ICT as A Revolutionary Tool for the Local Government: A Case Study of Bhutan

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ABSTRACT

Today in the era of 21st century the concept of Globalization and Good Governance is very prominent amongst the developed and developing countries. To achieve the ideals of good governance, Information and Communication Technology is seen as a boon to reach the level of transparency. The effectiveness and efficiency in work has improved drastically which is one of the most important components of Good Governance. In today's time, any information that a person seeks to receive or any information that the service provider wishes to provide is just a click away. The country of Bhutan, officially known as the Kingdom of Bhutan is a landlocked country in South Asia. The introduction of digital technologies have boosted growth and has enhanced opportunities in various parts of the world, though in Bhutan the introduction of ICT came much later than the neighboring countries. In the current times, the government has enthusiastically adopted the use of ICT to improve the services of its citizens, and now the country is hardly having any organization which is not using the various techniques of ICT whether it's public or a private.

Introduction

Bhutan, also known as the Land of Happiness, The Last Shangri-La, Land of Thunder Dragon and with many other names is a small land lock country with approximately 740,000 (during the time of this study) population between the two giants of the world India and China. Bhutan was always a sovereign independent country and is ruled under the prosperousWangchuckdynasty since 17th of December 1907. Since then the country has undergone lots of transformation but the but in the fields of Information and communication it came from the reign of the third King, His Majesty the King Jigme DorjiWangchuck onwards as he opened the doors of the country to the outside world and it is after that Bhutan got the exposure and started to have the foreign relationships. His Majesty Jigme SingyeWangchuck the fourth King of Bhutan, who ascended the throne when he was just 17 years old, making him the youngest monarch in the world.His Majesty the King Jigme SingyeWangchuck is also the creator of the now internationally known philosophy of "Gross National Happiness" (GNH) for which now people around the world also knows the people of Bhutan as the "happy people". His Majesty the Fourth King voluntary abdicated the throne for his son the present Fifth King DrukGyalpo Jigme KhesarNamgyelWangchuck on 9th of December 2006 and a public coronation ceremony was held two years after that is on 6th of November 2008 also commemorating the 100 years of monarchy in Bhutan and the first parliamentary elections. We the people of Bhutan are very blessed to have such visionary Kings who ruled us with the best of their capabilities and treated every one of us equally no matter to which part or community we belonged to.

Information and Communication Technology (ICT)

ICT which stands for "Information and Communication Technologies." ICT refers to all those technologies which provided direct access to all those information that one requires through different forms of telecommunication. ICT is very much similar to Information Technologies but ICT focuses more on communication technologies wherein people can communicate and share information. This includes the internet, wireless networks, cell phones, radio and other communication mediums.

The modern information and communication technology has made our world a "Global Village", wherein allowing people to communicate with others around the world as if they were their neighbor who is living next door. The term "Technology" is very broad, and every one of us has our ways of understanding its meaning. We use technology to complete our various task in our day to day lives, so, in brief, we can describe technologies as all those product and process used to simplify our daily lives. Technology is also an application of science used to solve problems. But it is vital to know that technology and science are different subjects which work hand-in-hand to accomplish specific tasks or solve problems.

Local Government in Bhutan

The history of formal commencement of ICT in Bhutan can be traced back to as early as 1960's and the counties first telecommunication network service was started in the year 1963 which was followed by radio broadcasting service in the year 1973. With the government scheme of waving of the tax from computer import in the early 2000's, it has like brought a wave of computers to the country and today most of the household where there is a child studying or a parent working you will find a computer. Realizing how important ICT is for the country as a whole a separate ministry, Ministry of Information and Communication was created in the year 2003, which was to henceforth look after all the ICT activities of Bhutan.

A Local Government (LG) is that form of public administration which exists as the lowest tire of administration within a given state. A local government generally functions within the power assigned to them by the legislature or directives of the higher level of the government. The local Government Act of Bhutan was enacted on 11th of September, 2009, by the parliament of Bhutan to further implement the vision our King of decentralization and devolution of power and authority. The Act was slightly amended in the year 2014. After the enactment of the Local Government act of 2009, local government was established in all the twenty dzongkhags (districts) which is been overseen by the Ministry of Home and Cultural Affairs. The Act tasks all local governments with a variety of duties and responsibilities as well as with certain objective which includes promoting Gross National Happiness, Preserving the culture and tradition, providing democratic and accountable government, promoting developmental activities, protecting public health, and discharging any other duties and responsibilities specially created by the law. Local Government are generally been headed by a chairman who is known as the Thrizin who lead, represent and manage their respective bureaucracies and they bring answerable to the body above it and ultimately to the parliament of Bhutan.

All the components of Local Government falls under the administrative division and are prohibited making laws, but however, they are empowered to make those rules and regulations consistent with law as established by the parliament of Bhutan. All those candidates who wish to contest for the local government election should be between the

age of 25 to 65 years and their term after winning the election is for a period of five years or until the local government is dissolved.

The concept of Thromde

A Thromde (Municipalities) is a second-level administrative division in Bhutan. The legal administrative status of Thromde was most recently codified under the Local Government Act of Bhutan of 2009, and the role of Thromdes in elections in Bhutan was defined in the Election Act of 2008. Like the Gewog Administration, the Thromde Administration is also a product of decentralization and devolution of powers and authority. Thromdes are been administered independently by a Thromde Tshogdu if the Thromde falls under Class A Thromde or else directly by the Dzongkhag Administration or the Gewog Administration as decided by the government for Class B Thromde or The Yenlag Thromde. As of 2019, there are only four self-governing Thromde namely Thimphu, Phuentsholing, Gelephu and SamdrupJongkhar.

Comparison of IDI (Information and Communication Technology Development Index) of the SAARC countries

Country	Global IDI ranking 2016	Regional IDI Ranking for South Asia in 2016	Global IDI ranking 2017	Regional IDI Ranking for South Asia in 2017
Afghanistan	164	8	159	8
Bangladesh	145	6	147	6
Bhutan	117	3	121	3
India	138	4	134	4
Maldives	86	1	85	1
Nepal	142	5	140	5
Pakistan	146	7	148	7
Sri Lanka	116	2	117	2

Source ICT Development Index 2017

The Above table shows the IDI ranking of the SAARC countries and it clearly shows that Bhutan is doing well as the people of the country as well as the administrators have positively accepted the fact that ICT can be a lifesaver and a game-changer in the present scenario. Even though Bhutan falls in the south of the globe where we are considered the developing countries, we have positively accepted the change that is required in the present era. With the introduction of ICT, it has become very essential in the day to day working of all individuals irrespective where the person is and where the person is working. ICT has become a need of the hour and it is very hard to imagine our life without it especially now when our day starts with opening our eye to reach out to our mobile phones and closing with locking it and keeping it aside.

Research Methodology

For this study, the research method was based on the quantitative research wherein questioners', interviews and observation were used for collecting of the data. The sampling techniques' used was non-probably technique (convenience sampling). Concerning the questionnaire, the researcher had set two sets of questionnaire of which one set was for the customers (beneficiaries) and the other was for the service provider (Gewog & Thromde). The main reason for having two separate sets of questionnaire was to collect independent data and at the same time to get the different individually perspective from the two sets of people from whom the researcher had collected the data. The samples were collected on a

random basis and were collected from a mix population i.e. from the different age groups. The main reason for collecting from different age groups was because different age groups had different perspective for ICT and at the same time having different levels of knowledge and understanding for the use of various forms of ICT tools.

OBJECTIVES OF STUDY

i. To study the effectiveness and efficiency of the service delivered by the Local Government including the Thromde through the various means of ICT.
ii. To studythe level of transparency and the level of convenience increased by the introduction of ICT in the organization.
iii. To study whether both the user and the service provider finds it a reliable form of communication and exchanging of information.
iv. To study the convenience of the user in using the various platforms of ICT and the obstacles faced during the process

PURPOSE OF THE STUDY

The main purpose of the study is that the research is the very first of its kind of research on this topic in my district and the country as a whole. Through this research the researcher wish to set a benchmark for the study and at the same time the research should be of some help and a reference for the future researcher if they happen to do the study in the same or similar parameters. This research also aims at providing feedback to the concerned authorities through the data collected so that the concerned authorities could improve their service delivery in the times to come.

Through this study the researcher wants to explore the benefits of ICT has on the local government and how is it contributing positively towards local self-governance and finally in good governance as a whole.

Data Analysis

This is the most important chapter of this whole paper as in this chapter the researcher will be interoperating the data that was able to collect from different respondents. This is also the chapter through which we are able to lean if the hypothesis was proven or not. As the researcher have already mentioned before that the data collected was through the method of random sampling and it was collected through connivance sampling method. The sample size was 250 in which 150 were the beneficiaries and 100 were the service providers.The data was been collected from different age groups ranging from 15 to 56 and above.

The data are interpreted in a most simple way through which even a common people with just basic education will be able to understand the interpretations.

Survey for Beneficiaries

The following data collected below are being collected from the beneficiaries for whom the sample size was 150. Beneficiaries are those entirerespondents who are the native people of that particular Gewog or Thromde or those who are staying there and are availing the services being provided by Gewog and Thromde administration. The data collected is in a random basis irrespective of their age and gender. The data were collected from the respondent from the various Gewogs and Thromdes where the surveyor had gone to do and collect the data for this study.

1: What are the different modes of electronics tools that you use?

- Mobiles, Telivesions and Radio
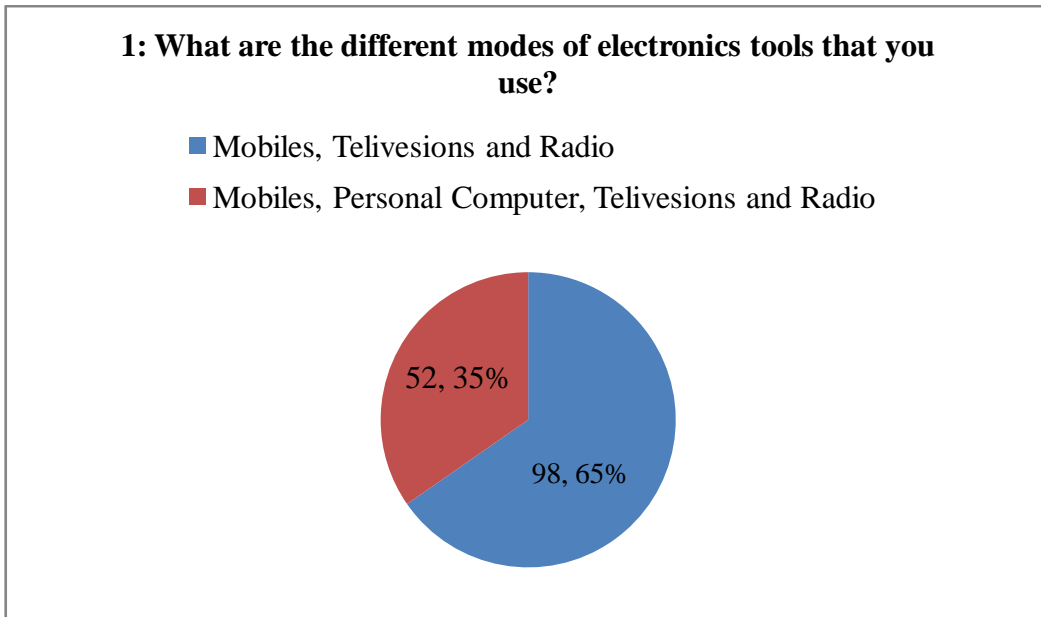- Mobiles, Personal Computer, Telivesions and Radio

52, 35%

98, 65%

Fig. 1 shows the different modes of electronics that the respondents used most of the respondents who fell in the age group of 15 to 35 used all the different tools of electronics whereas the age group from 35 to 56 and above mostly used Mobile, Televisions and Radio and not the Personal Computers.

2: Are you aware of the concept of Information and Communication Technologies (ICT)?

■ Yes ■ To Some Extend ■ No ■ Not At All
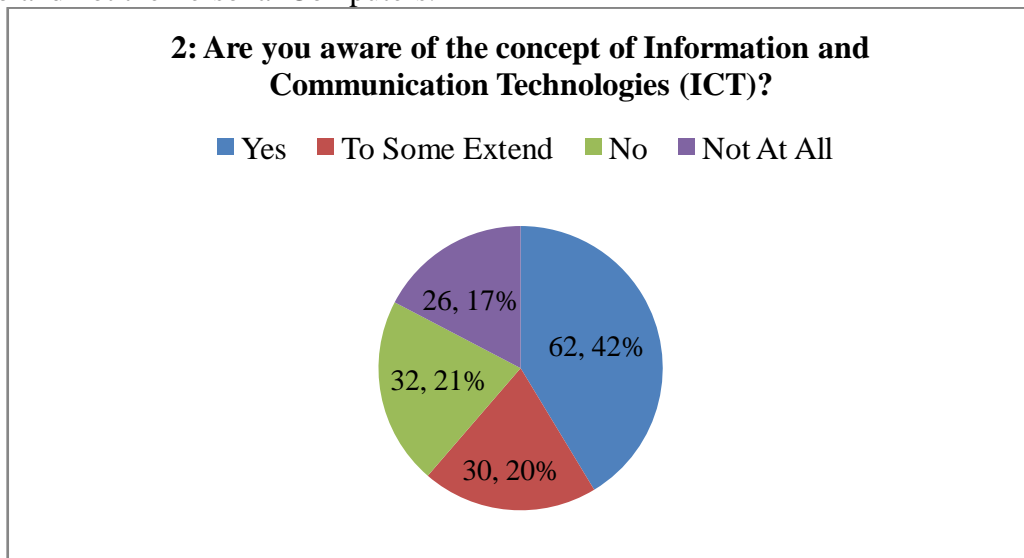
26, 17%

32, 21%

62, 42%

30, 20%

Fig. 2 shows whether the respondents were aware of the concept of ICT or not and it was learned that most of the respondents were aware of the concept of ICT. The respondents who were aware of the concept of ICT at least to some extent had their own email ID but not everyone out of them used them regularly.

3: Are you aware of all the services provided by the Thromde and the Gewog Administration?

- Not Aware At All 3%, 4
- Not Aware 10, 7%
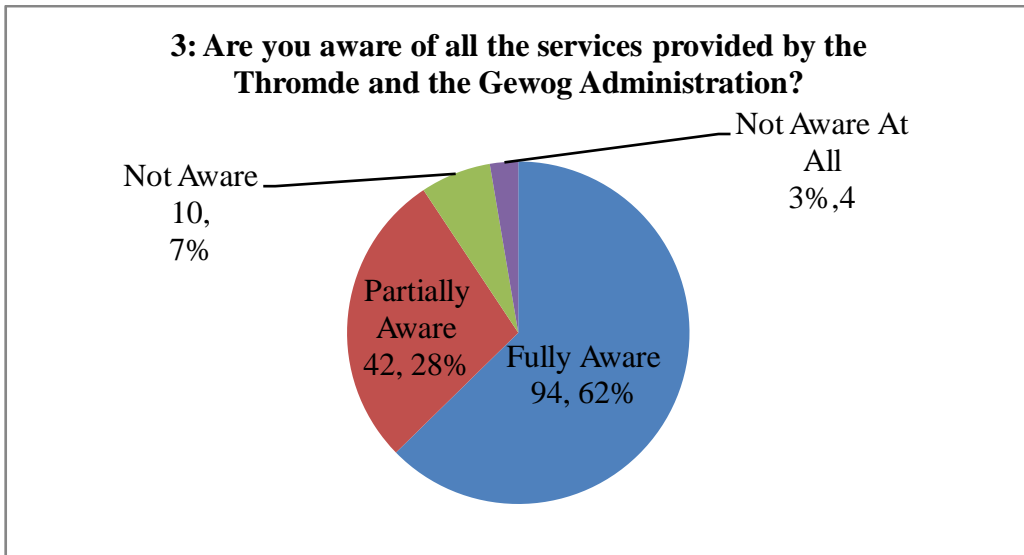- Partially Aware 42, 28%
- Fully Aware 94, 62%

Fig 3 shows whether the respondents were aware of the services provided by the Gewog or the Thromde administration and it was learned that 136 respondents out of 150 were fully or partially aware of the services and 14 out of 150 were not aware or not at all aware of the services provided and they were mostly from the age group of 15 to 25.

4: Is there availability of help desk in the Thromde and Gewog Administration to give information about the services?

- Somwtimes 9%, 14
- No 1%, 2
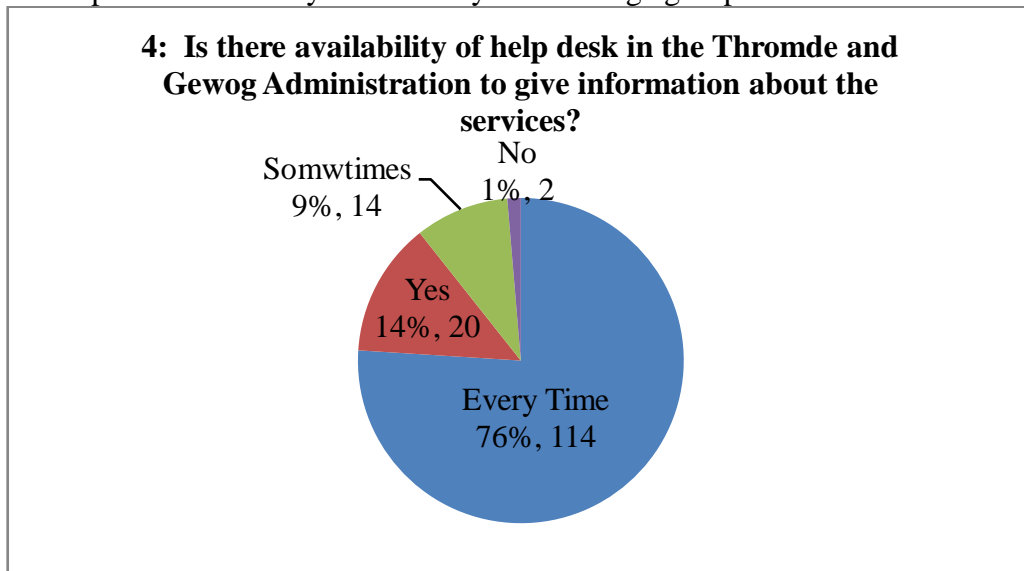- Yes 14%, 20
- Every Time 76%, 114

Fig 4 shows whether there was availability of help desk or not and it was learned that there were help desk facility in most of Gewog or Thromde administration according to the respondents.

5: Do you think that the services provided by the Thromde or Gewog Administration through the means of ICT is in a time bound manner?

To Some Extent 7%, 10
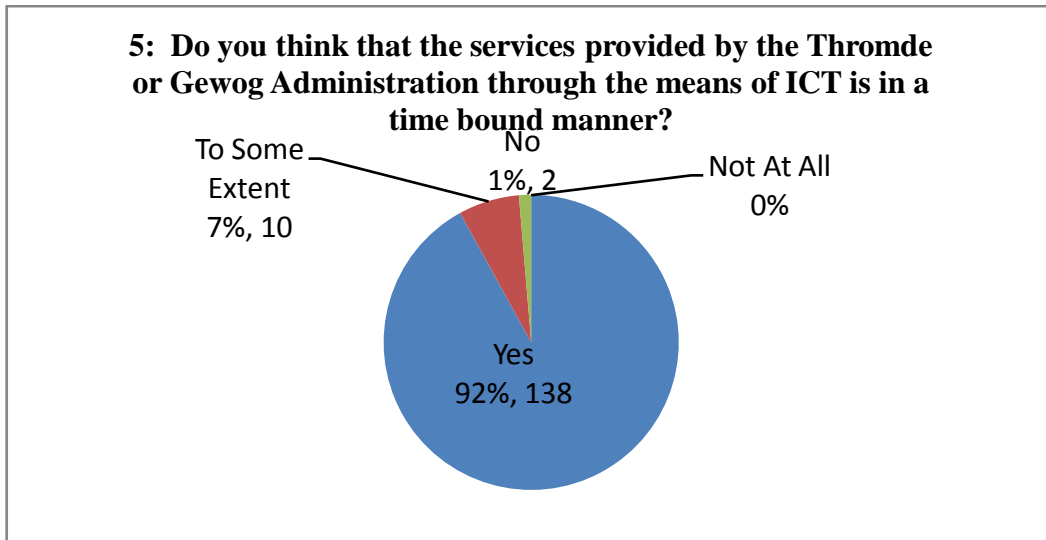
No 1%, 2

Not At All 0%

Yes 92%, 138

Fig 5 shows that whether the services provided by the concerned authorities were time bound or not through the means of ICT and it was learned that most of the respondent said it was time bound.

6: How have Thromde and Gewog Administration resulted effectively and efficiently with the introduction of ICT in their working?

Very Good 5%, 8

Good 2%, 2

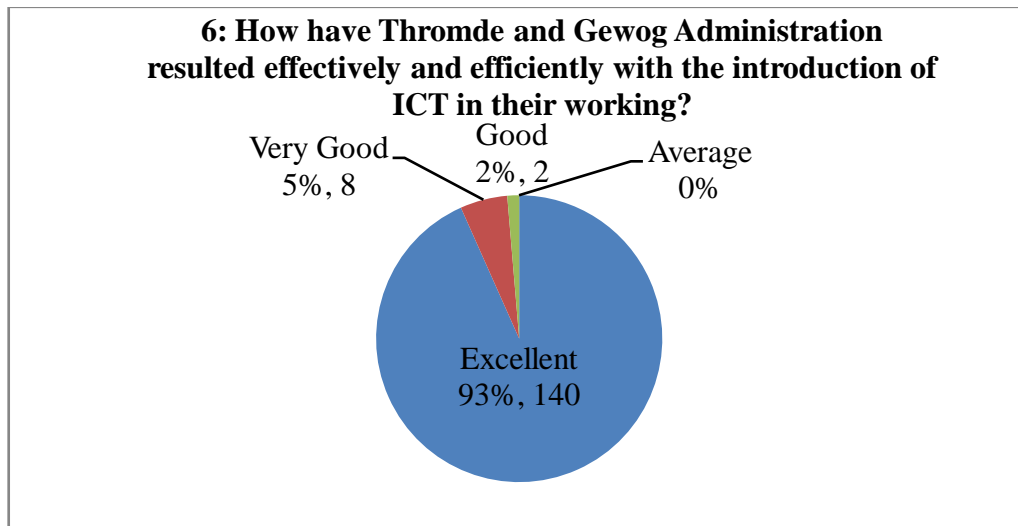Average 0%

Excellent 93%, 140

Fig 6 shows whether the concerned authority have resulted effective and efficient in the service delivery with the introduction of ICT and it was learned that almost all of the respondent said that they concerned authority have resulted in effective and efficient in the service delivery by the introduction of ICT.

7: Do you feel that with the use of ICT the level of transparency has increased?

Partially Transparent 5%, 8

Quite Transparent 1%, 1

Not At All Transparent 0%
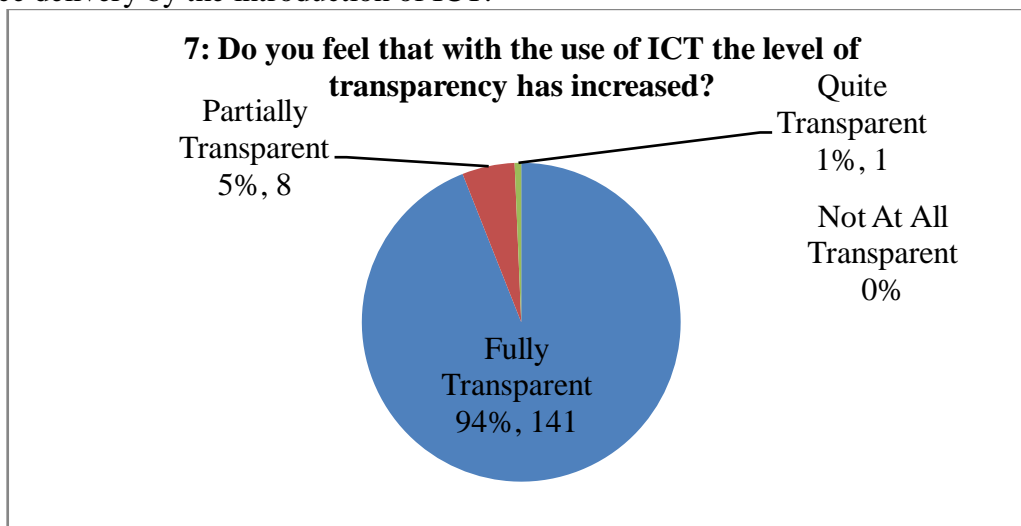
Fully Transparent 94%, 141

Fig 7 shows whether with the introduction of ICT the level of transparency has increased or not and it was learned that almost all the respondent said that the level of transparency had increased and there was not even a single respondent who said it has not increased at all.

8: Do you think Credit/debit card facility for payment should be introduced for all the services provided by the Thromdes and Gewog Administration?

Not At All 10%, 15
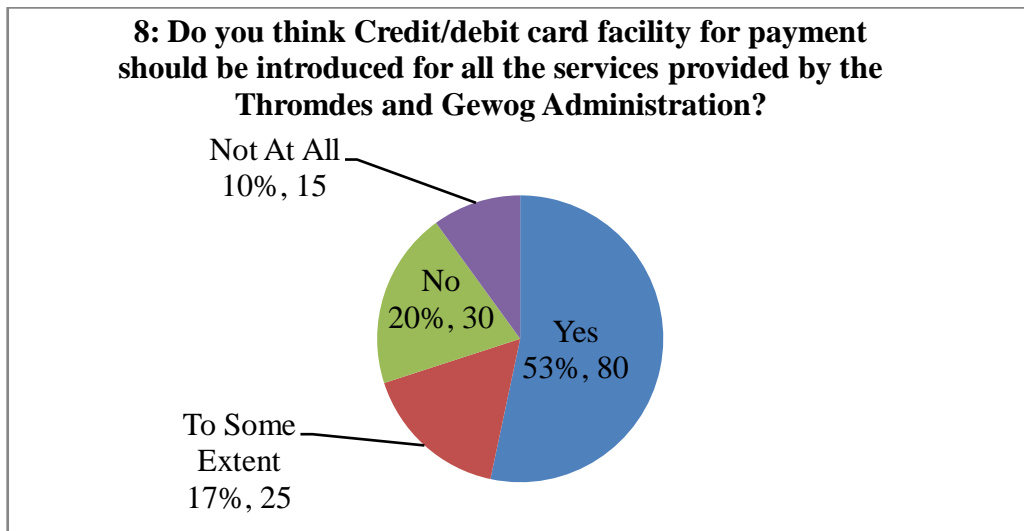
No 20%, 30

Yes 53%, 80

To Some Extent 17%, 25

Fig 8 shows whether the credit or debit facility should be introduced as a mode of payment for the services provided and it was learned that a bit over 50% of them wanted to be introduced and they were mostly belonging to the Thromde area and who were good with the modern technologies but a bit less than 50% responded that it is ok the way it is now.

9: How would you rate overall concept of delivering of services through the means of ICT by the Thromde or Gewog Administration?

Average 3%, 5

Poor 0%
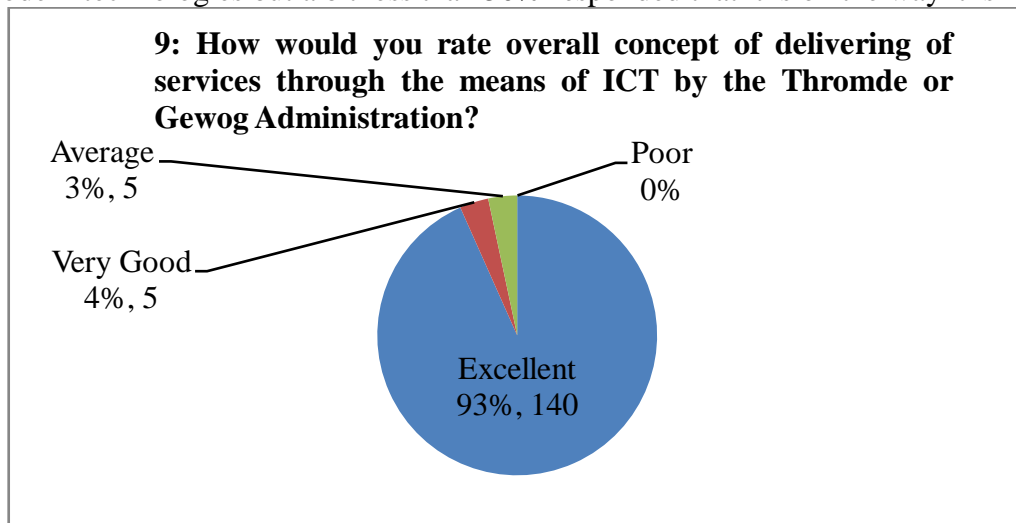
Very Good 4%, 5

Excellent 93%, 140

Fig 9 shows whether the respondents were satisfied with the delivery of services through the means of ICT and it was learned that almost all of them were very much satisfied with it.

10: Are you satisfied with ambience of the Thromde and Gewog Administration with the introduction of ICT?

Partially Satisfied 2%, 3 — Quite Satisfied 3%, 5 — Not Satisfied 0%
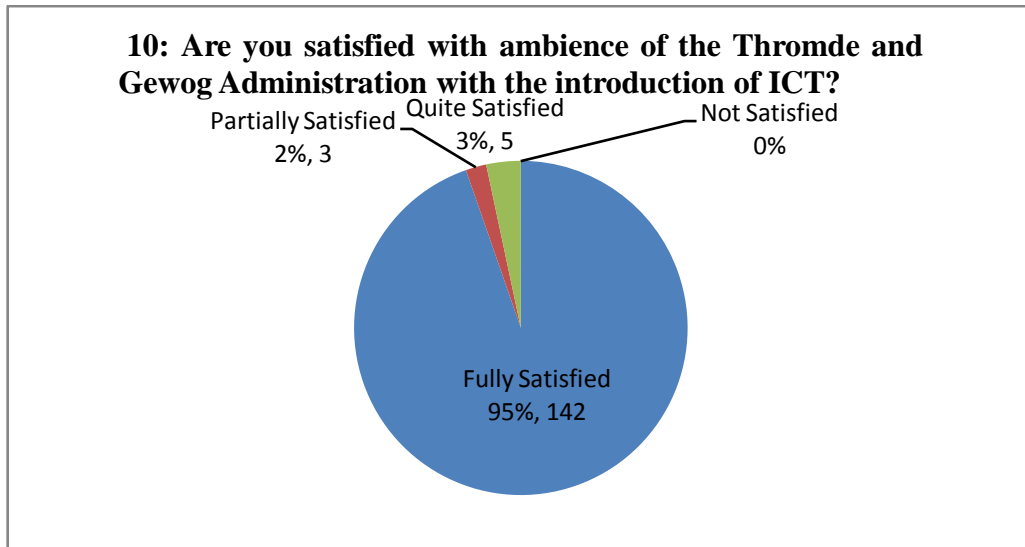
Fully Satisfied 95%, 142

Fig 10 shows whether the respondents were satisfied with the introduction of ICT in Gewog and Thromde administration and it was learned that almost all the respondent were satisfied with it.

11: Do you feel that by the introduction of the ICT it has become more complex to avail the services?

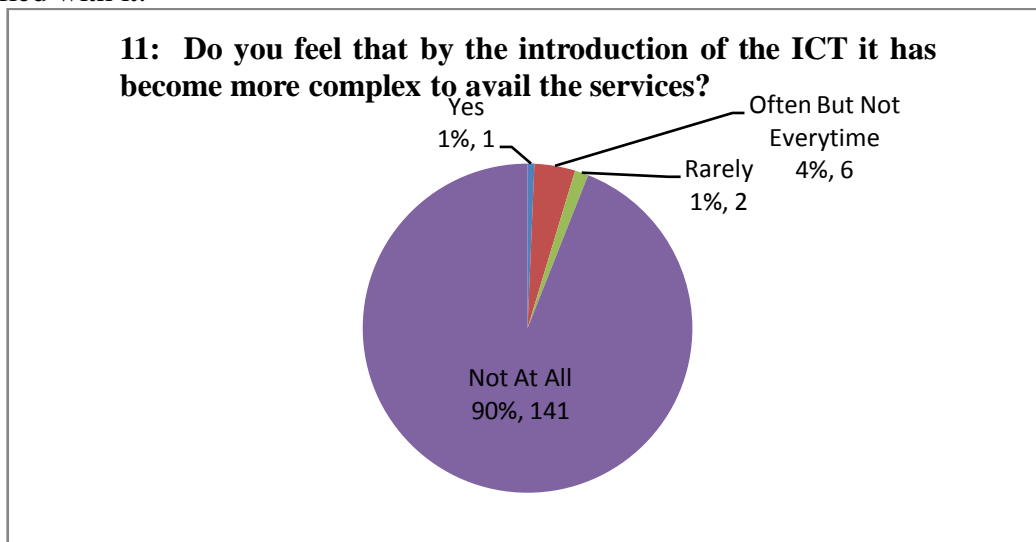Yes 1%, 1 — Often But Not Everytime 4%, 6 — Rarely 1%, 2

Not At All 90%, 141

Fig 11 shows whether with the introduction of ICT it has become more complex to avail the services and it was learned overall that it was not at all complex to avail services with the introduction if ICT in the Gewog and Thromde administration.

Survey for Service Providers

The sample size for the employees was 100 so the percentage figure is also directly the number of respondents who were in favor of their answer to that particular question. The service providers were either from the Gewog or Thromde administration and were from the different sectors as well.

1: What are the different modes of electronic tools that you use?

Mobiles, Radi
o and
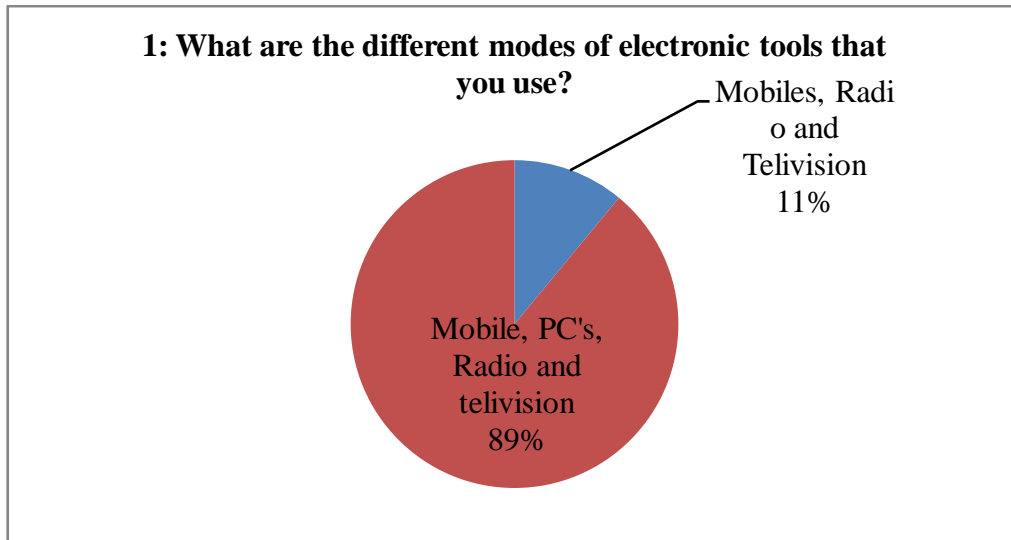Telivision
11%

Mobile, PC's,
Radio and
telivision
89%

Fig.12 shows the different modes of electronics that the respondents use most of the respondents who fell in the age group of 15 to 35 used all the different tools of electronics where as the age group from 35 to 56 and above mostly used Mobile, Televisions and Radio and not the Personal Computers

2: Do you have a sound knowledge about the use of ICT mechanism in the organization?

Yes To Some
Extent
1%

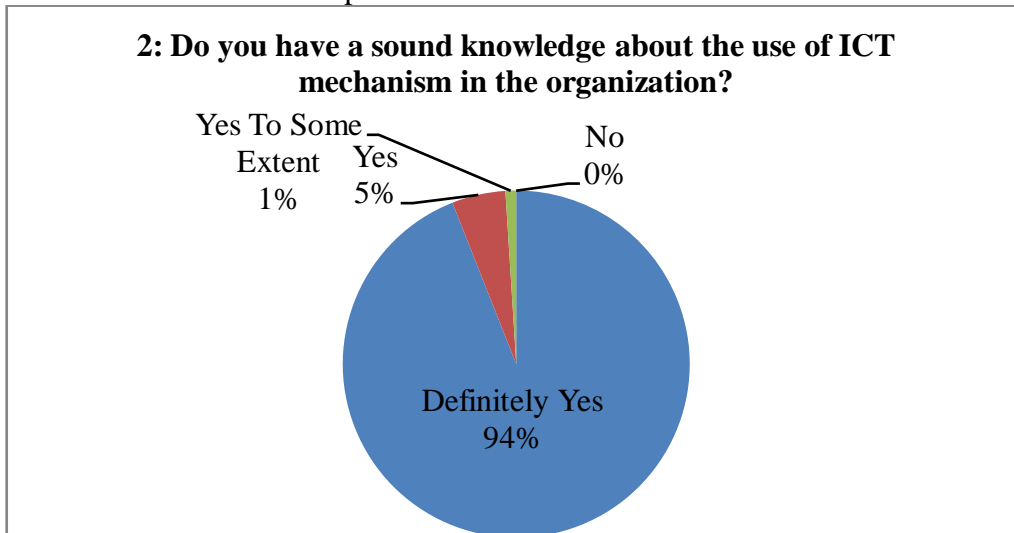Yes
5%

No
0%

Definitely Yes
94%

Fig 13 shows whether the respondent had a sound knowledge about the ICT mechanism in the organization that they were working and it was found that almost all the respondents had a sound knowledge about it and non were there who didn't knew about the ICT mechanism.

3: Do you think any inadequacy of equipment such as hardware, software and networking, or power supplies comes in the way of efficiently delivering services to the public at Thromde or Gewog?
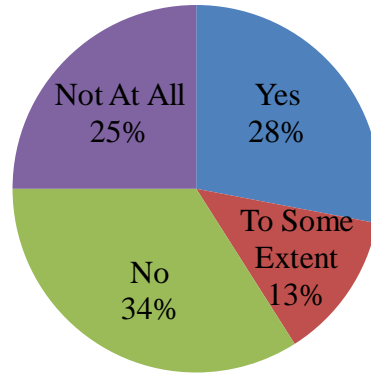

Fig 14 shows whether the respondents felt that inadequacy of the equipment comes in the way of effective service delivery and there was a mix finding as most of the rural areas respondents said that it came on the way where as the respondents from the urban areas said "no, it didn't."

4: Are you satisfied with the overall working ways in context of delivering services to customers at Thromde or Gewog with the introduction of ICT?
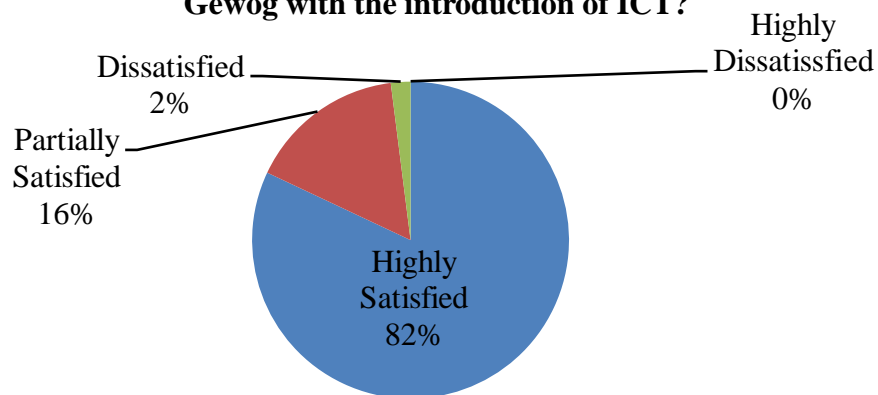

Fig 15 shows whether the respondents were satisfied with the service delivery throught he means of ICT and it was found that although most of them were satisfied 2 of the respondent who were not so well with the use of ICT responded that they were.

5: Whenever there is system failure or have some problem with the system does it get rectified to the soonest?

More Than A Week
35%

Yes The Very Day
15%

Takes A Day Or Two
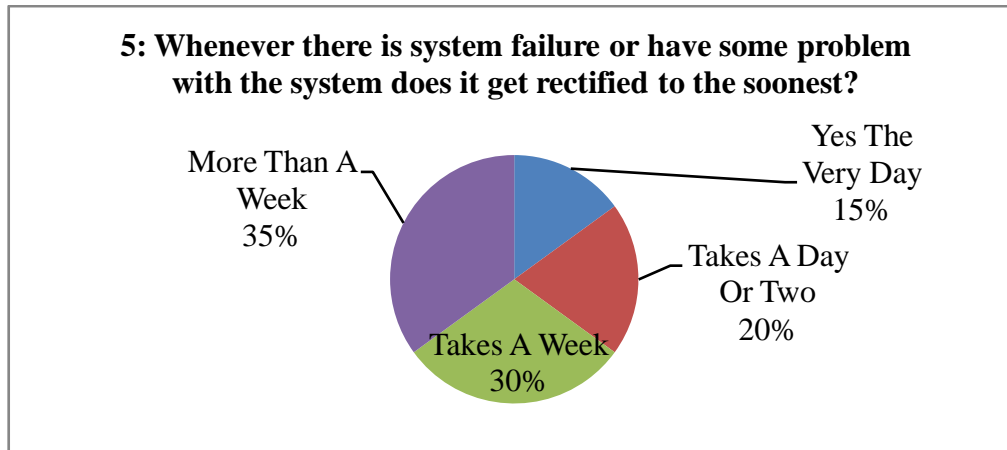20%

Takes A Week
30%

Fig. 16 shows that whenever there is system failure how fast does it gets rectified and it was found that in the offices which are more close to the urban areas gets a quicker response to the problems and gets rectified to the soonest and vice-versa.

6: Do you think the Thromde or Gewog have resulted in better record Management after introduction of ICT?

Disagree
3%

Strongly Disagree
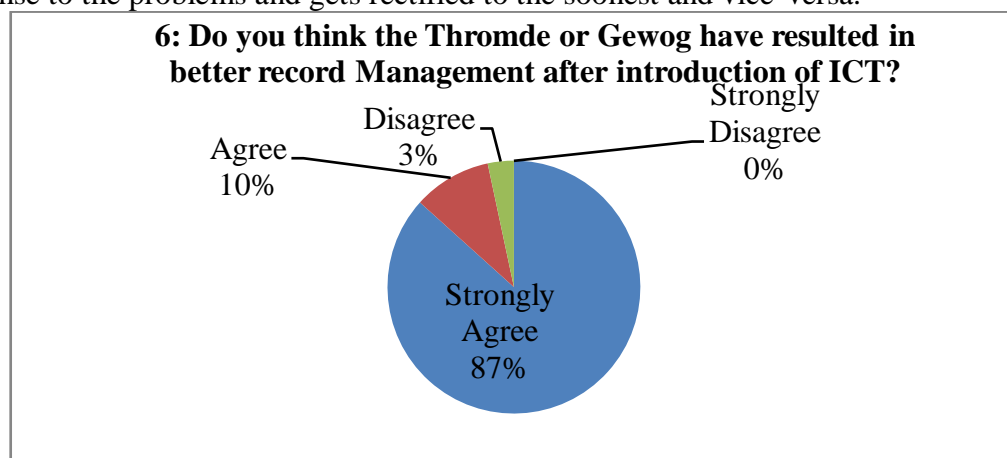0%

Agree
10%

Strongly Agree
87%

Fig. 17 shows has there been a better record management after the introduction of ICT and it was found that almost all the respondent strongly agreed to it and there is not even a single respondent who strongly disagreed to the statement. It was also found that officials who had lack if E-literacy disagreed.

7: Is there training facilities provided to employees for adequate handling different jobs through the medium of ICT?

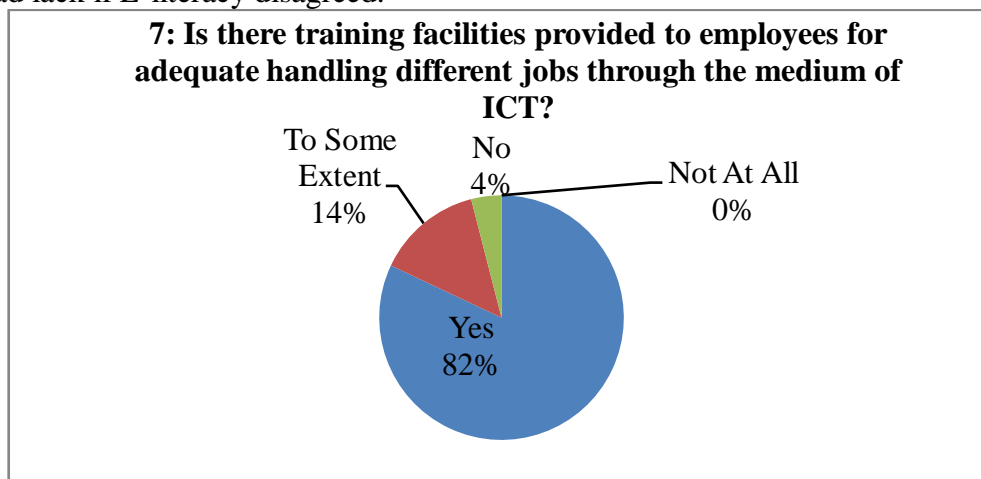To Some Extent
14%

No
4%

Not At All
0%

Yes
82%

Fig. 18 shows whether there was training facilities been provided to the employees on ICT and it was found that whereas most of them had received a training only 4 of the respondents didn't receive any training on the use of ICT in their jobs.

8: Are you satisfied with the system (P.C's) that are been provided to the Thromde or Gewog Administration or does it need an upgrade?

Need An Upgrade 25%

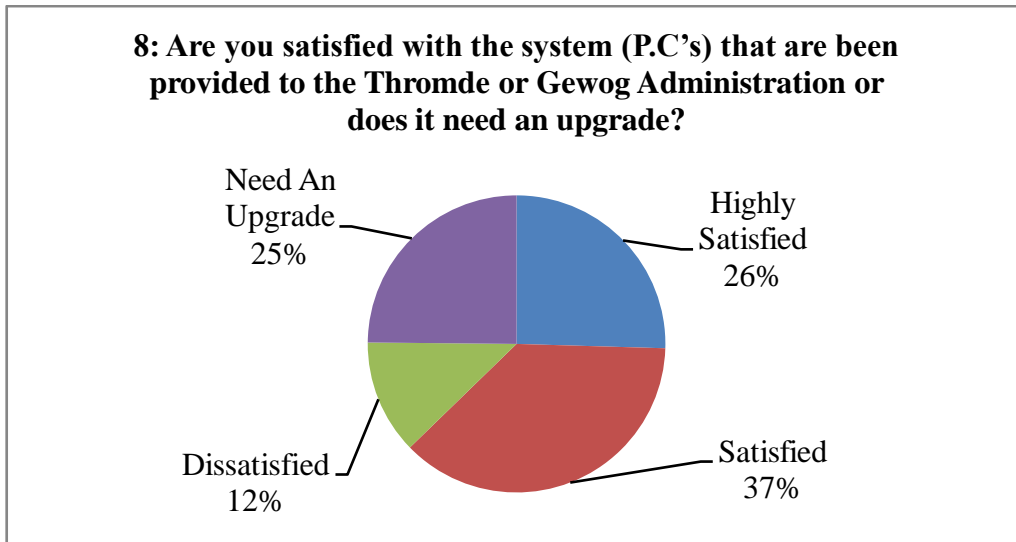Highly Satisfied 26%

Dissatisfied 12%

Satisfied 37%

Fig. 19 shows whether the respondents were satisfied with the PC's that are been provided to their office and it was found that 63 of the respondents were at least satisfied where as 37 of them were not satisfied and said they needed an upgrade.

9: Do you think Credit/Debit card facility should be made an optional mode of payment for all the services that are been provided by Thromde or Gewog?

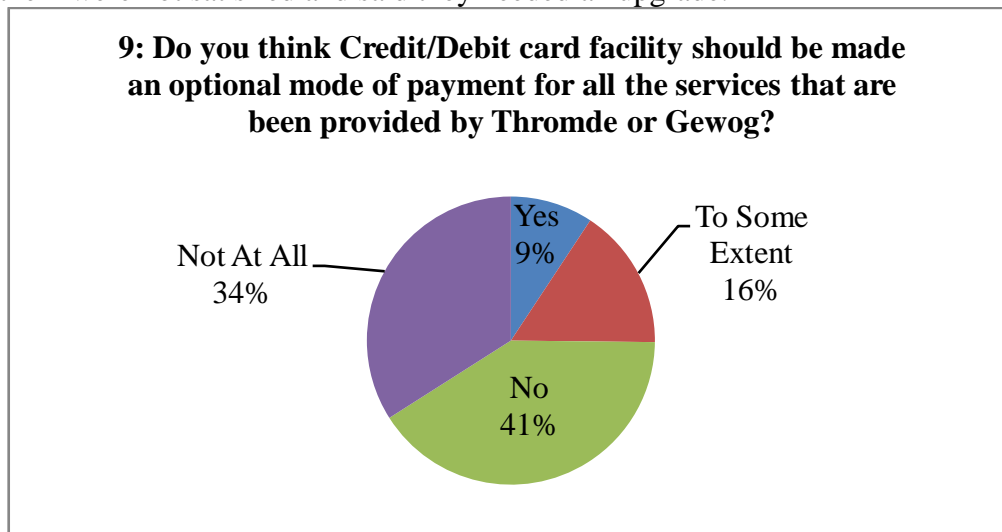Not At All 34%

Yes 9%

To Some Extent 16%

No 41%

Fig. 20 shows whether credit/ debit facilities should be made available to pay for the services and it was found that the Thromdes agreed to the concept whereas the Gewog administration responded it was not necessary.

10: Was any kind of Training being provided to the citizens when there was any new ways of delivering services or providing information by the Thromde or Gewog.

Not At All 15%
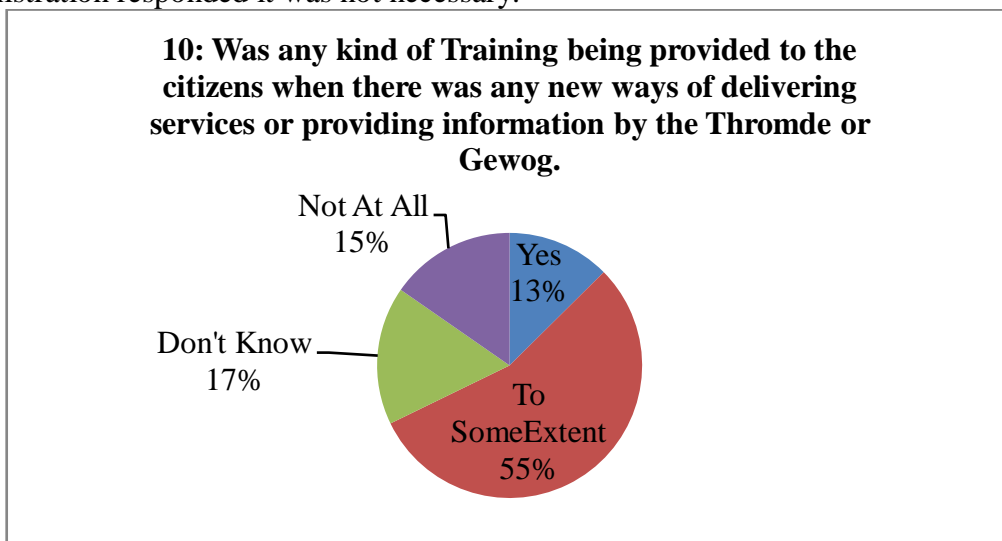
Yes 13%

Don't Know 17%

To SomeExtent 55%

Fig. 21 shows whether any kind of training was provided to the citizens or not when new ways of service delivery was introduced and it was found that more that 50 of the respondents said it was provided and 32 of them responded that they didn't know or was not provided.

11: Do you feel that the level of Transparency has improved with the introduction of ICT at the Thromde or Gewog?
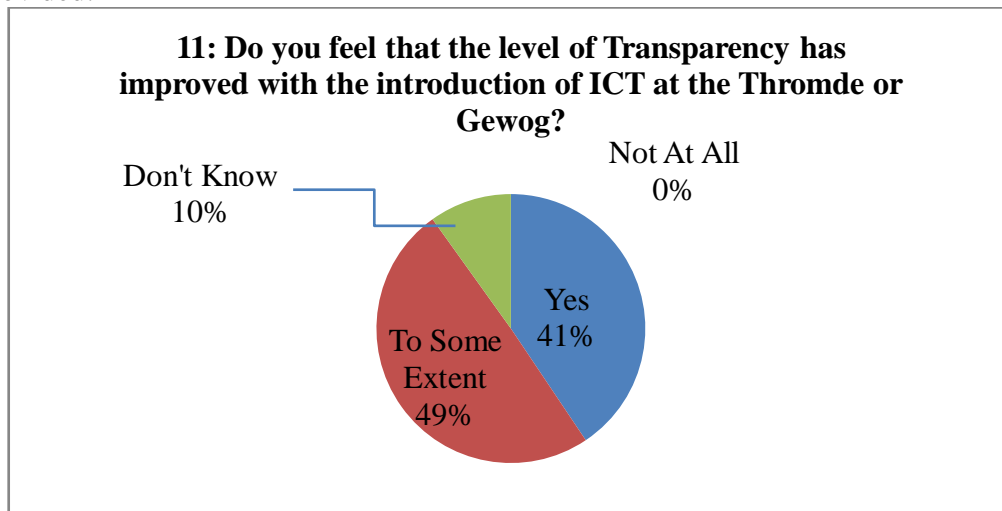
Not At All 0%
Don't Know 10%
Yes 41%
To Some Extent 49%

Fig 22shows whether the respondents felt the level of transparency has improved by the introduction of ICT and 90 out of 100 respondents felt that there is an increase in the level of transparency and only 10 of the respondent said that they don't know. There were not even single who said that the level of transparency has not improved at all.

12: Do you feel that the people have positively accepted the use of ICT for delivery of services or a means to pass the information by the Thromde or the Gewog?

Not At All 5%
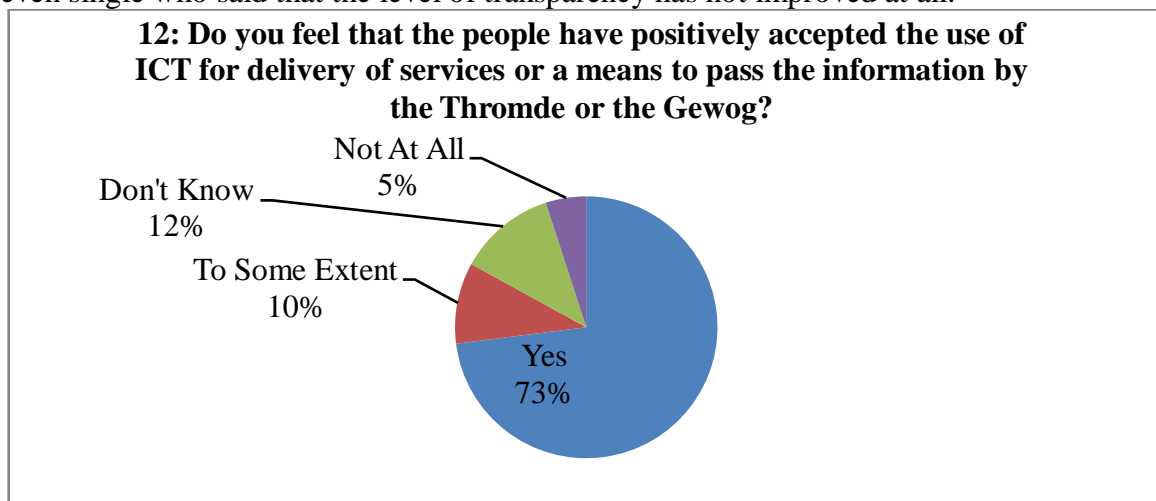Don't Know 12%
To Some Extent 10%
Yes 73%

Fig 23 shows whether the people have positively accepted the use of ICT in the field of service delivery and it was found that while most of them said yes there were handful who said not at all and their reason being most of the old generation faces lots of problem to cope up with the use of ICT.

Conclusion

When the topic was selected the researcher was confident that the survey will have all the positive feedback and there will be none who will take ICT as a negative thing, but surprising came across a handful of respondents who were not happy with the modern technologies and they felt that by the introduction of various ICT tools we have now become the slaves of the technology but just because of the hand full of people we cannot overlook the majority of the population who is generating benefits out of it.

The survey also put forward some of the challenges that the service provider faces while delivering the services and at the meantime it was also found that the level of transparency has improved with the introduction of ICT in the daily working of the Local

Administration. The survey also brought light to many things like now both the service provider as well as the beneficiaries are more reliable to different forms of ICT to communicate as well as to exchange the information's and they feel that it is much better than the traditional form of bookkeeping.

Suggestions

The suggestion are been made through the data collected through the various means mentioned above and is been made looking the scenario when the data was collected at that given point of time. The following are some of the suggesting that the researcher would like to put them forward and hope it can be of some help and benefit the mass:

The Gewog administrators to be provided with proper ICT training on a regular basis.

The thesis has mentioned the Gewog administration only as while the survey was being conducted, Thromde officials were well aware of the different systems and the use of various ICT mechanisms. So, the Gewog administrators especially the elected ones like Gup, Magmi and the Tshogpas should be provided with a proper training and those training should be in a timely basis rather than a onetime training so that they are updated with the latest scenario and the use of ICT.

The entire Thromde application to include construction approval and occupancy certificate links.

This will be very beneficial if introduced and at the same time very much convenient as at present the person who wishes for a construction or who wants a occupancy certificate after construction has to go physically which needs more time so with the introduction of this lint in the application itself it would save lots of time and would be convenient as well.

The beneficiaries to be provided with some training to any new kind of service delivery introduced through the means if ICT.

The beneficiaries should be provided with some kind of training if the local government administration is introducing any new way of service delivery through the means of ICT. I know that it will be very hard to train everyone but at least we can train the Tshogpas who are been elected by the people from their community and then the Tshogpas can then train or make the people understand of how the new service delivery system workes.

Like the Thromdes Gewog also to have an application for their various services.

in the present environment when we are been surrounded by technologies all around us it would be very beneficial if the Gewogs can also have an application of their own for all the services that they provided so that it becomes very convenient for both the service lenders and as well as the service providers.

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