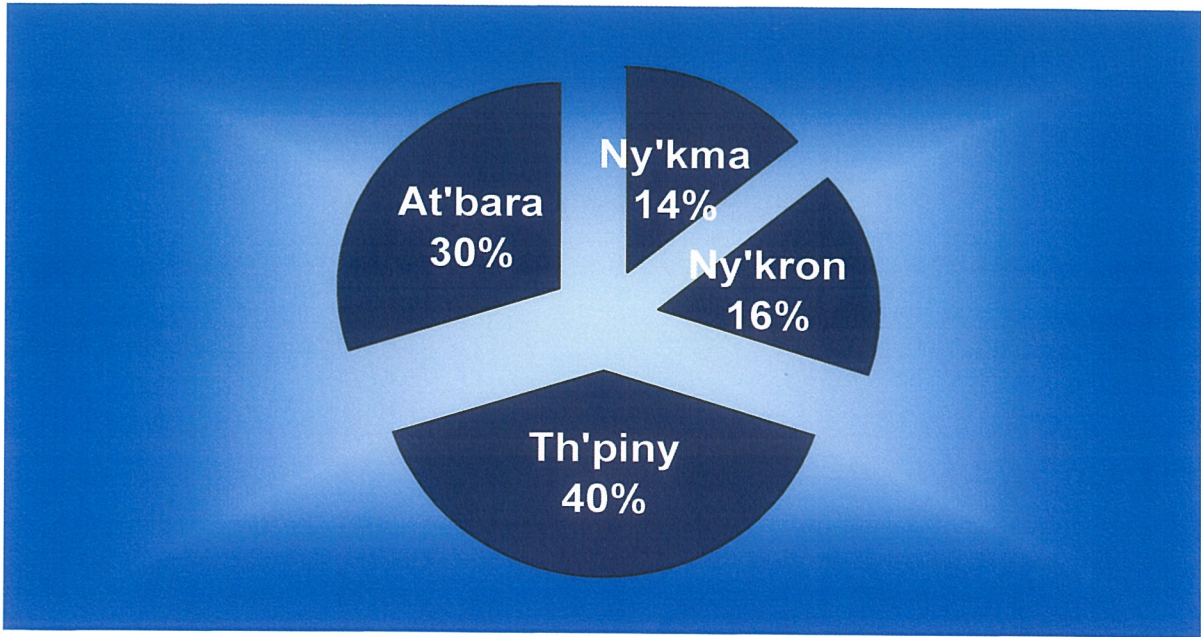
So the media is popularly becoming an outstanding tool of delivering the information to the grass root people when it comes to terms of making the people trust the issue or the services.

The Main purposes of using RIC net are also shown in a pie chart below;



See table 2 on page 16 for the data used

The use rate by female in the RIC net is also represented in a pie chart below;



See table 6 on page 20 for the data use in this pie chart.

Below are some of the RIC pictorials, the project sign post photographed last year in Juba and the inside of the café also photographed during the survey visit in Juba, South Sudan; **Rialbek Sign Post in Juba, South Sudan.**



The inside of Rialbek Café with a single customer photographed 13th, Feb, 2010.



CHAPTER FIVE

DISCUSSIONS, RECOMMENDATIONS & CONCLUSIONS

5.0 DISCUSSIONS

The committee members in Rialbek Internet Café were asked why women use RIC services less often than men. The results were consistent with a lot of the arguments; they suggested cultural reasons, which differed in the five communities according to the strength of their traditional values prevalent there. The south Sudan, where the women's role in public service is greatly restrictive, many women failed to enjoy their right to access the information on the internet.

Another committee suggested that the real reason might be lack of training rather than cultural reasons because not all the communities restricted women from accessing public services. He added that greater participation of rural women in ICT sector might lead to greater demand for communication and networking, tools for establishing the ICT sector in those remote areas.

In Rural areas, basic education was another problem not only to women but also men although the few users claimed standard education in the area of study. Less turn up for RIC services was greatly cited to be lack of awareness, training, and confidentiality.

In terms of the differences among all the users, the low turnout which lead to low utilization was generally viewed as lack of the following to both men and women; Awareness, training, distance to those far from the station, extension of services to rural people.

5.1 RECOMMENDATIONS

Based on the research findings, the researchers formulated the recommendations listed below for stakeholders to consider. The recommendations are divided into two parts: One set of recommendations are for the RIC management and second set are for agencies and governments.

RECOMMENDATION FOR RIC MANAGEMENT

Most of the recommendations in this report are for the RIC management. These recommendations were discussed with the RIC management and since three of them were part of the researcher, they understood the major problems and agreed with the recommendations.

Need for extensive consultation prior to establishment of RIC Services;

1. The RIC management should hold extensive consultations with various stakeholders, namely Residence leaders, elders, etc. in the surrounding residential area before setting up the internet station in the area.

2. Although RIC has a current practice of consulting village leaders, these consultations are not extensive enough to iron out all the issues. For example, a result suggests that RIC station should not be located within the church or medical center, but separately

Selection and monitoring the performance of RIC station committee members by RIC management. Committee members should be selected on merit, and also their interest and ability to spend time doing work for the RIC station,

For example, each RIC committee should have at least one representative from each of the surrounding residential area.

Also representatives should be selected from a wide cross- section of the community, such as elders, young people, students, teachers, medical personnel and, If possible, with gender balance.

1. The RIC Management needs to monitor the functioning and performance of RIC station committee members

2. The research results show that most committees are not functioning properly or are defunct. Clear responsibilities should be provided to committee members and operator on what they are expected to do. Furthermore, RIC Management from Nyakama needs to encourage and motivate the committee members to hold regular meetings, explaining issues such as types of RIC services, advantages of using it, ownership of RIC, etc.

3. There should be guidelines established on action to be taken by RIC Management if RIC station committees do not hold meetings as required under the agreement or if members do not attend. For instance if a member does not attend a certain number of meetings, he/she will cease to be a member

4. The committee members should be designated some specific tasks. A public notice detailing which RIC member is responsible for which task should be placed on the RIC station notice-board, e.g. Mr. Gabriel for confidentiality breach, Ms. Angelina for training.
5. The RIC committee should look into means of transporting urgent messages to people's homes. It was suggested in the study to recruit volunteers, train them on confidentiality and roster them in an organized manner for this task.
6. The RIC Management needs to review the revenue-sharing arrangement with other station committees and operators.
7. To assist the committee, funds should be allocated to pay for the cost of transportation and refreshments. Committee members should have an incentive to sit in meetings and do work for the station. Also, some financial incentive needs to be given to the chairperson and committee members to be more active. This could be a commission or bonus-based.
8. for the station, the RIC Management needs to appoint a contact person 1- who is from the village in which the station is situated to assist with RIC work. The person must be a respectable person and have some influence in his or her rural community.
9. For example, in the case in Passico station which was recently set up, RIC Management has established a contact that is originally from people living and working in Passico. RIC Management utilizes him to talk to people in the station such as the operator and committee members.
10. The contract agreements between RIC Management and station committees need to be reviewed and modified on an annual basis to take into account the developments, roles and RIC services,

Training of RIC station committee members & and operators on their functions and responsibilities;

1. The RIC Management needs to train RIC station committee members and operators on their functions and responsibilities at least once a year
2. An annual training program for RIC committee representatives should be introduced, possibly in Passico, with representatives from all other stations attending together. This meeting will also enable them to share information amongst themselves. The training should

have components dealing with finance management and conflict resolution to empower members to better handling of competitive situations in future.

3. Regular training should be conducted to strengthen the capacity of poorly educated operators. Exchange of programs should be conducted among many other stations to create a network, and to motivate and expose them to different backgrounds, environments and cultures, Training should also focus on people with skills in basic management, IT, accounting, etc. These are issues that they should have some knowledge of, in addition to ICT skills.

Rialbek operators and committee members need to work closely together to iron out problems and better delivery of services to the people;

1. Operators should be selected on merit. Guidelines should be clearly identified by the RIC Management and followed by the RIC station committee members for the hiring process of an operator. This should be transparent to avoid nepotism and resentment by others due to this.

2. The RIC committee members and the operators need to work closely with others to promote the station services.

3. Operators should be members of the RIC station committees in order to be non pro-active in raising awareness, accountability and ownership.

4. Operators must be available at the internet station at the designated times,

5. The research results show that some operators do not open the station on time and are absent in working hours. Operators could be instructed to provide services to extended hours.

5. Operators should be regularly reminded about confidentiality.

7. The research results show that some respondents were afraid that confidential materials would be leaked to the community. Clients should be made aware that there is a breach of confidentiality, there is a complaint procedure. The RIC committee needs to take action when this happens. Procedures should be set such that a certain number of proven breaches will lead to termination of an operator.

9. Operators should take an active role in promoting awareness programs in the locality. They should be well versed with RIC services and hence well placed to conduct the awareness program.

Promoting business activities

1. RIC services should be promoted for business activities so as to help people earn a living. It is expected that business applications will drive up the utilization ever further. RIC should therefore examine ways of stimulating business usage perhaps by raising awareness and training people in new ways of accessing information and opportunities.

Encourage more women to use RIC services

More women should be encouraged to use RIC services. RIC management must target women and raise women's awareness to use the services.

RECOMMENDATIONS FOR DONOR AGENCIES AND SOUTH SUDAN GOVERNMENT

Further Replication of RIC within South Sudan

1. It is recommended that the RIC project could be further expanded to many other places currently having Internet Station within Juba, Relevant stakeholders should be encouraged before the decision is made.

Replication of RIC to the other Towns within South Sudan apart from Juba

1. It is recommended that the RIC project could be expanded to other towns in the Country, however, proper consultation with government authorities and other stakeholders should be carried out before any decision is made. Furthermore, feasibility studies should be conducted before a decision is made to expand this project to the other towns in the Country.

The researcher also believed and recommended that more studies be done on the *RIC Web-Based Information Systems* to help the up-coming learners and the professionals to easily access and utilize the RIC services with no more encounter the poor information systems.

5.2 CONCLUSIONS

This research has examined the impact of Internet (RIC project) on the lives of grass-roots people in South Sudan. Firstly, the researcher examined the extent of access and utilization of RIC services and in particular examined the main issue affecting community uptake and appropriation of RIC services. Reasons for low usage of the Café by women and reasons for the difference in utilization among the internet users in the station. Secondly, the research examined the impact of ICT services on the lives of grass roots people and in particular the issues such as whether the RIC project has improved the lives of rural people, which groups in the communities have benefited most, whether it has brought about training awareness and sustainable resource management, whether it has improved the well-being (including education and access to information needs) of people in RIC project communities and whether it has in any way contributed towards peace-building and reconciliation after the ethnic conflict, and the country war torn region.

The research findings show that RIC has assisted in reducing the digital divide, assisted in the communication facilities for the rural inhabitants, helped students of University of Juba through Google search engine to their assignments and research questions on the internet, assisted NGOs enhanced business activities, find out shipping schedules, interacting with friends, liaise with government officials in Juba, assisted in education and finally) assisted in IT-related issues.

To sum up, the results show that RIC has reduced the digital divide via increased communication between South Sudanese people living in rural areas, urban areas, abroad and overseas.

5.3 APPENDICES

A. HARDWARE REQUIREMENTS

1. One laptop Computer
2. One Printer (Inkjet)
3. Digital Camera 12 mega pixels

B.THE SOFTWARES USED

Microsoft Word

Microsoft Excel

Windows Photo viewer

Internet wares

C. INTERVIEW GUIDELINES

Self-Introduction of the interviewer and the interviewees

Brief explanation of the study

Asking of the research questions

Responses of the interviewees

Taking notes of the respondents answers to the questions by the interviewer

Giving thanks and appreciations to the respondents

D. BUDGET

ITEM	SPECIFICATION	DESCRIPTION	AMOUNT	BENEFIT
One Laptop Computer	12 or 15 inch Intel(R) Atom(TM) CPU N450 (Toshiba)	CPU speed 1.66 @ghz, 1.67 @ghz RAM 2GB -CD Rom Drive 48X Max _Hard disk 140 GB -Bus speed (1000hz) -cache size 2MB -system memory	2,000,000 ugx	-Security -Better access -large storage -faster reaction in case of destruction robustness -portable
Transport to and fro.	On land by Bus.	From Kampala to Juba.	600,000 ugx,	Field information is crucial
From resident to the field of study	By taxi	From home to study area	100,000 ugx	
Digital camera	-1gb of speed		700,000 ugx	Easy entry of client photo in the computer -fast
printer	Inkjet printer D3640	Black and colored cartridges and black high yield cartridges	100,000 ugx	
1UPS	APC smart UPS 700	-220-240Volts -4A 4ports cable		Stable in Power and storage to keep Notebook prone during power loss -prevention of data loss

Total Amounts 3,500,000 ugx

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