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The Role of Information and Communication Technology for Gender Equality: The Case of Assosa Zone, Ethiopia

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ABSTRACT

Information and Communication Technologies (ICT) allows augmented flow of information, knowledge, and exposure to the customs, norms and practices of cultures and societies. The main objective of this research is to investigate the role of ICT for gender equality. To attain the objectives of the research study designed through qualitative and quantitative research methods. The findings of the study revealed that more number of the respondents has no awareness about ICT tools. Reasons included for this ignorance are poor electricity supply, limited network coverage, lack of skill/knowledge, shortage of money to buy ICT tools and others.

Keywords: Information and Communication Technology, Gender Equality, Role of ICT for gender equality

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1. INTRODUCTION

A century and more after the industrial revolution, we are in the throes of another major shift in human civilization; the information revolution that has given birth to the information society. The information society is the most discussed phenomena in recent times. New information and communication technologies (ICTs), especially the Internet, have been seen as ushering in a new age. It is also true that the information age is not all rosy; the benefits of this new age have not touched all of humanity, and all its outcomes are not necessarily positive (Gurumrthy, 2004). There is now a shared understanding within the development community that development policies and actions that fail to take gender inequality into account and fail to address disparities between males and females will have limited effectiveness and serious cost implications (Derek and Chen, 2004).

There is a correlation between the level of human development and the prevalence of ICT access and use. Countries with high human development indices prove to have high ICT availability. The rapid growth and development of ICT are creating opportunities for the economic empowerment of the country and its citizenry. However, reactive and short-sighted adaptation of ICT to anchor the country's development strategy and goals is bound to contribute to the creation of new forms of economic and social inequities and greater exploitation and discrimination based on gender.

ICTs allow an increased flow of information and knowledge, increased exposure to the customs, norms and practices of other cultures and societies. This in turn tends to increase awareness of issues surrounding gender inequality. Gender inequality refers to health, education, economic and political inequalities between men and women. Gender inequalities and its social causes, impacts the sex ratio, women's health over their lifetime, their educational attainment and economic conditions. Gender inequality is a multifaceted issue that concerns men and women alike (Mishra and Kiran, 2015). ICTs can be an invaluable tool in positively changing people's attitude, by disseminating educational programs on gender equity. In addition, increased pressure from an informed constituency that are sensitive to gender inequality issues can also induce policymakers to include gender as an important component of their social and economic policies (Derek and Chen, 2004).

The development of infrastructure includes many decisions about the location of facilities, the type of technology, and issues of costs and pricing. Technological aspects can have a tremendous impact on women's access to and use of ICT. It is therefore important to complement the provision of ICT facilities with additional services and training that will build the capacities of women as well as men to act on the information and knowledge accessed through ICT (Natasha, 2003).

The General objective of this research was to investigate the role of ICT for gender equality in Assosa Zone, Ethiopia. And to achieve the main objective the specific objectives were: to describe the awareness of the population about the role of ICT for gender equality, to identify the access of ICT in the study area, to identify the factors affecting the use of ICT and to identify forms of gender inequality.

2. METHODOLOGY

2.1 Description of the study Area

Ethiopia is a country of diverse language, culture, nation, and geographical location. These made Ethiopia one of the multi exquisiteness countries in Africa as well as in the world. Ethiopia has nine regions; Benishangul-Gumuz is one of among the nine regions which found in the western part of Ethiopia with the side of Amhara and Oromia Region. The Region shares common boundaries in the west with the North and South Sudan, in the north-east with the region of Amhara, in the east and south with the Region of Oromia. The Region of Benishangul-Gumuz comprises three administrative zones; these are Metekel, Kamash and Assosa Zones. The study was conducted in two woredas ofAssosa zone namely Assosa and Bambasi woreda. From these two woredas; two kebeles from each woreda was purposively selected. By this, Amba-05 kebele and Abramo Kebele from Assosa woreda and 01 kebele and dabus kebele from Bambasi woreda

2.2 Research design

For this study, descriptive survey research design was used through quantitative and qualitative research method. This was done in order to describe the awareness of the population about the role of ICT for gender equality, identify the access of ICT in the study area, to identify the factors affecting the use of ICT, to identify forms of gender inequality and to discuss the role of ICT for gender equality.

2.3 Sampling Techniques and Sample Size

Benishangulgumuz region; Assosa zone, Bambasi (Dabus and 01 kebele) and Assosa woreda (Abramo and Amba 05) were purposely selected because of the nearness of the university and the town. And the two woredas' ICT, women's affair office coordinators and each kebele administrators were purposely selected for qualitative data. Convenience sampling was used in order to select respondents from each kebeles. It was difficult to survey the entire population because the cost of a census is too high. The three main advantages of sampling are that the cost is lower, data collection is faster, and since the data set is smaller it is possible to ensure homogeneity and to improve the accuracy and quality of the data (David s. Moore and George P., 2005).

The researchers were taking the sample of respondents from the identified woredas' of the kebeles' of community by using the following formula. The woreda's ICT and women's affair office coordinators were purposely selected.

The Sample of the respondents was taken by using the following formula.

$$n = \frac{n_0}{1 + \frac{n_0}{N}}$$

(Kothari, 2004)

Where $n_0 = \frac{Z^2_{\alpha/2} pq}{d^2}$

n= sample size

d= margin of error

N= total number of population

P=proportion population

α= level of significance

q=1-0.7=0.3

Where: d= 0.05

p= 0.7

d=0.05

$$n_0 = \frac{Z^2_{\alpha/2} pq}{d^2} = \frac{(1.96)^2 * 0.7 * (1-0.7)}{(0.05)^2}$$

Based on the formula $n_o = 322$

$$n = \frac{n_o}{1 + \frac{n_o}{N}} = 299 \text{ (sample size)}$$

The target population was the people who leave in the selected kebeles and whose age was greater than 15 years and based on this each kebele population and sample distribution were summarized below.

Table 1. Total Population of the Study and Simple Distributions

Wereda	Kebele	Total Population	Sample distributions ($n_1 = \frac{n*N_1}{N}$)
Assosa	Abramo	950	67
	Amba 05	815	57
Bambasi	01	2010	142
	Dabus	465	33
Total		4240	299

Source (based on Kebele Administrator's office report, 2008/09 E.C)

2.4 Data Source and Data Type

The primary data was collected by using questionnaires and observation from the population of the two woredas of the four kebeles and also by using interview from women's affair office and the ICT office coordinators. Secondary data was collected from available reports, records, published and unpublished documents from the concerned offices. Internet was also used to search research related works and documents required to this study.

2.5 Method of Data Collection

The data was conducted by the enumerator with the presence and supervision of the researcher. For quantitative data, the questionnaire was made; pretested and necessary modifications were made before the actual data collection was takes place. For qualitative data collection, semi-structured interview was used to collect data on the role of ICT in gender equality. The observation check list was also prepared in order to observe the role of ICT in gender equality. The question was translated for those respondents who cannot read and write English language to Amharic language by the data collector and the information from the respondent was filled accordingly. The whole data collection procedure was closely supervised by the researchers.

2.6 Method of Data Analysis

The collected quantitative data was processed using SPSS software version 20.0; in that, descriptive statistics was used to put the result in the form of tables, charts, graphs. Qualitative data was collected and the result of the finding of qualitative data was displayed in the form of narrations, explanations, concepts, and opinions.

3. RESULT AND DISCUSSION

3.1 Demographic Characteristics of the Respondents

Two hundred ninety nine (299) questionnaires were prepared and distributed but one hundred eighty two (182) questionnaires were returned. Therefore, the analysis

and interpretation were made on the basis of the frequency of responses given by those 182 respondents.

The general demographic characteristics of respondents indicate that, 182 respondents were involved in the study. 96 (52.7%) were male and 86 (47.3%) were female, 115 (63.2%) of the respondents were married, 44 (24.2%) were single and 23 (12.6%) were divorced; 72 (39.6%) of respondents were categorized in age range between 20-29 years, 70 (38.5%) of respondents were categorized in the year 30-39, 36 (19.8%) of respondents were categorized in the year 40-49, and 4 (2.2%) of respondents were categorized 50-59 years.

29 (15.9%) of the respondents were illiterate, 52 (28.6%) of the respondents were only the ability to write and read, 16 (8.8%) of the respondents were grade 8^{th} complete, 33 (18.1%) of the respondents were grade 10^{th} complete, 1 (0.5%) of respondent were grade 12^{th} complete, 30 (16.5%) of the respondents were diploma holders, and the remaining 21 (11.5%) of the respondents were bachelor degree holders.

3.2 Awareness of the Population about the Role of ICT and ICT Accessibility

The awareness of the population about the role of ICT on gender equality was identified by measuring their familiarity and usage of ICT tools.

The respondents who were familiar with ICT tools can access information based on their interest and those who can access information might have awareness about the role of ICT for gender equality. Based on the respondents response the result was displayed below.

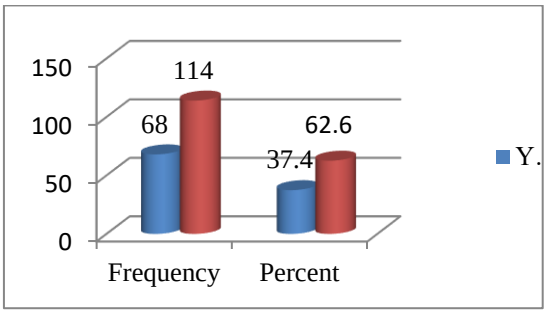


Fig. 1. Respondents Familiarity with ICT

As indicated on the figure 1, 114 (62.6 %) respondents were not familiar with ICT but 68 (37.4%) of the respondents were familiar with ICT.

Table 2. Way of Familiarity with ICT

Way of familiarity with ICT	Frequency	Percent
Through Self-study	7	10.3
Through Friends	7	10.3
Through Training	9	13.3
Through Learning in schools	33	48.5
Through Media	6	8.8
Others	6	8.8
Total	68	100.0

Table 2 shows the respondents were familiar with ICT were through learning in schools 33 (48.5%), through training 9 (13.3%), through self-study 7 (10.3%),

through friends 7 (10.3%), through media 6 (8.8%) and others 8 (8.8%) and also the researchers were interviewed the kebele administrators and wereda ICT coordinators about the familiarity of the people with ICT and they confirmed that there were people who were not familiar with ICT tools.

3.3 Use of ICT for Gender Equality

The respondents were asked whether they know the use of ICT or not and their response was summarized as follows.

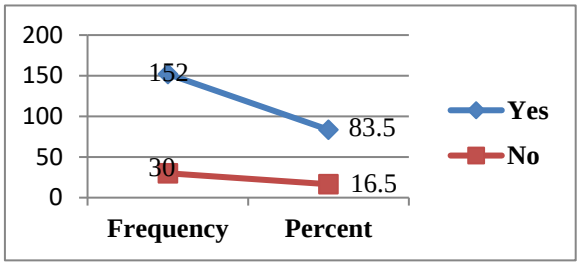


Fig.2. Use of ICT knowhow

As indicated on the above figure 2, 152 (83.5%) knew the use of ICT for gender equality but 30 (16.7%) of the respondents didn't know about it.
According to respondents' response on the use of ICT for gender equality, the respondents who have knowhow the use of ICT, ICT usage summarized as follows.

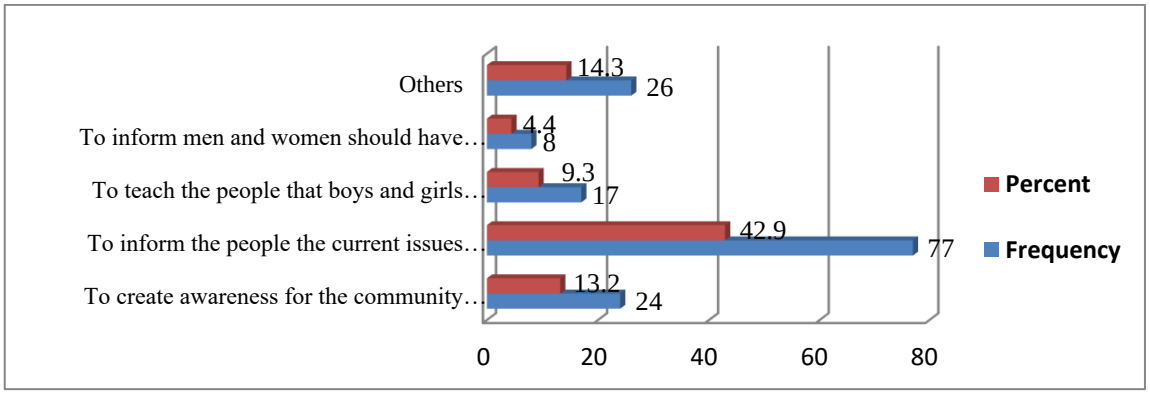


Fig.3. Use of ICT

As indicated on the figure 3, 77 (42.9%) were used ICT to inform the people the current issues what exist in the world, 24 (13.2%) of the respondents used ICT to create awareness for the community about rights and responsibilities, 17 (9.3%) of the respondents used ICT to teach the people that boys and girls have equal opportunity in education, 8 (4.4%) of the respondents were used ICT to inform men and women should have equal payment for similar work and 26 (14.5%) of the respondents were used ICT for other purposes in combination with the listed purposes. The researchers were also interviewed kebele administrators and woreda ICT and gender affairs office coordinators about the use of ICT for gender equality and the answered similar with the above.

3.4 ICT Accessibility

To identify the accessibility of ICT in the study area, the researchers were asked the selected respondents about ICT access.

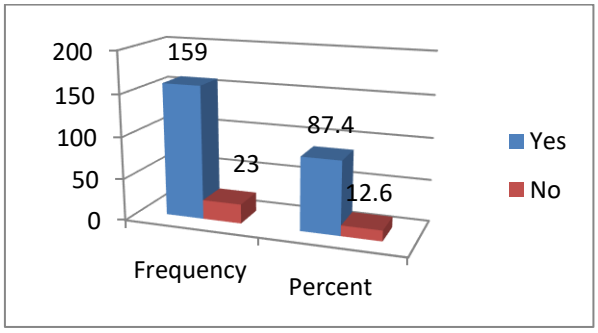


Fig. 4. ICT's Access

As shown on the above figure 4, 159 (87.4%) respondents were said that there was ICT access; whereas 23 (12.6%) of them said as there is no ICT access. For respondents that said there is ICT access in their community was asked which ICT tools were accessible in their community and their answers summarized on the following table.

Table 3. ICT Accesses in the Community

ICT accesses in the community	Frequency	Percent
Radio	77	48.4
Television	21	13.2
Computer Center	2	1.3
Mobile	15	9.4
Others	44	27.7
Total	159	100.0

As indicated on the above table-3, 77 (48.4%) of the respondents said radio was accessible, next 21 (13.2%) television access, 15 (9.4%) mobile access, 2(1.3%) computer center and 44 (27.7%) other ICT accessibilities in combining with radio, television, mobile and computer center.

3.5 Factors That Affect the Use of ICT and Forms of Gender inequality

The following statements were distributed for respondents to identify the factors that affect the use of ICT. Each statement was given value by respondents based on a five level Likert scale as a value of 1 was assigned to 'Strongly disagree', 2 'Disagree', 3 'Neutral', 4 'Agree', and 5 'Strongly agree'.

Table 4. Factors that Affect the Use of ICT

	Frequency	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
There is shortage of money to buy ICT tools	N	9	12	50	60	51
	%	4.9	6.6	27	33	28

Lack of Skills to use ICT tools	N	27	31	33	82	9
	%	14.8	17	18.1	45.1	4.9
lack of Electric power	N	24	31	50	45	32
	%	13.2	17	27.5	24.7	17.6
Limited network coverage	N	37	63	56	24	2
	%	20.3	34.6	31	13	1.1
Lack of time to use ICT	N	62	88	25	6	1
	%	34.1	48.4	13.7	3.3	0.5
language problem to use ICT	N	16	112	35	17	2
	%	8.8	62	19	9.3	1.1

As shown in table 4, 9 (4.9%) of the respondents were selected strongly disagree, 12 (6.6%) respondents selected agree on the statement 'There is shortage of money to buy ICT tools ' and 50 (27%) respondents chosen neutral but 60 (33%) of the respondents were chosen agree and 52 (28%) of the respondents were chosen strongly disagree.

9 (4.9%) of the respondents strongly agreed, 82 (45.1%) respondents agreed on the statement 'Lack of Skills to use ICT tools' and 33 (18.1%) of respondents were selected neutral but the remaining 31 (17%) respondents were disagreed and 27 (14.8%) respondents were strongly disagreed.

24 (13.2%) of the respondents were picked strongly disagree, 31 (17%) respondents were chosen disagree on the statement 'lack of Electric power' and 50 (27.5%) of the respondents preferred neutral, but 45 (24.7%) of the respondents were chosen agree and 32 (17.6%) respondents were chosen strongly agree.

2 (1.1 %) of the respondents selected strongly agree, 24 (13%) respondents selected agree, 56 (31%) of the respondents selected neutral, 63 (34.5%) respondents were disagreed and 37 (20.3%) respondents were strongly disagreed on the statement 'Limited network coverage'.

On the statement 'Lack of time to use ICT', 62 (34.1%) of the respondents strongly disagreed, 88 (48.4%) of respondents disagreed, 25 (13.7%) of the respondents chosen neutral, 6 (3.3%) respondents agreed and 1 (0.5%) respondent strongly agreed.

16 (8.8%) of the respondents strongly disagreed, 112 (62%) respondents disagreed on the statement 'language problem to use ICT' and 22 (22.9%) of respondents had chosen neutral but 17 (9.3%) respondents agreed and 2 (1.1%) strongly agreed. On

this statement some respondents were told for the researchers about language problem. And they said the Broadcast Corporation should increase the airtime of programs dispersed by indigenous language. The researchers were also interviewed the kebele administrators and woreda gender affairs office coordinator to encapsulate the factors that affect the use of ICT in the study area. They said there were lack of enough electricity, limited network, economic factor, and others.
Regarding with the forms of gender inequalities; the respondent's response was tabulated as the following.

Table 5. Forms of Gender Inequalities

What are the forms of gender inequalities	Frequency	Percent
In Education	23	12.6
In health care	8	4.4
Economy	108	59.3
Child preference	22	12.2
Others	21	11.5
Total	182	100.0

As indicated on table 5, 23 (12.4%) of respondents said there was education inequality, 8 (4.4%) of the respondents said there was health inequality, 108 (59.3%) of the respondents said there was economy in equality. Based on the check list also the researchers tried to assess this and most of the people especially female labors were said there was inequality on payment even they were worked more time and more work but paid lower than men (e.g. construction laborers). 22 (12.2%) of the respondents were said there was a discrimination of child based on sex (gender). 21 (11.5%) of the respondents chosen others with a combinations of the above.

3.6 ICT Role for gender equality

In general, ICT includes any communication device or application encompassing radio, television, phones, computers etc. Socially the majorities of developing countries women are still tradition bound and are in detrimental position. if there is ICT accessibility ICT has benefits to empower women through informing the community; for instance through ICT the people can broad cast opinions in positive way about gender equality, can increase mutual relations, can do business, and others. The features of ICTs and its overall benefits for economic development makes it a key component through which gender equality can be improved. Especially in a developing country, this can be a good strategy by inducing policymakers to include gender as an important component to their social and economic policies. In the areas of the industry like health and education, ICT can be more focused on improving the lives of women in more rural areas (Derek and Chen, 2004). Based on the check list the researchers were tried to ask some rural women about the role of ICT in their community; one woman was said like this *'through watching television I have got a lesson by attending 'Chilot' drama weekly on EBC (Ethiopian Broadcasting Corporation) about how a man and a woman can divide their property when they become divorced. But in our community the traditional way of judging the division of property for a man and a woman when they divorced was favored for a man and after I got this lesson, I told for the community and they accepted me. Now in our community we all have equal right.'*

This revealed that ICT/broad cast/ has a paramount importance to teach the people about equality and diverse issues. The government or regional government or zone administrators, or woreda administrators or non-governmental organizations or the concerned body should work on it to add more programs that enable the community/citizen/ to become informed or knowledgeable.

4. CONCLUSION

The findings revealed that 62.6% of the respondents were not familiar with ICT. However, most of the respondents knew the use of ICT for gender equality and more than half of the respondents used radio to get information. Shortage of money, lack of skills or knowledge to use ICT tools, limited network coverage, and lack of electric power, language problem and others were the factors that affect to use ICT in the study area. And also economy inequalities, education inequalities, health care inequalities, child preference and others were the forms of in equalities which were happened in the study area. Hence, the study concluded that ICT tools have a boundless importance to inform the people about gender equality or the rights and responsibilities of the people evidently. The following recommendations are given based on the findings:

i. The stakeholders should work to increase the awareness of the people about ICT.
ii. ICT infrastructures should be fulfilled for rural areas to enable the people knowledgeable about gender equality, the agricultural activities and others.
iii. The airtime of Radio or any other media should be increased that may teach the community including indigenous language.
iv. Governmental organizations, nongovernmental organizations and all the people should cooperatively work to eliminate the inequalities which occur based on gender.
v. To eliminate gender discrimination further research or project is recommended in the region, country.

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REFERENCES

1. David s. Moore and George P., (February 2005) Introduction to the Practice of Statistics. 5th edition. W.H. Freeman & company. ISBN 0-7167-6282-X
2. Derek H. C. Chen, (2004) Gender equality and economic development: The role of information and communication technologies, World Bank Policy Research Working Paper 3285.
3. Gurumrthy A. (2004) Gender and ICTs, Institute of Development Studies. September 2004.
4. Kothari, C.R., (2004) Research methodology: Methods and Techniques. 2nd edition. New Delhi, India: New Age International Limited Publisher.
5. Mishra G, Kiran U. V. (2015). Role of ICT in achieving complete gender equality in India, International Journal of Technical research and Applications, Vol. 3 (3).
6. Natasha (2003). Gender Issues in the Information Society, Paris: United Nations Educational, Scientific and Cultural Organization (UNESCO).