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Final Report of Impact Assessment of Broadband Connectivity Provided under RTDF funded Broadband Access Network Projects (Build Broadband Network and Provide Internet Access Connectivity Services in 5 Districts of Koshi Province: Ilam, Jhapa, Morang, Sunsari, Udayapur)

Executive Summary

This executive summary provides a concise overview of the key findings, conclusions, and recommendations arising from the Impact Assessment of Broadband Connectivity provided under the Rural Telecommunication Development Fund (RTDF) funded Broadband Access Network Projects, specifically focusing on the "Build Broadband Network and Provide Internet Access Connectivity Services in 5 Districts of Koshi Province: Ilam, Jhapa, Morang, Sunsari, and Udayapur."

Key Findings

1. **Increased Digital Inclusion:** The broadband connectivity initiatives have significantly improved digital inclusion in the target districts, bridging the digital divide. Access to high-speed internet has empowered local communities with access to online education, e-health services, e-commerce opportunities, and government services.
2. **Economic Empowerment:** The provision of broadband access has spurred economic growth in the region. Small and medium-sized enterprises (SMEs) have expanded their market reach, and new digital entrepreneurs have emerged, stimulating job creation and income generation.
3. **Enhanced Education:** The availability of broadband connectivity has revolutionized the education sector. Students now have access to online learning resources, reducing educational disparities and improving the overall quality of education in the region.
4. **Healthcare Advancements:** The implementation of telemedicine and e-health services has improved healthcare access, especially in remote areas. Patients can consult with healthcare professionals remotely, leading to better health outcomes and reduced healthcare costs.
5. **Government Service Delivery:** Government services, including e-governance and digital documentation, have become more accessible to residents. This has led to increased transparency, reduced bureaucratic delays, and improved service delivery.

Conclusions

1. Positive Societal Impact: The broadband connectivity projects in Koshi Province have had a profound and positive impact on society. They have uplifted the quality of life, empowered local businesses, and enhanced overall development.

2. Economic Growth: The initiatives have contributed to economic growth by fostering entrepreneurship, increasing productivity, and creating employment opportunities, particularly in the IT and digital sectors.
3. Improved Public Services: Access to government services has become more efficient and transparent, promoting good governance and citizen engagement.

Recommendations

1. Expand Coverage: Consider extending broadband connectivity to underserved and remote areas within the province to ensure equitable access and continued development.
2. Capacity Building: Invest in digital literacy programs to maximize the benefits of broadband connectivity, ensuring that all residents can leverage online resources effectively.
3. Sustainability: Develop a sustainable funding model to maintain and upgrade the broadband infrastructure to keep pace with evolving technology.
4. Monitoring and Evaluation: Implement a robust monitoring and evaluation framework to assess the ongoing impact of broadband connectivity projects and make necessary adjustments.
5. Public Awareness: Launch awareness campaigns to inform residents about the benefits and usage of broadband services, encouraging wider adoption.

In summary, the impact assessment of broadband connectivity in Koshi Province demonstrates its transformative potential in enhancing digital inclusion, economic development, education, healthcare, and government services. The findings highlight the need for continued investment and strategic planning to ensure the sustainable growth of broadband access in the region, ultimately improving the quality of life for its residents.

Introduction

Purpose and Objectives

The Impact Assessment of Broadband Connectivity Provided under the Rural Telecommunication Development Fund (RTDF) funded Broadband Access Network Projects in Koshi Province, Nepal, serves as an essential tool for evaluating the transformative effects of broadband infrastructure deployment in the region. This report aims to elucidate the purpose and objectives of the survey, offering a comprehensive understanding of the survey's context and significance.

The primary purpose of this survey is to assess the impact of broadband connectivity initiatives undertaken in five key districts of Koshi Province: Ilam, Jhapa, Morang, Sunsari, and Udayapur. Funded by RTDF, these initiatives aimed to Build Broadband Networks and Provide Internet Access Connectivity Services to empower local communities through digital inclusion. To this end, the survey was conducted with the following specific objectives:

- **Evaluate Societal Impact:** To gauge how broadband connectivity has influenced the lives of residents, including its effects on education, healthcare, employment, and access to government services.

- **Assess Economic Implications:** To determine the economic impact of broadband deployment by examining its influence on local businesses, job creation, and entrepreneurial opportunities.
- **Analyze Education Enhancements:** To assess the role of broadband access in improving the quality of education and its accessibility to students in the target districts.
- **Examine Healthcare Advancements:** To investigate the utilization of telemedicine and e-health services, as well as their effects on healthcare delivery and outcomes.
- **Evaluate Government Service Accessibility:** To understand how broadband has facilitated access to government services, promoted transparency, and reduced bureaucratic delays.

Background and Significance

In the era of digital transformation, access to high-speed internet has emerged as a critical determinant of a region's socio-economic progress. In Nepal, as in many developing countries, broadband connectivity has the potential to bridge the digital divide, empower communities, and drive economic growth. The significance of this survey lies in its ability to shed light on the tangible outcomes of RTDF-funded Broadband Access Network Projects in Koshi Province.

Broadband connectivity not only connects communities to the global digital landscape but also serves as a catalyst for local development. It facilitates online education, enabling students to access a vast repository of knowledge. It empowers entrepreneurs and SMEs by expanding their market reach and reducing operational costs. It revolutionizes healthcare by making telemedicine and e-health services accessible, particularly in remote areas. Furthermore, it enhances the transparency and efficiency of government service delivery, fostering good governance.

Given the potential for profound societal and economic transformation, the assessment of broadband connectivity in Koshi Province becomes paramount. It not only validates the investments made in digital infrastructure but also informs future policies and strategies aimed at ensuring equitable access and maximizing the benefits of broadband technology. In essence, this survey offers a comprehensive exploration of the impact of broadband connectivity on the lives of residents in Koshi Province, Nepal, providing valuable insights for sustainable development and digital inclusion in the region.

Methodology

Data Collection

a. **Sampling Methods:** The methodology for this impact assessment survey employed a stratified random sampling approach to ensure representative data collection across the five target districts: Ilam, Jhapa, Morang, Sunsari, and Udayapur. Within each district, stratification was done based on urban and rural areas to capture the diversity of experiences. The sample was drawn from households, businesses, educational institutions, healthcare facilities, and government offices.

b. **Survey Instruments:** Data was collected through a combination of structured questionnaires, interviews, and field observations. The survey instruments were designed to capture both quantitative and qualitative information. The questionnaires were administered to residents, business owners, students, healthcare professionals, and government officials to gather specific data on their experiences and perceptions of broadband connectivity.

Data Analysis Techniques

a. **Quantitative Analysis:** The quantitative data collected through the questionnaires were analyzed using statistical software. Descriptive statistics, such as mean, median, and standard deviation, were calculated to summarize numerical data. Inferential statistical techniques, such as chi-square tests and regression analysis, were employed to establish relationships and associations between variables.
b. **Qualitative Analysis:** Qualitative data from interviews and open-ended survey questions were subjected to thematic content analysis. This involved identifying recurring themes, patterns, and narratives to gain deeper insights into the impact of broadband connectivity on various aspects of life, including education, healthcare, and business.

Sample Size

The sample size for this survey was determined based on accepted statistical principles, ensuring a representative and statistically significant dataset. In total, data was collected from:

- **Schools**: 29 government secondary schools.
- **Healthpost:** 19 healthpost
- **Local Government:** 92 office of rural municipalities, office of municipalities, ward office.
- **Public:**206 random survey

The sample size for each category was determined to capture a diverse range of perspectives while maintaining statistical rigor.

Limitations of the Methodology

While every effort was made to conduct a comprehensive impact assessment, it's important to acknowledge the limitations of this methodology:

- **Sampling Bias:** Despite rigorous sampling techniques, there may still be some inherent sampling bias due to factors such as non-response or underrepresented groups.
- **Response Bias:** The survey responses are subject to response bias, where participants may provide answers that they believe are expected rather than their true experiences.
- **Temporal Limitation:** The assessment reflects the conditions and experiences at the time of data collection and may not capture longer-term effects or changes.
- **Generalization:** While the findings are valuable for the target districts, they may not be fully generalizable to other regions with different demographics and infrastructural contexts.

Despite these limitations, the methodology employed in this survey is designed to provide robust insights into the impact of broadband connectivity in Koshi Province, Nepal, and serves as a valuable basis for informed decision-making and policy formulation in the region.

Survey Area

Broadband Connectivity (RTDF)

The survey area for the Impact Assessment of Broadband Connectivity Provided under RTDF funded Broadband Access Network Projects in Koshi Province, Nepal, includes the following districts:

Survey Area		
S.N.	**Districts**	**Qty**
1	Udayapur	33
2	Sunsari	15
3	Morang	44
4	Jhapa	13
5	Ilam	35
Total		**140**

These districts were specifically targeted for the broadband connectivity initiatives funded by the Rural Telecommunication Development Fund (RTDF). The assessment covers both urban and rural areas within these districts to provide a comprehensive understanding of the impact of broadband access on the diverse communities in the region. The survey area encompasses a range of economic, educational, healthcare, government services, social, and infrastructure contexts, allowing for a thorough evaluation of the impact of broadband connectivity in Province1.

Public Survey

The public survey area for the Impact Assessment of Broadband Connectivity in Koshi Province, Nepal, includes the following districts:

Survey Area		
S.N.	**Discrict**	**Qty**
1	Udayapur	12
2	Sunsari	60
3	Morang	34
4	Jhapa	47
5	Ilam	53
Total		**206**

Focus Group Discussion

The Focus Group Discussion of Impact Assessment of Broadband Connectivity Provided under RTDF funded Broadband Access Network Projects in Koshi Province, Nepal, includes the following places:

S.N.	District	Place	Qty
1	Udayapur	Katari Municipality	1
2	Sunsari	Ramdhuni Municipality and Inaruwa municipality	2
3	Morang	Belbari Municipality	1
4	Jhapa	Buddhashanti Gaunpalika	1
5	Ilam	Suryodaye Municipality	1

Survey Result

Here are the survey findings based on the Impact Assessment of Broadband Connectivity Provided under RTDF funded Broadband Access Network Projects and the public survey area for the Impact Assessment of Broadband Connectivity in Koshi Province, Nepal.

Broadband Connectivity (RTDF)

Here are the survey findings based on the Impact Assessment of Broadband Connectivity Provided under RTDF funded Broadband Access Network Projects in Koshi Province, Nepal:

Location

FIG. 1- Respondents by Location

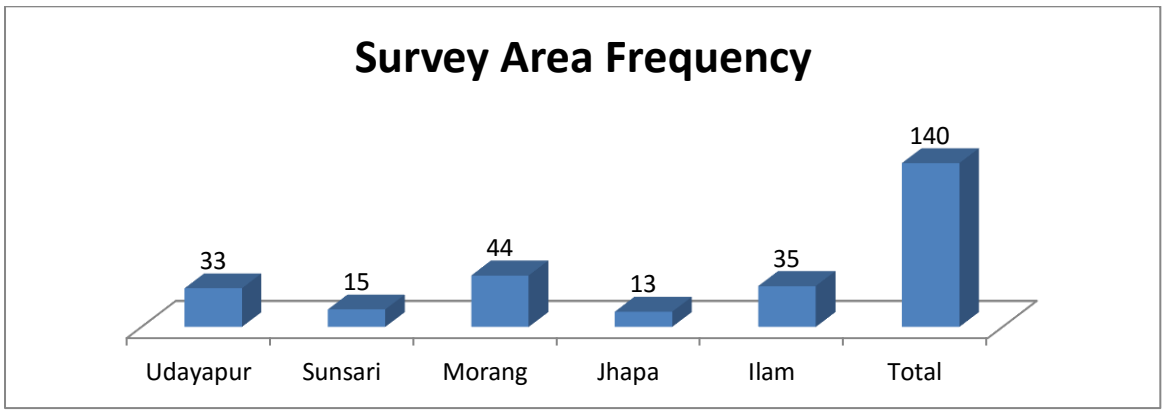


Figure 1 shows that the survey was done with total 140 sites in which 33 sites was of Udayapur,15 sites of sunsari,44 sites of Morang,13 sites of Jhapa and 35 sites of Illam.

Q. 1# *Are you using broadband internet service available through Nepal Telecommunications Authority?*

FIG. 2 Internet using

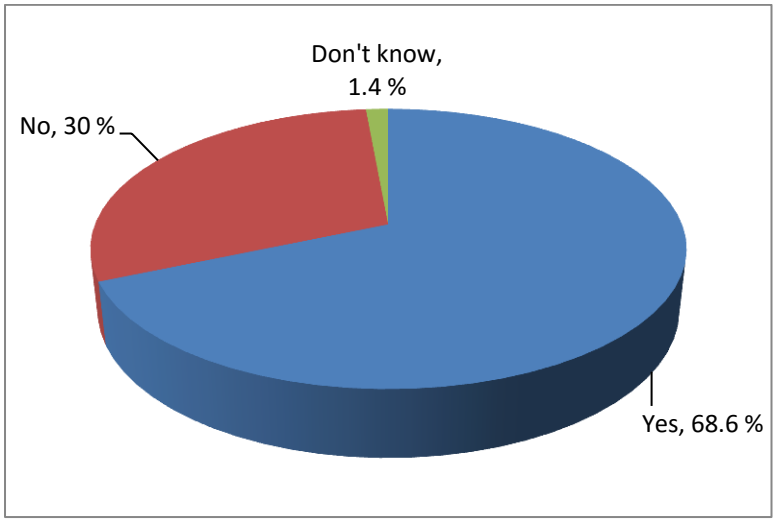
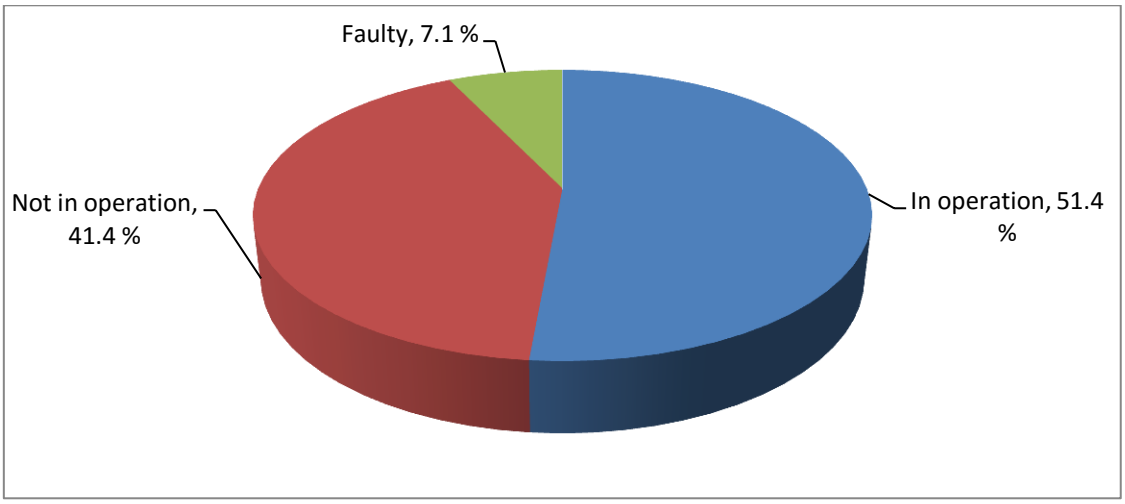


Figure 2 indicates that among the survey done in 140 sites, 96 person said 'yes' that they use broadband internet provided through NTA, 42 said 'No' and 2 people said they don't know.

Similarly while measuring in percentage 68.6% of person said 'Yes' that they use broadband internet provided y NTA,30% person said 'NO' and 1.4% said 'Don't Know'.

Q. 2# *What is the status of broadband internet service operation available through Nepal Telecommunication Authority?*

FIG. 3 Broadband Status

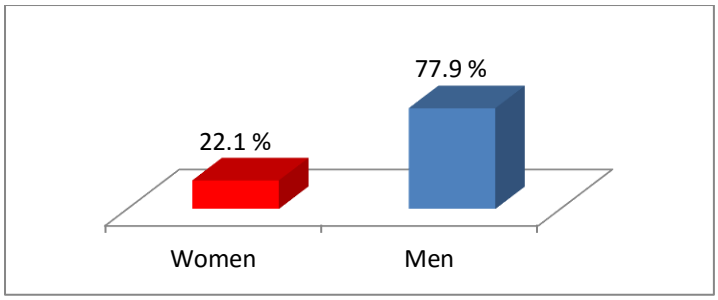


From the survey of 140 sites we got to know that 72 person said that the broadband internet provided by NTA 'is in operation', 58 person said 'is not in operation' and 10 person said 'is damage'.

According to the percentage 51.4% of person said that the broadband internet provided by NTA 'is in operation',41.4% of person said 'is not in operation' and 7.1% of person said 'is broken'.

Q. 3# Women, men or others use Internet services in organization

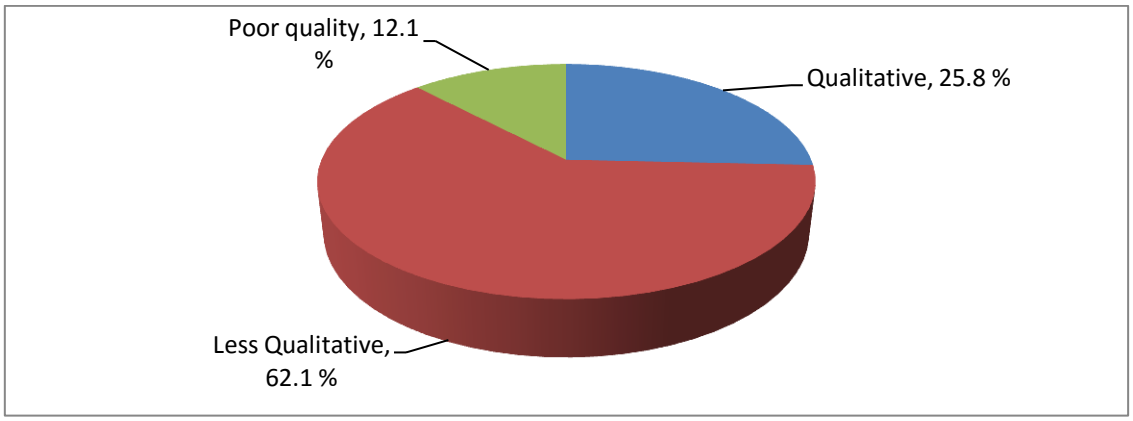
FIG. 4 Internet users Gender wise



The survey done in 113 sites shows the data that 77.9% of male use the broadband internet and 22.1% of person use the broadband internet.

Q. 4# How is the quality of broadband internet service?

FIG. 5 Quality of Broadband

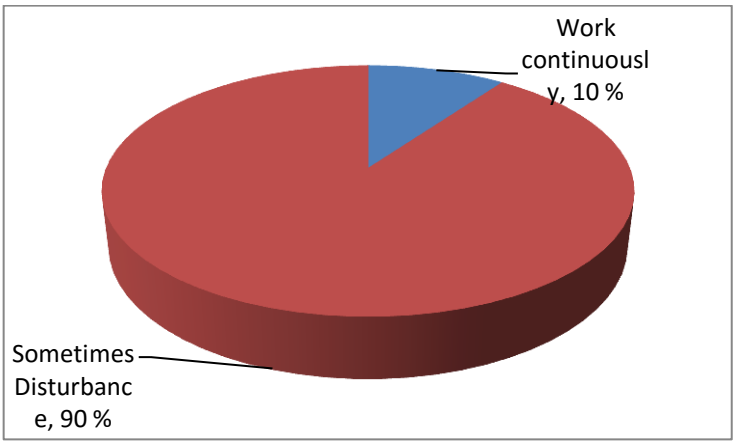


The survey done in 140 sites shows the data that 36 person said the broadband internet has Qualitative services, 87 person said that is of 'low quality' and 17 person said 'Poor Quality'

Measuring in percentage 62.1% of person said that the broadband internet has low qualitative services,25.8% of person said qualitative and 12.1% of person said 'poor quality'.

Q. 5# Does the internet service work continuously?

FIG. 6 Internet Continuity



The survey done in 140 sites, 14 person said the broadband internet 'work continuously' and 126 person said 'Sometimes it doesn't work'.

Reading in percentage the data shows that 90% of person said that the broadband internet 'doesn't work sometimes' and 10% of person said 'work continuously'.

Q. 6# When the internet services doesn't work, how many days will the problem be solved by the service provider?

FIG. 7 Problem be solved

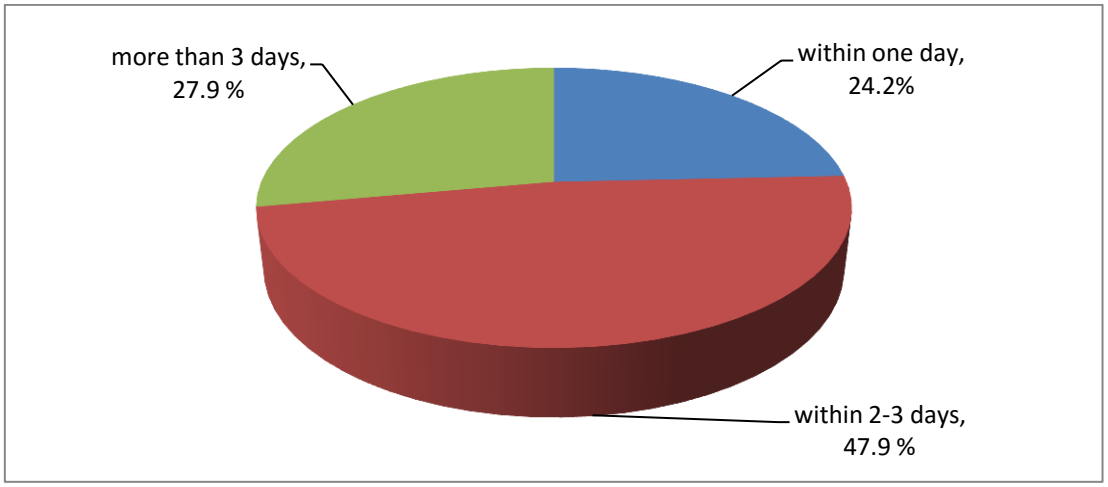
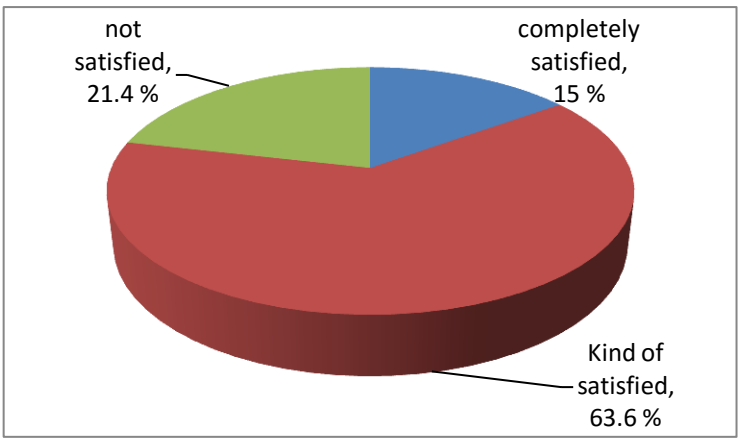


Figure 7 shows that in 140 sites, 34 person said the internet problem solved 'within one day', 67 person said 'within 2-3 days' and 39 person said 'more than 3 days'.

Figuring out in percentage 47.9% of person said that to solve internet problem the operator takes '2-3 days',27.9% of person said 'more than 3 days' and 24.2% of person said 'within one day'.

Q. 7# Are you satisfied with the received internet service?

FIG. 8 Satisfaction from internet Service



The survey of 140 sites shows, 21 person are 'completely satisfied' with the internet service, 89 person said 'somewhat satisfied' and 30 person said 'not satisfied'.

In percentage, 63.6% of person said 'somewhat satisfied' with the received internet service, 21.4% of person said 'not satisfied' and 15% said 'completely satisfied'.

Q. 8# What is the efficiency of the service provider organization?

FIG. 9 Efficiency of service provider

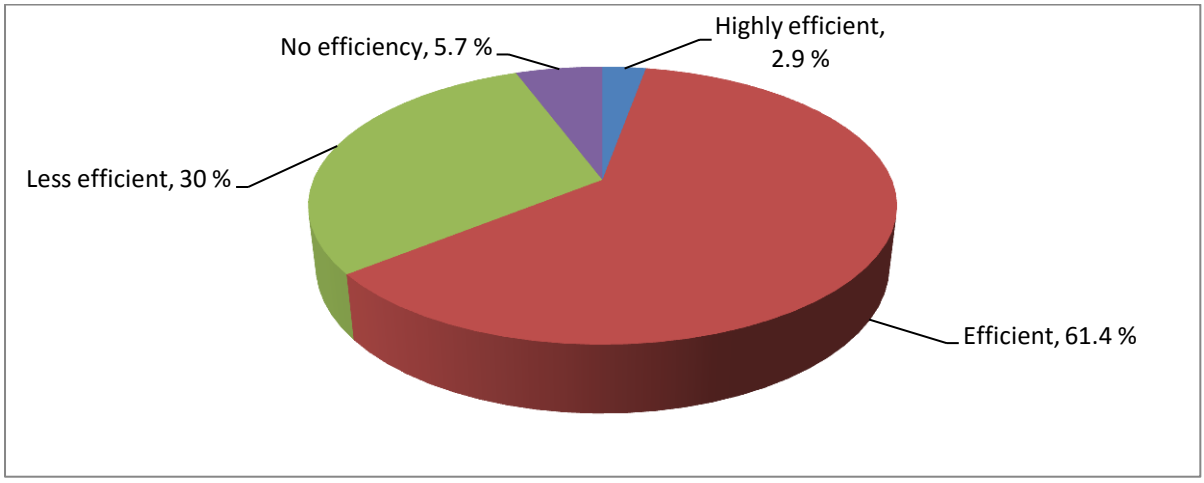


Figure 9 reveals the data of the survey done in 140 sites, 4 person said that the efficiency of the internet service provider is 'Highly efficient', 86 person said 'efficient', 42 person said 'Less efficient' and 8 person said 'No efficiency'.

Reading in percentage the data shows 61.4% of person said that the efficiency of internet service provider is 'efficient', 30% of person said 'less efficient', 5.7% of person said 'no efficiency' and 2.9% of person said 'highly efficient'.

Q. 9# Is there a need for information technology and the Internet?

FIG.10 Need of Information technology

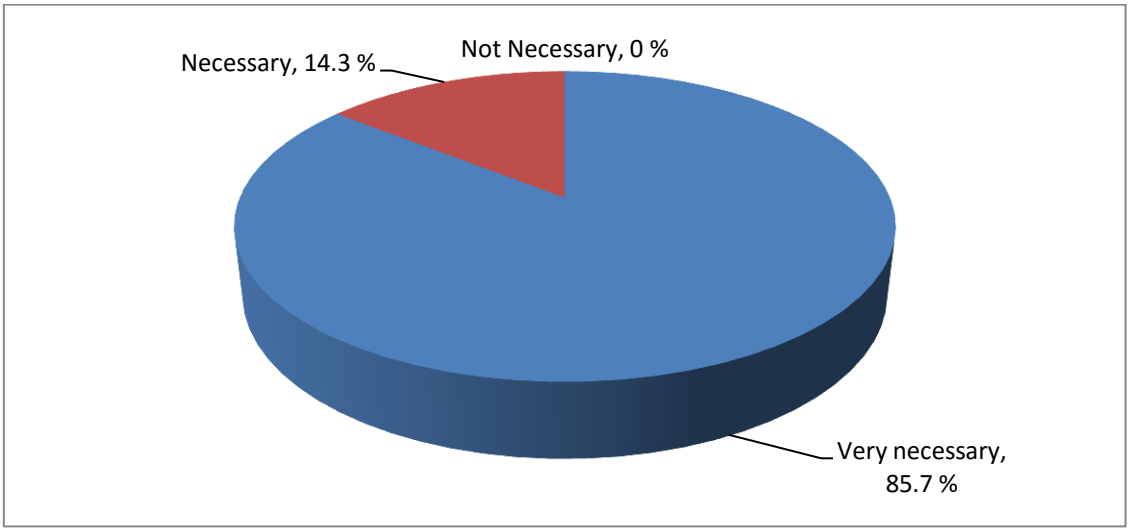


Figure 10 indicates the data of survey done in 140 sites, 120 person said the information technology and the internet is 'Very necessary' and 20 person said 'Necessary'.

According to the percentage, 85.7% of person said that the information technology and the internet is 'Very necessary' and 14.3% of person said 'necessary'.

Q. 10# For what purpose do you use the internet service? (You can choose more than one)

FIG.11 Purpose of Internet

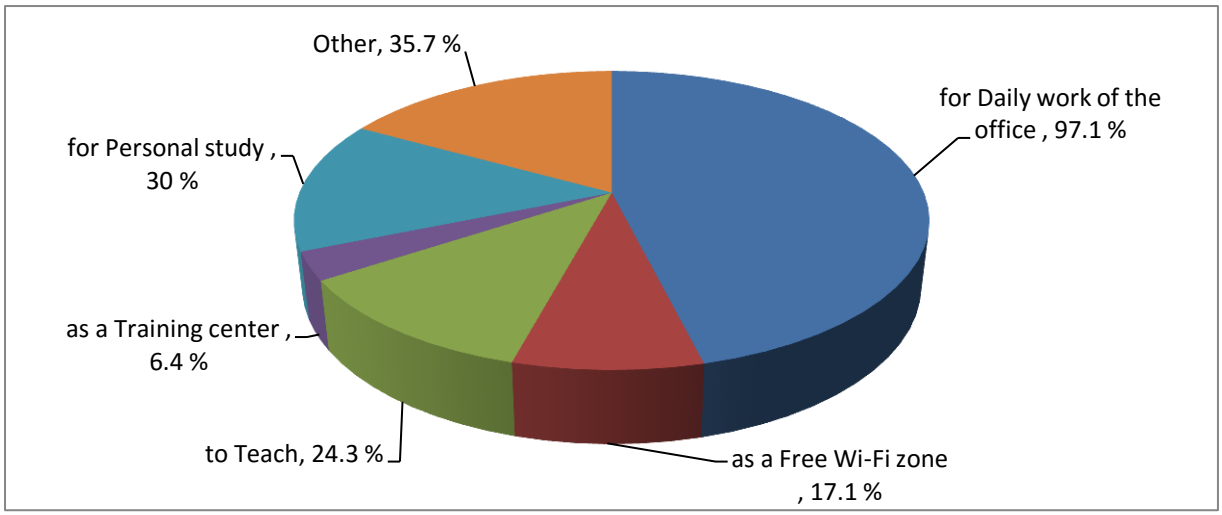


Fig 11 indicates that the survey done in 140 sites,97.1% of person said that they use internet 'for daily work of the office',35.7% of person said 'other',30% of person said 'for personal study',24.3% of person said 'to teach',17.1% of person said 'as a free Wi-Fi zone' and 6.4% of person said 'as a training center'.

Q. 11# Has the internet been used in online service flow or not?

FIG.12 Online services

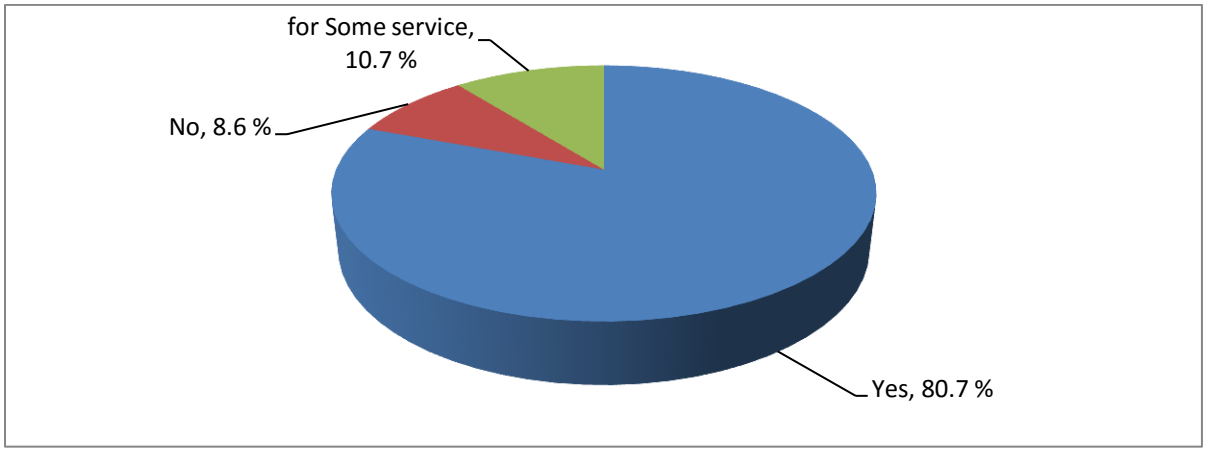
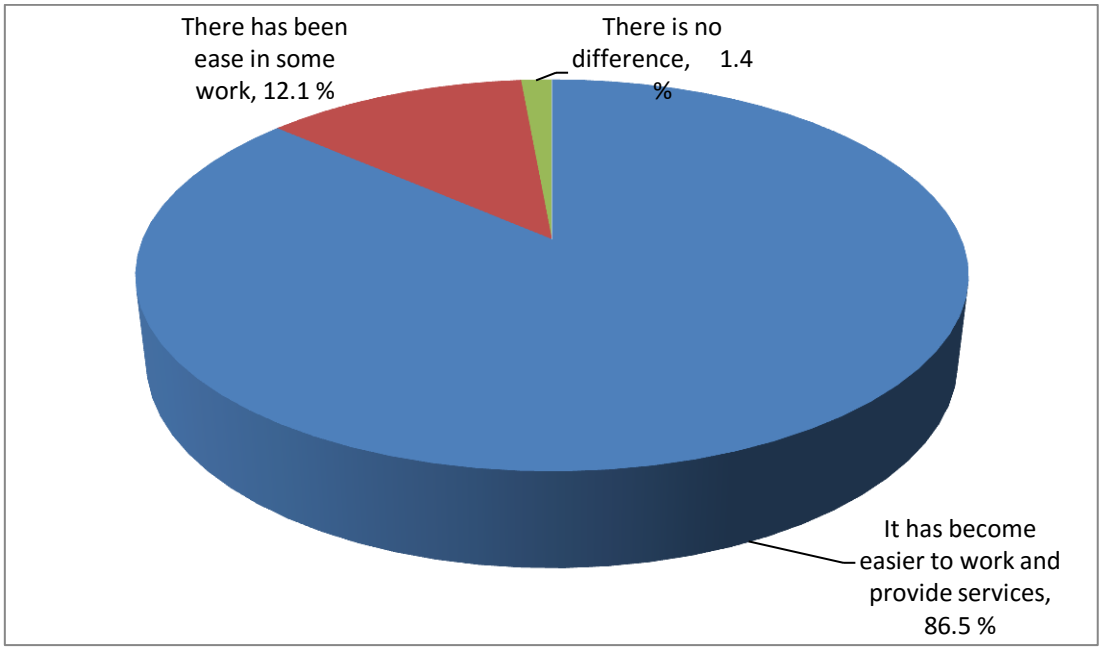


Fig 12 shows the data received from the survey done in 140 sites on which 113 person said 'yes' that they use internet services for online service,12 person said 'No' and 15 person said 'for some services'.

Formulating in percentage,80.7% of person said 'Yes' that they use internet for online services,8.6 % of person said 'No' and 10.7% of person said 'for some service'.

Q. 12# What difference have you found in the service before and after using the Internet?

FIG.13 Service Difference Before and after



From the survey done in 140 sites, 121 of person said that through the internet' it has become easier to work and provide services', 17 person said 'it has become easier to work and provide services' and 2 person said 'there is no difference'.

In percentage, 86.5% of person said that through the use of internet 'it has become easier to work and provide services,12.1% of person said 'it has become easier to work and provide services and 1.4% of person said 'there is no difference'.

Q. 13# What are the challenges of service delivery through internet service?

FIG.14 challenges of service delivery

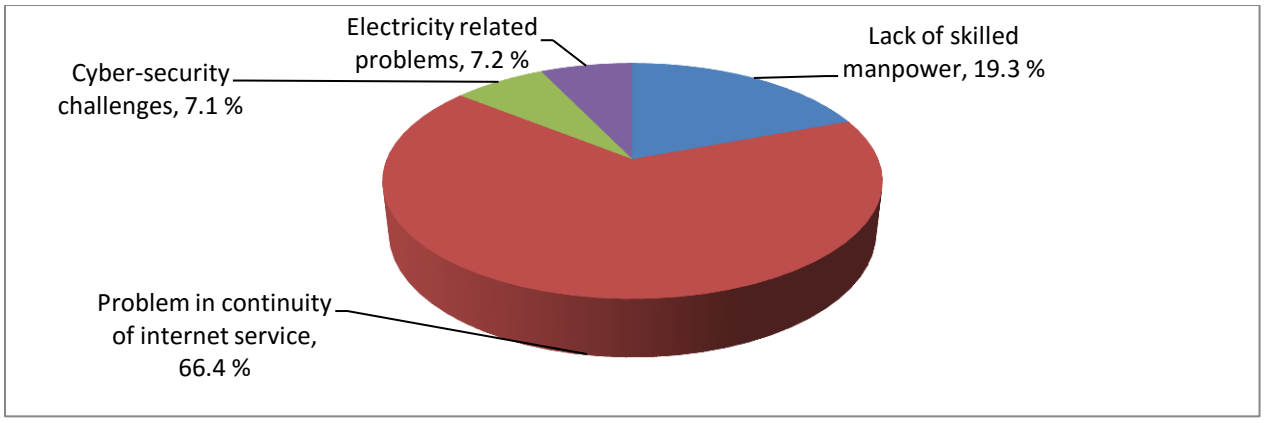
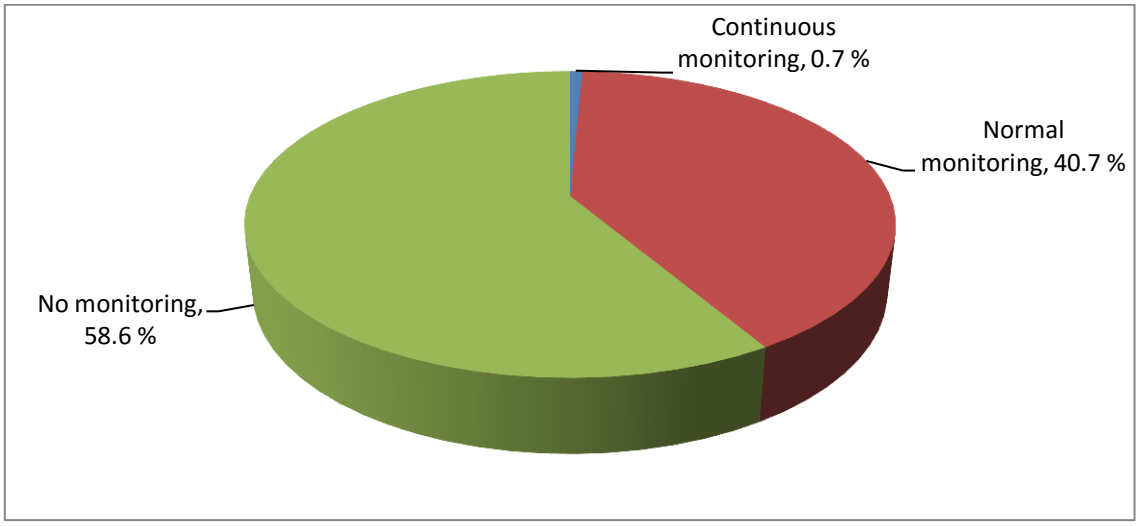


Fig 14 shows the data from the survey of 140 sites that 27 person said the challenges of service delivery through the internet service is 'lack of skilled manpower', 93 person said 'problems is continuity of internet service' 10 person said 'Cyber Security challenges' and 10 person said 'Electricity related problems'.

Reading in percentage,66.5% of person said that the challenges of service delivery through the internet service is 'problem in continuity of internet',19.3% of person said 'lack of skilled manpower',7.1% of person said 'cyber-security challenges and 7.2% of person said 'Electricity related problem'.

Q. 14# Is there continuous monitoring of projects related to broadband internet and optical fiber by the ministry / authority or concern body?

FIG.15 Services monitoring



From the survey of 140 sites- 1 person said that there is 'continuous monitoring' of projects related to broadband internet and optical fiber by the concern body, 57 person said 'Normal monitoring' and 82 person said 'No monitoring'.

In percentage the data can be read as 58.6% of person said there is 'no monitoring' of projects related to broadband internet and optical fiber by the concern body, 40.7% of person said 'normal monitoring and 0.7% of person said 'continuous monitoring'.

Q. 15# Has the lifestyle of the local community become information technology friendly /or not?

FIG.16 Technology friendly

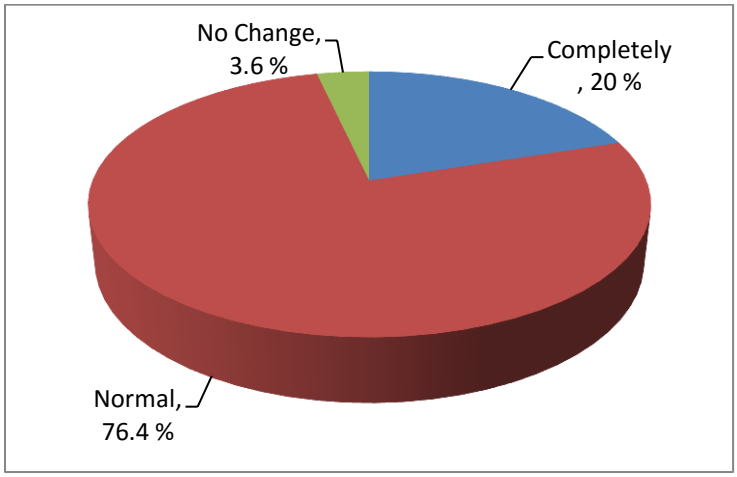


Figure 16 shows that the survey done in 140 sites- 28 person said that the lifestyle of the local community 'has completely occurred' through the information technology, 107 person said 'has been normal' and 5person said 'has not occurred'.

Formulating in percentage, 76.4% of person said that the lifestyle of the local community 'has been normal' through the information technology, 20% of person said 'has completely occurred' and 3.6% of person said 'has not occurred'.

Q. 16# Has the service delivery of your organization been simple, easy, effective and continuous due to the use of internet services / not?

FIG.17 Service Delivery

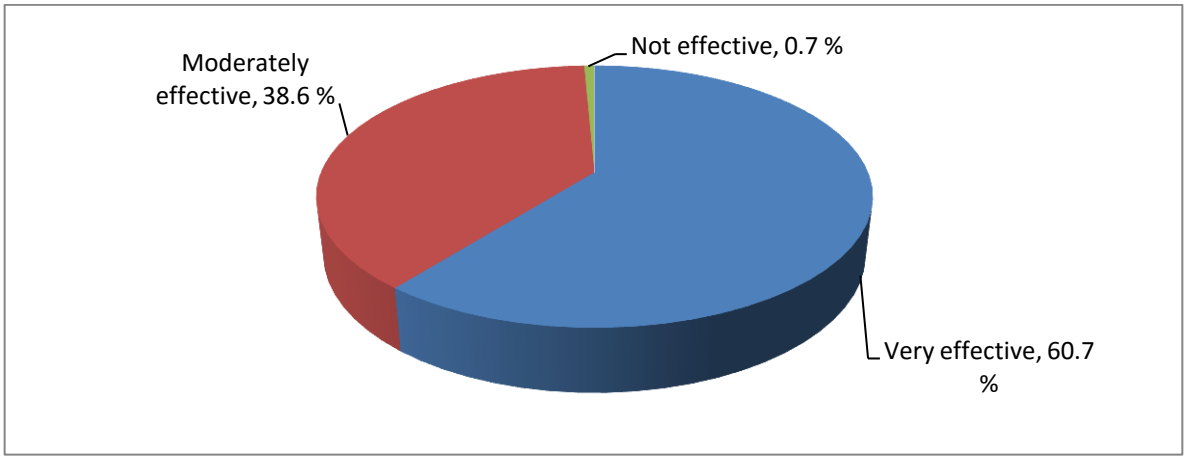


Figure 17 shows that within 140 sites- 85 person said 'very effective' that through the internet, service delivery of their organization has been simple, easy, effective and continuous, 54 person said 'moderately effective' and 1 person said 'not effective'.

According to percentage, 60.7% of person said 'very effective' that through the internet service delivery of their organization has been simple, easy, effective and continuous,38.6% of person said 'moderately effective' and 0.7% of person said 'not effective'.

Q. 17# Has there been an increase in the user's efficiency after using the internet service?

FIG.18 User's Efficiency

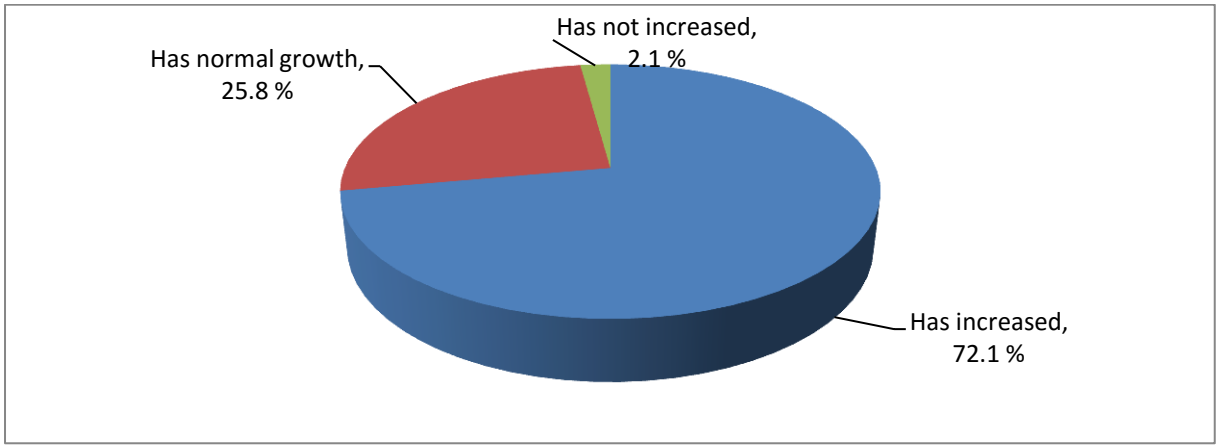


Figure 18 indicates from the 140 sites – 101 person said that the user's efficiency 'has increased' through the use of internet service, 36 person said 'has normal growth' and 3 person said 'has not increased'.

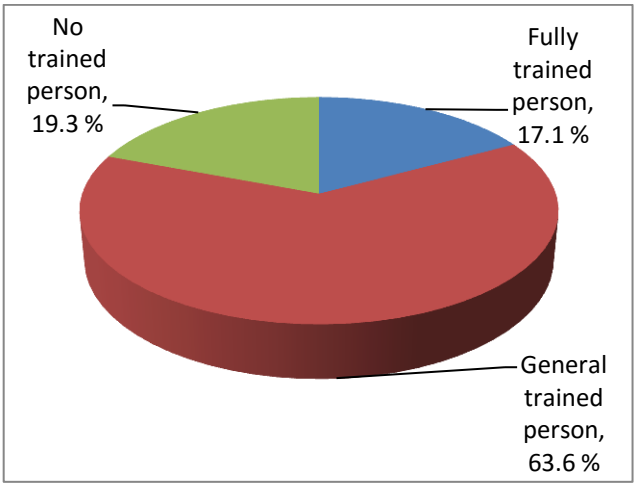
Similarly in percentage, 72.1% of person said that the user's efficiency 'has increased' through the use of internet service, 25.8% of person said 'has normal growth' and 2.1% of person said 'has not increased'.

Q. 18# Does your organization have knowledgeable/trained personnel related to internet services?

FIG.19 Knowledgeable/ Trained personnel

From the survey of 140 sites-24person said that their organization has 'fully trained person' who have knowledge related to internet services, 89person said they have 'general trained person' and 27person said they have 'no trained person'.

In percentage, 63.6% of person said that their organization has 'general trained person' who have knowledge related to internet services, 19.3% of person said their organization have 'No trained person' and 17.1% of person said they have 'fully trained person'.



Q. 19# After the end of the program related to the internet service connected by the authority for free for two years, will you continue the internet service through the same service provider after paying the fee?

FIG.20 Same service Continue

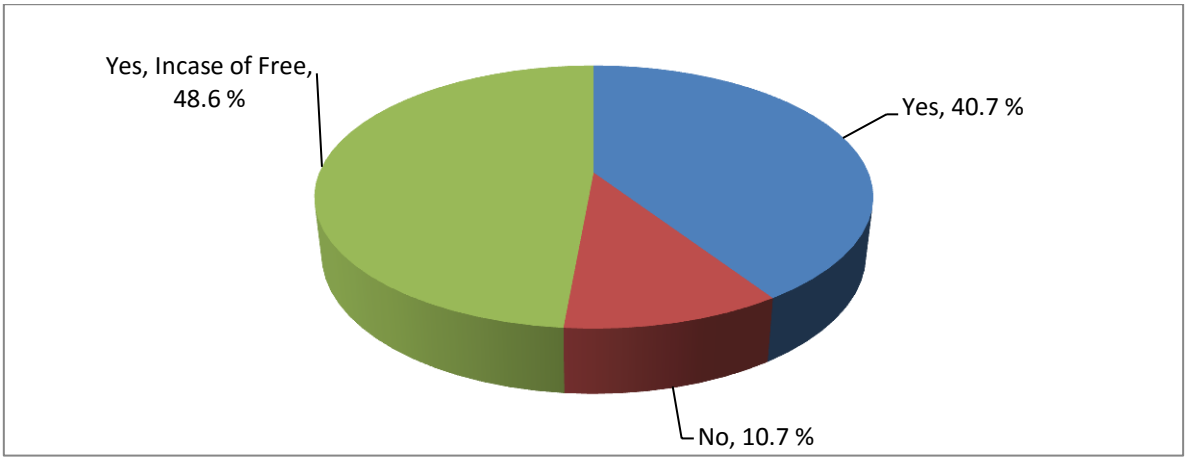


Figure 20 state the data of 140 sites where 57 of people said 'I do' to continue the internet provided through NTA which was free for 2 years, 15person said 'I don't' and 68 person said ' I do it only if it is free'.

Formulating in percentage the data shows 48.6% of person said 'I do it only of it is free' to continue the internet provided through NTA which was free for 2 years,40.7% of person said 'I do' and 10.7% of person said 'I don't'.

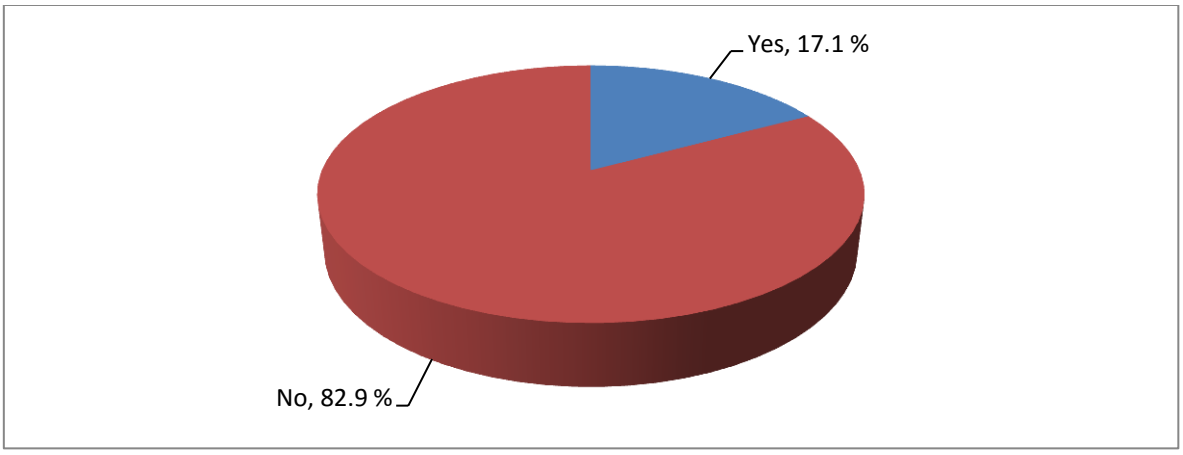
Q. 20# If you don't use internet service continuously, write why you don't do it.

Many more reason was raised of not continuing the internet provided through NTA which was free for 2 years, among them some of them are highlighted below.

1) Slow connection of internet.
2) Not good services
3) No good responses
4) No maintenance on time

Q. 21# Has connected broadband internet service created more employment in your organization / not?

FIG.21 More Employment



The data collected from the survey of 140 sites shows-24 person said 'Yes' that the broadband internet service has created employment in their organization whereas 116 person said 'no'.

Formulating in percentage the data can be read as 82.9% of person said 'no' that the broadband internet service hasn't created employment in their organization and 17.1% said 'Yes'.

Q. 22# Let us know if you have any suggestions or opinions about connected broadband

While doing the survey lots of suggestions was raised. Some of the major suggestions are mentioned below.

1) Should be regular monetarization.
2) Regular connectivity of internet
3) Timely Maintenance
4) Good customer services

Finding

The following are the findings of the survey conducted on the basis of the questionnaire about the broadband internet service provided by the Nepal Telecommunication Authority through the service provider using the Rural Telecommunication Fund.

1. It was found that 68.6 percent of the broadband internet service available through the Nepal Telecommunication Authority is in usable condition and 51.4 percent is operational.
2. The number of men using the internet in offices was higher than women.
3. Regarding the quality of the internet provided, it was found that the quality of the service is lower than the quality.
4. There is a problem with the continuity of the provided internet.
5. When the internet service doesn't work, the most common statement is that it takes 2 to 3 days for the problem to be solved by the service provider.
6. It was found that only a few were satisfied with the internet service provided.
7. It is said that the work of the service provider organization is efficient.
8. Most of the people said that the information technology and internet is very necessary.
9. It is said that most people use the internet for office purposes.
10. It was said that the local bodies are also providing online services through the use of internet and it was said that after the use of internet, there is ease in working and service delivery, while it was found that there are challenges in service delivery due to the problem in the continuity of internet service.
11. Regarding whether the projects related to broadband internet and optical fiber have been continuously monitored by the ministry, authorities or related bodies, most of the people said that there was no monitoring, but some also said that there was normal monitoring.
12. Majority of the people said that their lifestyle of the local community has become usually information technology friendly.
13. The service delivery of local bodies has been very effective while in some concerned body it is found moderate effective and continuous due to the use of internet services as well as there is also increasement in work efficiency through the use of internet.
14. It was found that in many organization general trained person are available rather than fully trained person regarding the knowledge of internet services.
15. Majority of organizations said that they will continue the provided internet through NTA if it is free and same ratio of organization said that they will continue while some of them said that they won't.
    The reason of not continuing the internet is that the internet an maintenance service isn't good.
16. 82.9 percent of people of concerned organization said that internet hasn't created the employment while 17.1 percent said that employment has created through internet.
17. From the survey we found that majority suggestion given by people regarding provided internet is that regular monetarization should be done, good costumer services, timely maintenance and regular connectivity.

Opinion of Concern Authority

Ministry of Communication and Information Technology

Mr. Netra Prasad subedi, joint secretary of Ministry of communication and information technology said that the Ministry has prioritized the use of Rural Telecommunication Development Fund in terms of connecting/expanding broadband services.

The progress made in the goal of providing broadband services across the country hasn't been achieved as expected by the Ministry. The Ministry has implemented necessary strategies to ensure equitable and widespread access to broadband services like increasing in coverage and quality.

The broad adoption of broadband internet has increased government service efficiency and work transparency. The government is planning to revised the Digital Nepal Framework to make the broadband internet services durable.

For the continuation of the structures established through the use of rural Telecommunication fund, the cost participation of the local level should be done.

National Planning Commission

Dr.Kiran Rupakheti, joint secretary of National planning Commission said that planning commission has always kept the project of broadband internet in priority. National planning Commission has done inspection occasionally on broadband internet that is provided under rural telecommunication development fund. This broadband internet has really made positive impact on education and health sector of rural area. Similarly has brought positive changes in society, had made work easy in rural municipality and ward.

The government will prepare the infrastructure; attract the private sector to invest and creating an enabling environment through policy facilitation.

Through the broadband internet government work has been easy as well as good and reliable infrastructure has developed by RTDF.

This type of infrastructure can be considered as role models.

Nepal Telecommunications Authority

Mr Binod Chandra Shrestha, Deputy Director of Nepal Telecommunications Authority answered these below enquiries.

1. How did the concept of rural telecommunication program come about?

- The Rural Telecommunication Development Fund established in accordance with sub-section 4 of section 30 of Telecommunications Act 2053, According to sub-sections 5 and 6 of the same section, development, expansion and operation of

telecommunication services in rural areas under the authority of the telecommunication policy of the Government of Nepal.
According to Nepal Telecommunication Authority (Rural Telecommunication Development Fund) Regulation 2068, the amount must be collected from the licensee at the rate of 2 percent of the gross annual revenue.
Likewise, the Rural Telecommunication Fund was started by preparing a concept paper based on the policies and programs of the Government of Nepal, the budget speech and the work, duties and rights of the Nepal Telecommunication Authority.
According to the provisions of the Telecommunication Policy 2060, there is a mechanism for the use of funds from the Rural Telecommunication Development Fund, project selection, prioritization and monitoring.
The concept of Rural Telecommunication Development Fund has come to reduce the digital divide by providing quality and reliable telecommunication services even in rural areas.

2. How many service providers are providing internet services under this project?

   - Nepal Doorsanchar Company Limited is working for Koshi, Madhesh, Karnali and Sudurpaschim Province towards Information Super Highway.
     In Gandaki and Lumbini provinces, a case was filed in the honorable Supreme Court regarding the agreement with United Telecom Limited and the case was not considered and the work could not be started.
     Mercantile Communication Pvt, Vianet Communication Limited, Worldlink Communication Limited, Subishu Cablenet Limited, and Techmind Network Pvt. Ltd. are the project sponsors for the 18 packages of projects within the broadband connectivity category. Six service providers carried out the work.
     Under Broadband Connectivity, 18 packages of projects have been implemented, these projects, Nepal Doorsanchar Company Limited, Mercantile Communication Pvt. Ltd, Vianet Communication Limited, World Link Communication Limited, Subisu Cable Net Limited and Techmind Pvt. Ltd. was completed through these 6 service providers.
     Work completed through TechMind Network for Ilam, Jhapa, Morang, Sunsari and Udaipur Districts.

3. How were different local stakeholders (local level, community health organizations and schools) involved in this project?

   - Local bodies, community secondary schools and community health institutions have been included according to the policy and program and budget statement of the Government of Nepal and the retention letter of the Nepal Telecommunication Authority regarding rural telecommunications.

4. Was the project completed on schedule and in accordance with the work plan? If not, why wasn't it possible?

   - On the date 2019/10/25, there was an agreement to complete the work within one year, but due to covid, the work was completed by extending the time period by 3 more months.

5. Are the accomplishments made in accordance with the project's goals? If not, what are the reasons?

   - The task was accomplished according to the goal of the project that providing the broadband internet service of at least 1Mbps to local level offices, ward offices, community secondary schools and community health centers and to provide on demand broadband internet service for other general public at the rate approved by the authority.
     This initiative made broadband service available in the region and also other competitor service providers to develop their networks, allowing customers to select a service provider based on both price and quality.

6. What were the problems encountered in completing this project and how were they resolved?
   - Although there were issues with the import of equipment and the mobilization of human resources during the implementation of this project due to the spread of the global covid epidemic, the project was completed with the coordination and facilitation of the local levels and the extension of the deadline.

7. How were Key Performance Indicators (KPI) determined such as broadband speed, technology, etc.?
   - The definition of broadband service has been established in accordance with the broadband policy, current internet bandwidth costs, internet content, on the basis of available technology and the service quality regulations of the Nepal Telecommunication Authority. That is determined by KPI.

8. How many population and organizations have been served by broadband internet service so far?
   - According to Nepal Telecommunication Authority's MIS Report, including 40.34 percent fixed broadband (wired) has reached 135.87 percent broadband penetration.
   -
9. How the Authority has contributed to bridging the digital divide between urban and rural areas through broadband connectivity

   The Nepal Telecommunications Authority (NTA) has played a significant role in bridging the digital divide between urban and rural areas in Nepal through various initiatives aimed at expanding broadband connectivity. Here are some ways in which the NTA has contributed to this goal:

1. **Policy Formulation:** The NTA has been instrumental in formulating policies and regulations that encourage the expansion of broadband services to underserved and rural areas. These policies create a conducive environment for telecom operators to invest in rural broadband infrastructure.
2. **RTDF:** The NTA manages the Rural telecommunication Development Fund, which is designed to subsidize the cost of providing telecommunications services in economically unviable or remote areas. The RTDF supports the deployment of broadband infrastructure in rural regions.
3. **Licensing and Spectrum Allocation:** The NTA is responsible for issuing licenses and allocating spectrum to telecom operators. They have promoted the use of broadband technologies in rural areas, making it more feasible to provide broadband access in remote locations.
4. **Promotion of Competition:** By promoting competition in the telecommunications sector, the NTA has encouraged service providers to expand their networks beyond urban centers and offer affordable broadband services to rural communities.
5. **Broadband Infrastructure Development:** The NTA has been involved in facilitating the development of broadband infrastructure in underserved areas. This includes encouraging the construction of fiber optic networks and the deployment of broadband towers in rural regions.
6. **Public-Private Partnerships:** The NTA has facilitated partnerships between government agencies, private sector companies, and development partners to fund and implement broadband expansion projects in rural areas.
7. **Monitoring and Regulation:** The NTA monitors the quality of broadband services provided by telecom operators to ensure that rural areas receive adequate and reliable connectivity.

While progress has been made, challenges such as rugged terrain and limited resources in rural areas continue to pose obstacles to bridging the digital divide completely. However, the NTA's ongoing efforts, in collaboration with various stakeholders, demonstrate their commitment to expanding broadband connectivity and narrowing the urban-rural digital gap in Nepal.

10. What regulatory or other issues/challenges has the Authority faced in promoting broadband connectivity, and how have these issues/challenges been addressed or mitigated?

    - NTA has faced the problems and challenges such as lack of inter-agency coordination, to set necessary policies and laws in time to facilitate the service providers to connect and promote Broadband, Service providers lack skilled manpower as per requirement, Equipment has to be imported from abroad and it takes time.
      Efforts have been made to solve and minimize the problems and challenges by requesting concerned agencies for inter-agency facilitation under the existing laws, rules and policies.

Operator

According to Mr. Kalyan Thapa, Chief of Operations at Techminds Pvt. Ltd., the broadband internet service offered under the Rural Development Fund is operational and in good condition. In case of network barrier or any default, our hardworking individuals are always in ready position to perform the necessary maintenance.

We offer free internet installation to people with low incomes, however we do charge an internet cost.

In addition, we are working with the local government suggestions and cooperation to keep the internet service operating.

Operating the NTA project was extremely challenging due to the covid-19, but as the covid-19 level declined, the task was gradually finished. While working with measuring the safety procedure too, we experienced some employee loss. Geographical challenges are something we too encounter. In addition, it costs a little more to establish a network in remote areas due to scattered houses, and the Nepal electrical authority also charges more for rent of poles, which results in costly internet.

Therefore, I advise that in order to keep this project going, the relevant authorities and the government should lower the pole rent and need to keep an eye on other competitive internet providers.

Survey with General Consumers

Location

FIG. 1- Respondents by Location

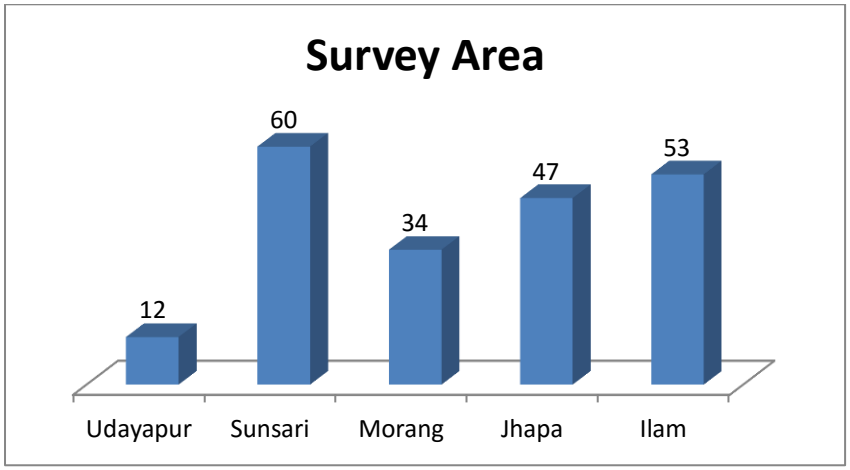


Figure 1 shows that the survey was done in 5 districts of Koshi Province where 12 people respondent in Udayapur,60 people in sunsari,34 people in Morang,47 people in Jhapa and 53 people in Ilam.

Age

FIG. 2- Respondents by Age

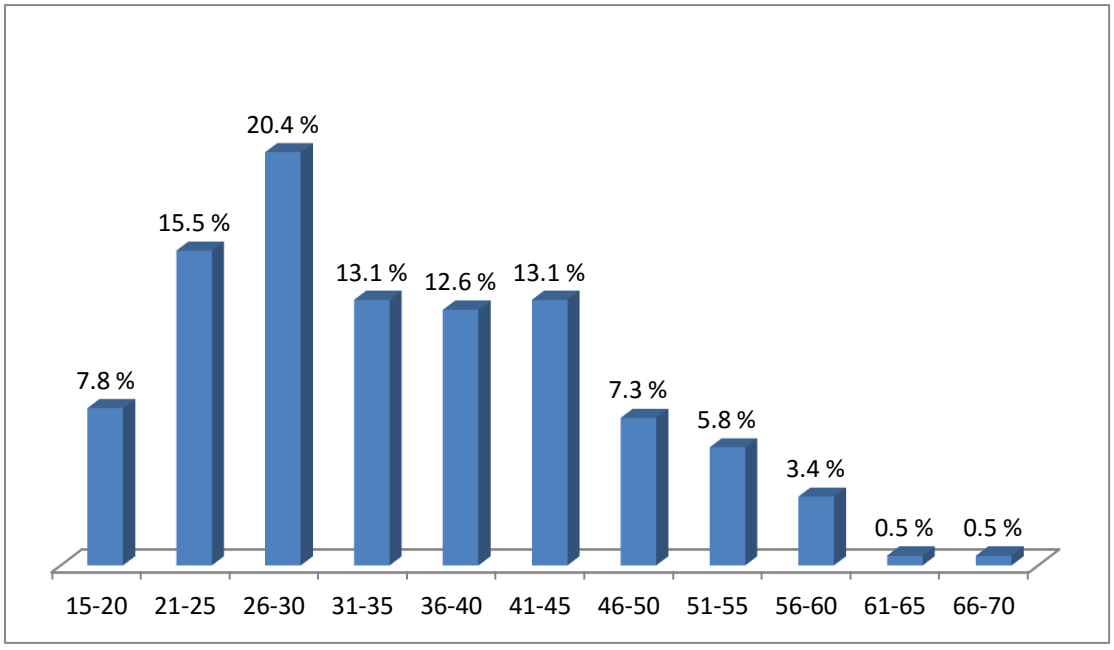


Figure 2 represents the age of respondents. Responses were gathered from respondents age 18 and up. The largest recorded age group, 26-30, represent 20.4% of the survey

population. The second largest group range between 21-25 represents 15.5%. The second largest group range between 31-35 represents 13.1%. The group range between 41-45 represents 13.1%. The group range between 36-40 represents 12.6%. The group range between 15-20 represents 7.8%. The group range between 46-50 represents 7.3%. The group range between 51-55 represents 5.8%. The group range between 56-60 represents 3.4%. The group range between 61-65 represents 0.5% and the last one is the group range between 66-70 represents 0.5%.

Gender

FIG. 3- Respondents by Gender

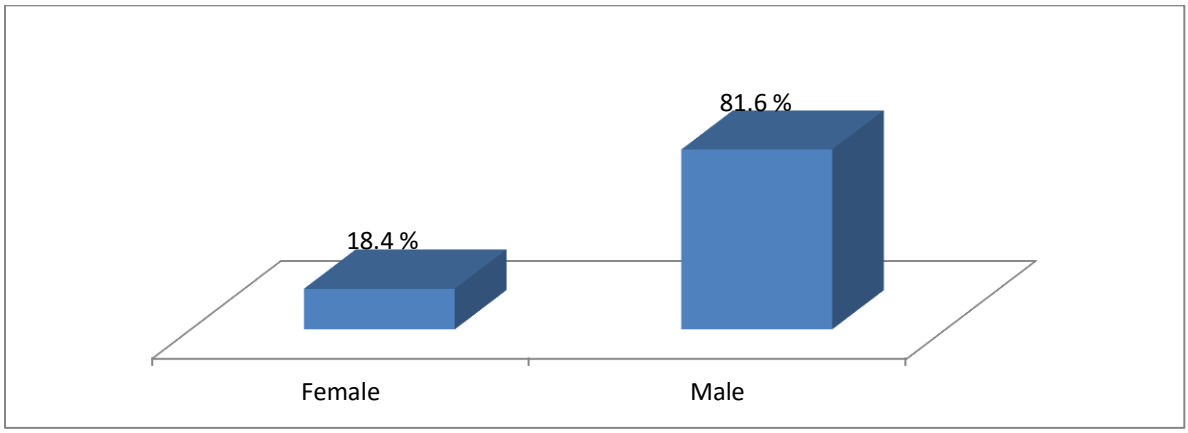


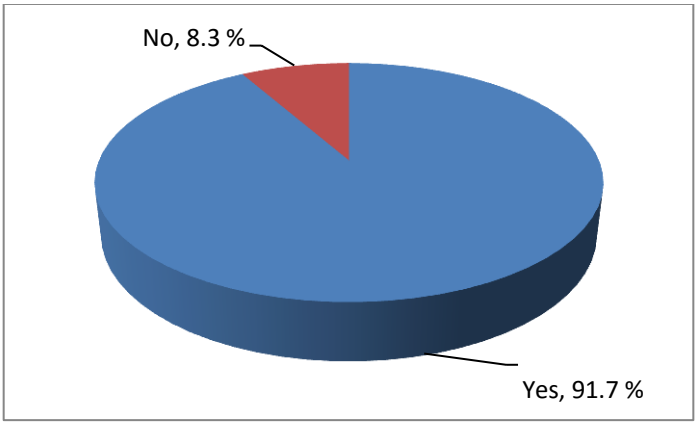
Figure 3 represents the gender of the respondent population of the 206 respondents to the study, the chart indicates that 81.6% were male and 18.4% were female.

Questioners

FIG. 4- Respondents by Question No. 1

Q – 1# *Have you connected broadband internet service at your home?*

Figure 4 shows that, out of the 206 individuals, 189 had said "yes," while 17 had said no. The figure shows that 91.7% of people have access to broadband internet, while 8.3% do not.

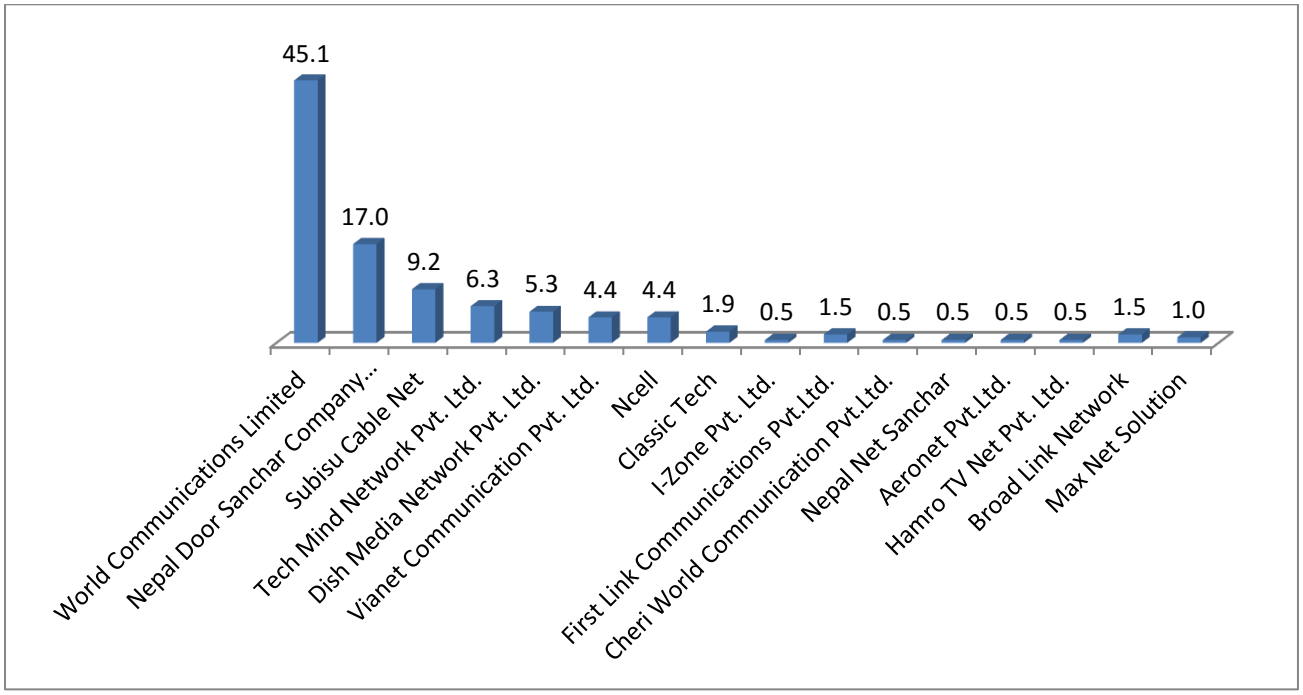


Q – 2# *If not, do you use mobile data at home?*

From the survey we found that among 206 individuals 17 people use mobile data which is 8.3%.

FIG. 5- Respondents by Question No. 3

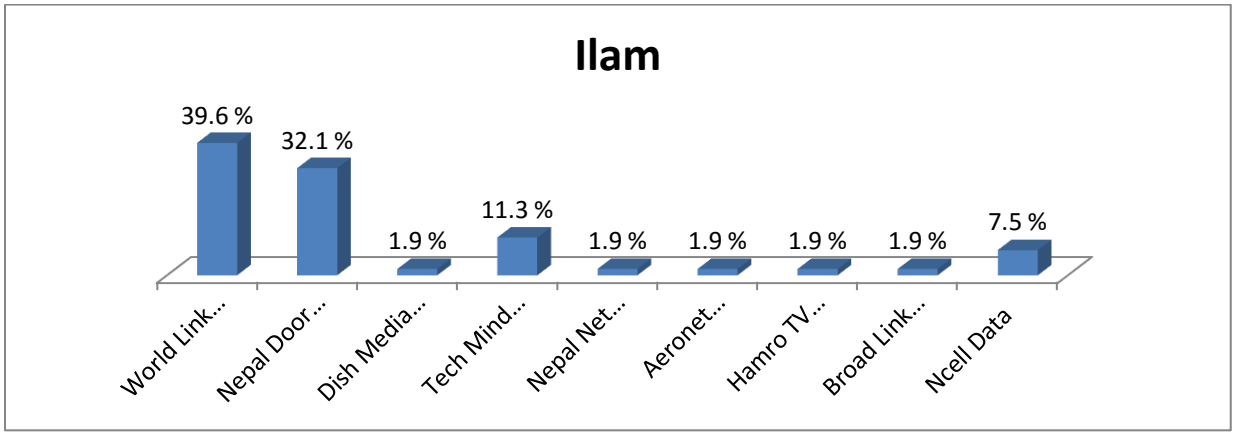
Q – 3# *What is your internet service provider?*

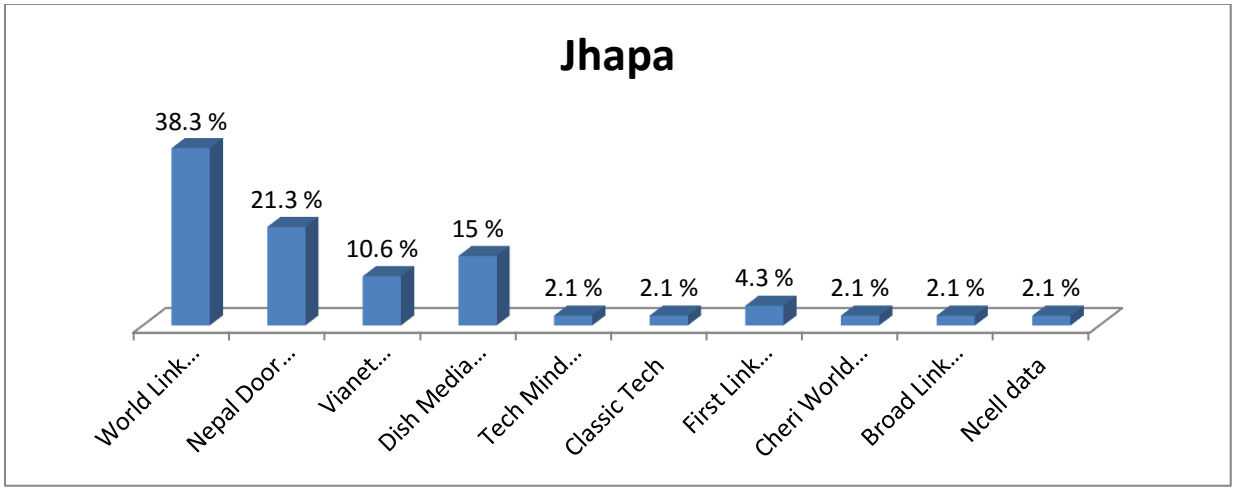


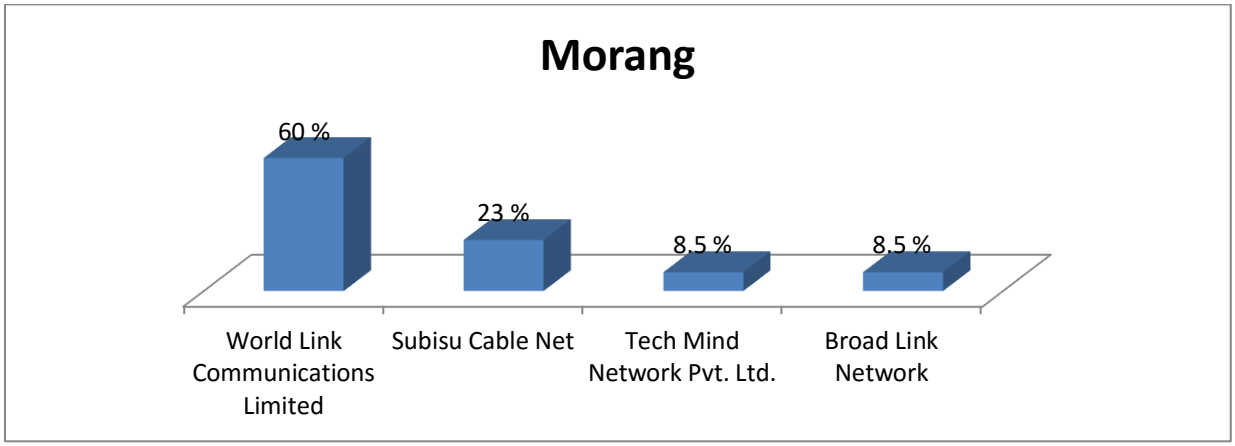
Above bar diagram indicates the percentage of people using the different internet service provider. From the survey of 206 individuals, 93 people uses Worldlink Communications Limited, 35 people uses Nepal Door Sanchar Company Limited, 19 people uses Subisu Cable Net, 13 people uses Tech mind Network Pvt. Ltd, 11 people uses Dish Media Network Pvt. Ltd, 9 people uses Vianet Communication Pvt. Ltd similarly other data is shown on diagram.

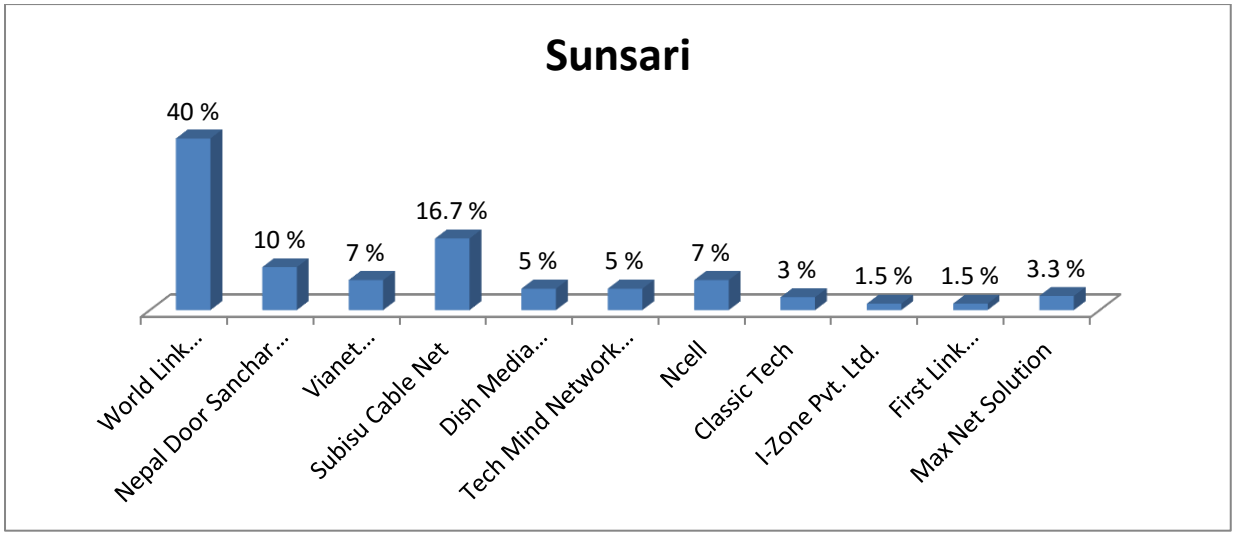
While in percentage the diagram shows that 45.1% of people uses Worldlink Communications Limited,17% of people uses Nepal Door Sanchar Company, 9.2% of people uses Subisu Cable Net, 6.3% of people uses Techmind Network Pvt. Ltd, 6.3% of people uses Dish Media Network Pvt. Ltd, 5.3% of people uses Vianet Communication Pvt. Ltd and other are shown in diagram simaltaniously.

District wise Internet service provider









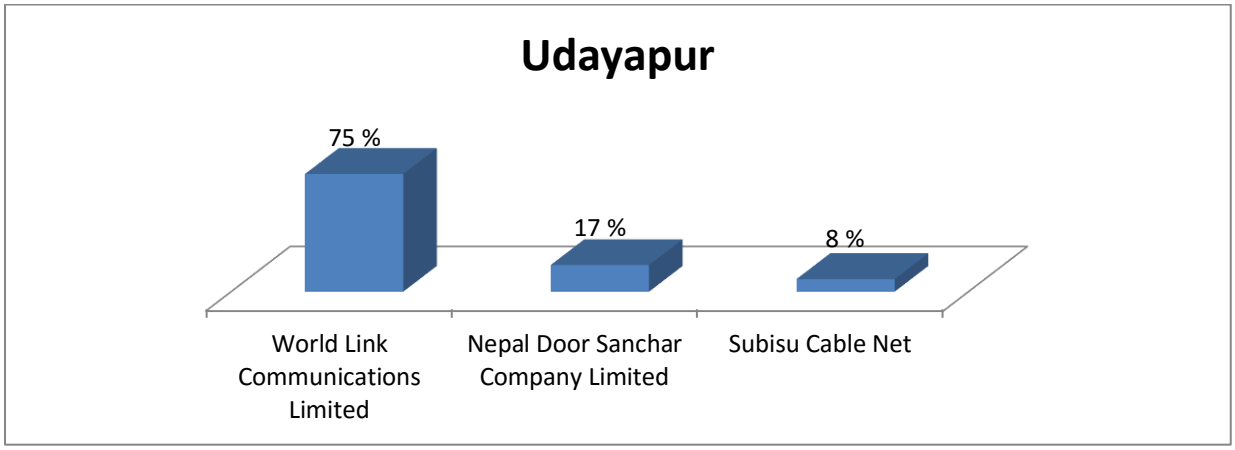
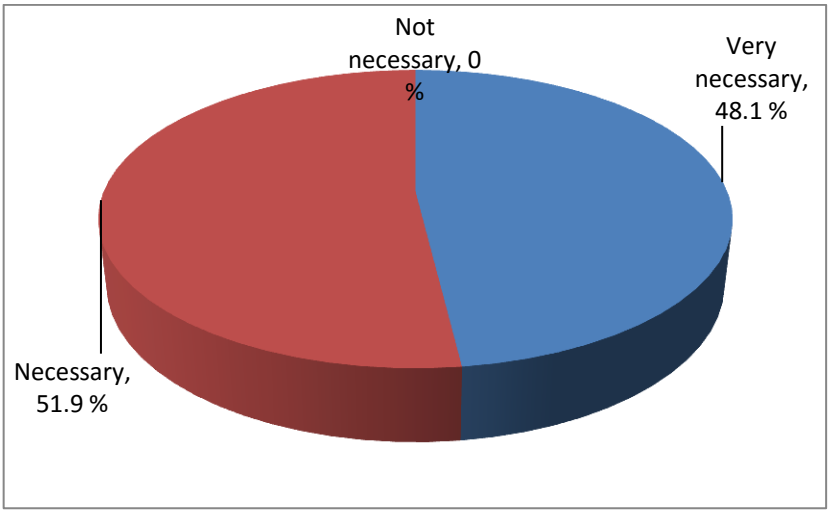


FIG. 6- Respondents by Question No. 4

Q – 4# *Internet and information technologies are necessary?*



Out of the 206 respondents, 99 individuals stated "is very necessary," and 107 individual said "is necessary," as shown in **Figure 6.**

The graph shows that 51.9% of people has says Information technologies "is necessary" while 48.1% of people has says "is very necessary" and no one is found saying not necessary.

FIG. 7- Respondents by Question No. 5

Q – 5# *What is the quality of the broadband internet service you are using?*

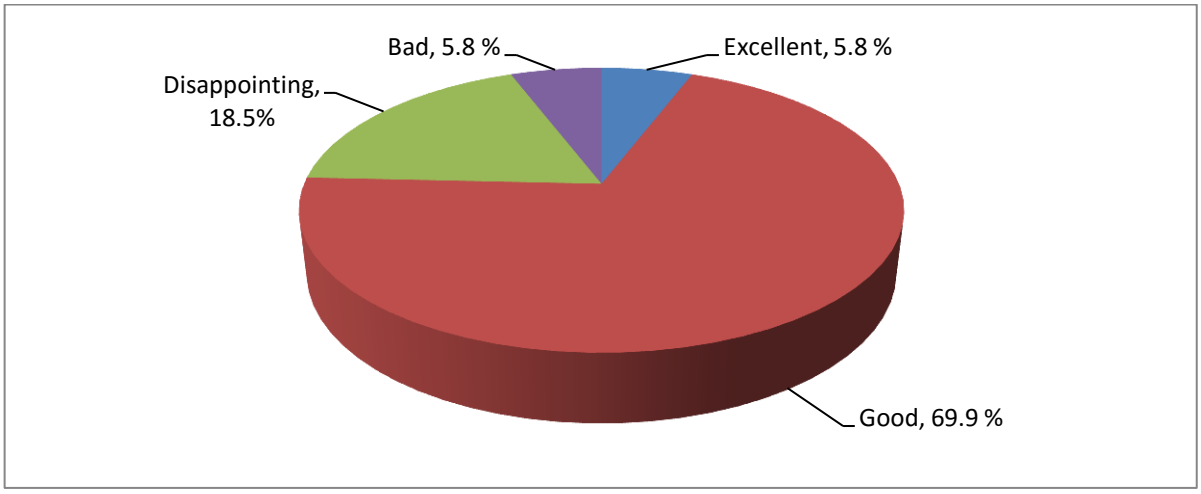


Figure 7 reveals that, of the 206 respondents, 12 had rated the experience as "Excellent," 144 as "Good," 38 as "Disappointing," and 12 as "Bad."

According to the percentage, 69.9% of respondents believed the quality of broadband internet service is good. 18.5% of respondents had selected Disappointing, 5.8% had selected Excellent, and 5.8% had selected Bad.

FIG. 8- Respondents by Question No. 6

Q – 6# *What would you like to improve on your home connected internet service?*

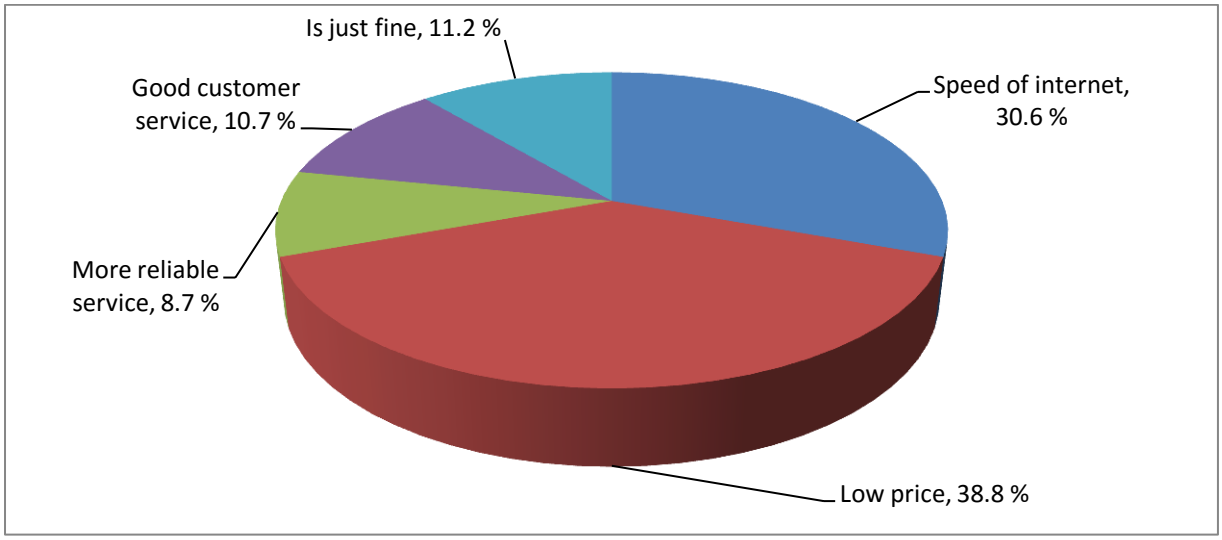


Figure 8 reveals that, of the 206 respondents, 62 had said that there should be improvement in speed of internet, 80 individuals had said that the internet should be low price, 18 people has says that the operator should provide the more reliable internet services to the customer, 22 individual says operator should operate good customer service and 23 individual are just fine as it is.

According to the percentage, 38.8% of respondents had said that the internet should be low price, 30.6% had said that there should be improvement in speed of internet, 11.2% individual are just fine as it is, 10.7% individual says operator should operate good customer service and 8.7% has says that the operator should provide the more reliable internet services to the customer.

FIG. 9- Respondents by Question No. 7

Q – 7# Has internet service contributed to your employment or not?

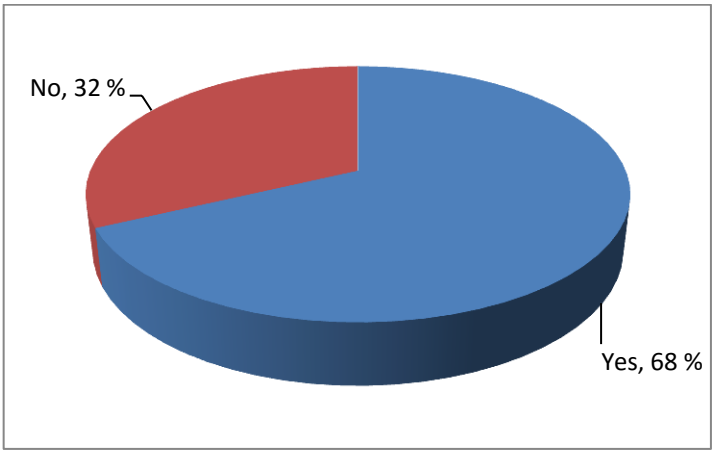


Figure 9 demonstrates that, of the 206 persons, 140 had responded "yes," and 66 had responded "no." The data demonstrates that internet service has contributed for employment for 68% of people and not for 32%.

FIG. 10- Respondents by Question No. 8

Q – 8# How has broadband internet affected your income?

Figure 10 reveals that, of the 206 respondents, 55 had indicated an increase, 8 had indicated decreased, and 143 had indicated not change much.

Figuring out as the percentage 69.4% of respondents responded that the proportion "has not changed much," 26.7% said that it "has increased," and 3.9% said that it "has decreased."

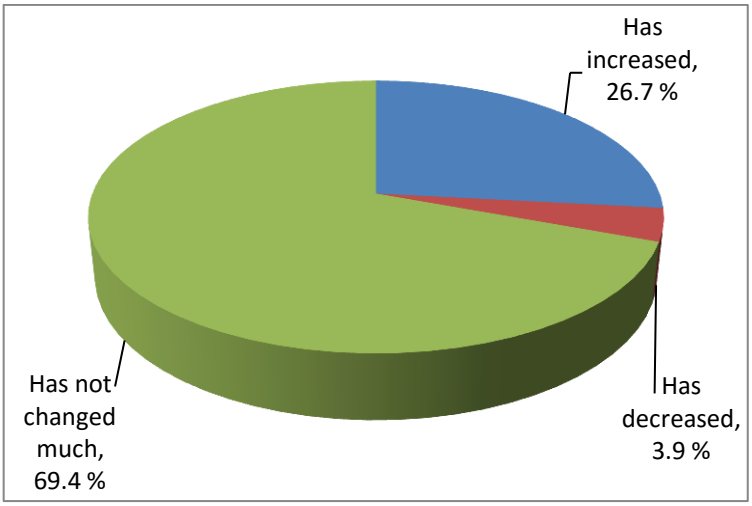


FIG. 11- Respondents by Question No. 9

Q – 9# How much time a day do you spend on the Internet?

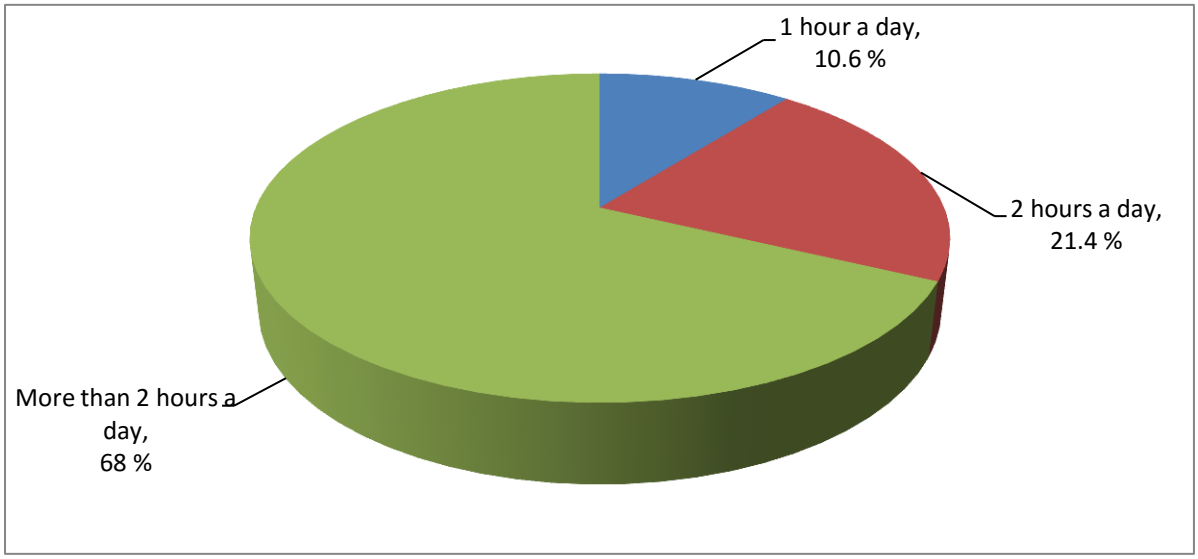
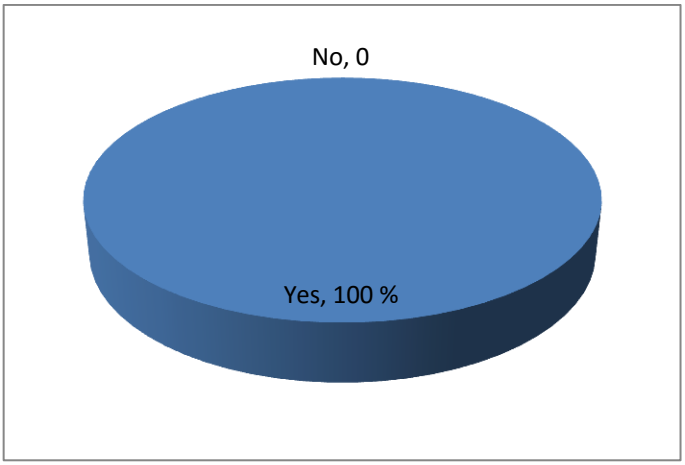


Figure 11 reveals that, of the 206 respondents, 22 number of individuals has said that they spend time on internet for a1 hour of a day, 44 individuals has said 2 hours a day and 140 people said more than 2 hours a day.

According to the percentage, 68% of respondents spend their time on internet more than 2 hours a day, 21.4% spend 2 hours a day and 10.6% spend 1 hour a day.

FIG. 12- Respondents by Question No. 10

Q – 10# Do you feel more connected with your relatives, friends, and society since adopting broadband internet services?



Among the 206 respondents all of them had said that they are more connected with their relatives, friends and society since they have connected broadband internet services. It means that it shows 100% of people are agreed that they are connected with their relatives, friends and society through broadband internet services

FIG. 13- Respondents by Question No. 11

Q – 11# Have you felt that your home/local community has become IT friendly after using broadband internet service?

Among the 206 respondents 202 people has yes and 4 individuals has says no.

Studying through the percentage it shows that 98.1% of people are agreed that their home/local community has become IT friendly after using the broadband internet services and 1.9% of individual aren't agreed with this.

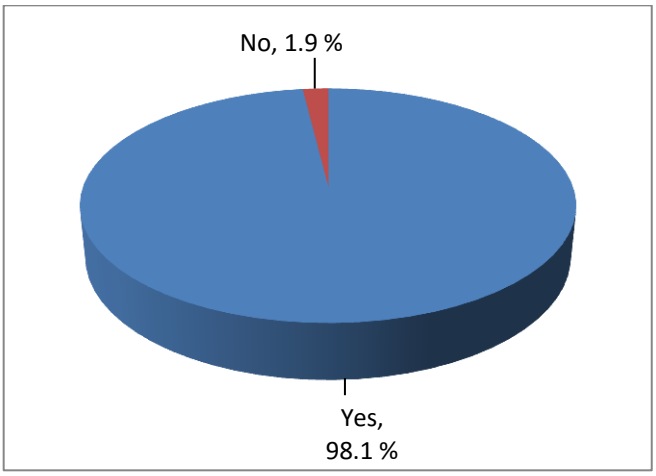
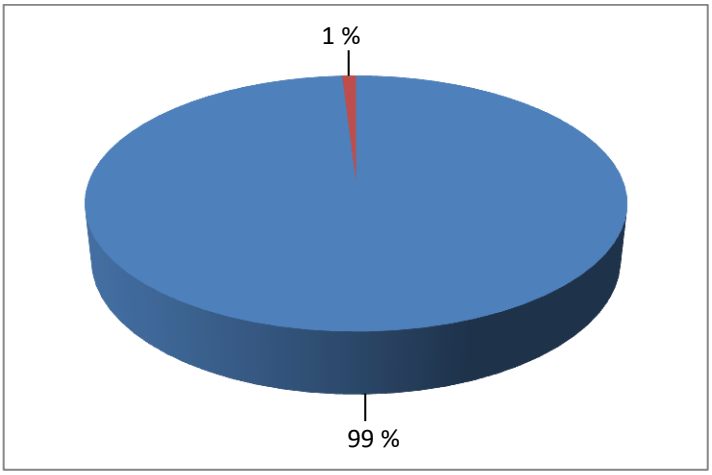


FIG. 14- Respondents by Question No. 12

Q – 12# Has the availability of broadband Internet increased your access to health care information, financial services, government services, etc.?

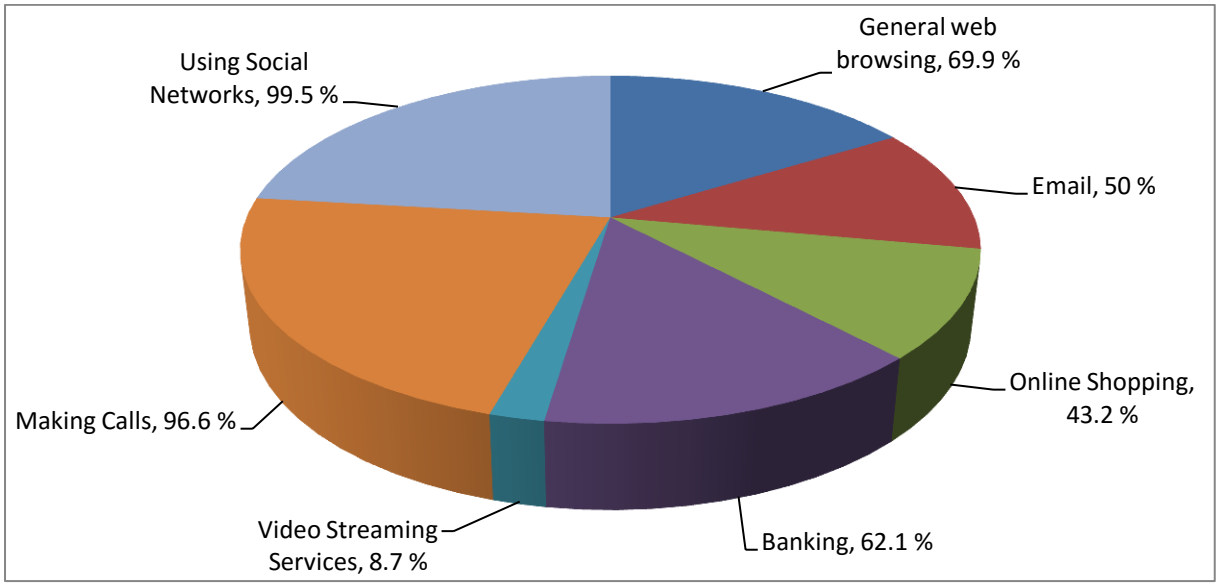


From the survey we found that among the 206 respondents 204 individuals says yes and 2 individuals says no.

In percentage, 99% of people had said that the availability of broadband internet has help to get the information of health care, financial services, government services etc and 1% of people aren't agreed with this.

FIG. 15- Respondents by Question No. 13

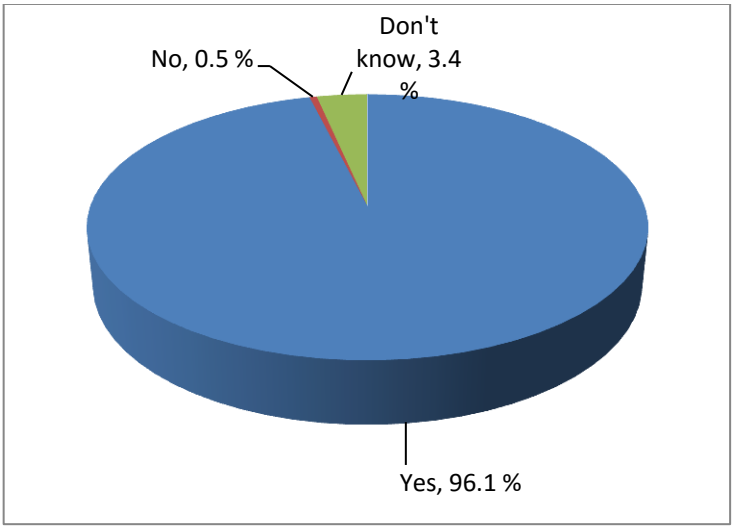
Q – 13# What activities do you use the internet service for? (More than one can be selected)



The fig.13 shows that 99.5% of people use internet for social networks,96.6% of people make calls,69.9% people use internet for general web design,62.1% of people use internet for banking,50% of people use internet for email,43.2% of people use internet for online shopping and 8.7% of people use internet for video streaming services.

FIG. 16- Respondents by Question No. 14

Q – 14# Is there competition between different broadband internet service providers in your area?

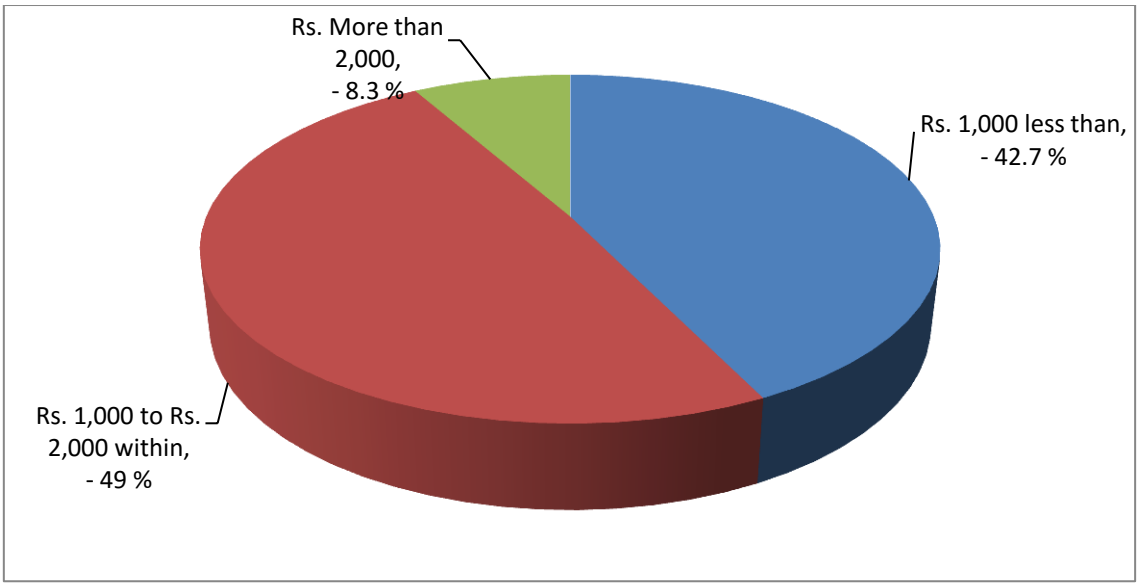


From the survey of 206 respondents 198 of individuals had said yes, 1 person said no and 7 people are unaware about it.

Similarly in percentage, 96.1% of people said yes that there is competition between different broadband internet services providers in their area whereas 3.4% of individuals are unaware about it and 0.5% of individuals said no.

FIG. 17- Respondents by Question No. 15

Q – 15# How much money do you spend to use internet service in a month?



Among 206 respondents, 88 people said that they spend less than NRs.1000 in internet per month, 101 people spend NRs.1000 to 2000 within and 17 people spend more than NRs.2000 in a month.

Figuring in percentage it shows that 49% of people spend Rs.1,000 to Rs.2000 per month in internet similarly 42.7% of individuals spend less than Rs.1000 per month and 8.3% of people spend more than Rs.2000 per month.

Q – 16# Write briefly about the change in your life due to the use of internet.

The use of internet has change a lot of things in people's life. Some of them are highlighted below.

1) The Internet has made communication faster and more accessible these days
2) Internet has made easier to learn and research
3) It has changed the way we consume news and information
4) Online shopping and e-commerce platforms have changed the way of shopping as well as financial transactions
5) Increased access to online education
6) It has changed the way of study.
7) Remote work has been made possible from one place
8) Increased access to business
9) It has given a platform to express oneself and share creativity and advocate for various causes

Q – 17# What kind of problems do you think misuse of internet services creates in society?

Lots of problem was mentioned by people while doing survey.Major of them are mentioned below.

1) Cybercrime seems to create a variety of problems, including hacking, identity theft, phishing, and online fraud
2) Misuse of Internet services may result in unauthorized collection and misuse of personal data
3) The spread of false or misleading information through the Internet can have serious consequences, including public confusion, social conflict, and public health.
4) Things like cyberbullying, harassment, and online abuse can harm individuals emotionally and psychologically and, in some cases, lead to tragic consequences.
5) Excessive use of the Internet and social media can lead to digital addiction, which affects a person's mental and physical health
6) Acts such as financial fraud may occur

Q – 18# If you have any comments or suggestions about the Internet service you have connected, please write.

Through the survey most of the people suggested that the cost of internet should be low or affordable, operator should provide the internet speed as promised MBPS, and operator should give good costumer services as well as time to time monitoring should be done.

Findings

Below findings were found while doing the survey in general public.

1) Most of the people have access to broadband internet service and among the many alternatives huge number of people has connected the world link communications, some of them have connected Nepal Door Sanchar Company, and some have subishu cabel net.
2) Almost People were in favor of necessity of the internet and information technology.
3) The internet connected by the choices of people themselves found good as per their opinion.
4) In terms of improvisation of their connected internet of home they prefer low price as well as speed of internet.
5) It is said that internet has contributed to the employment but has not affected much in income.
6) People spend more than 2 hour in internet per day and through the internet they feel that they are connected with family, friends and society.
7) People felt that their home/local community has become IT friendly after using the broadband internet services as well as has increased their access to health care information, financial services, government services, etc

8) It is found that most of the people uses internet for the social media and then phone calls as well the ratio of using mobile banking, general web browsing, online shopping, email is also good.
9) In most of the area it was found that different internet service providers were in access.
10) For the internet service majority of people spend NRs.1000 to NRs,2000 per month nearer to that it was also found that people spend below NRs1000 per month.
11) It was found that the Internet has made huge changes in peoples life like, Internet has made easier to learn and research, it has changed the way they consume news and information, Online shopping and e-commerce platforms have changed the way of shopping as well as financial transactions, increased access to online education, remote work has been made possible from one place, increased access to business, it has given a platform to express oneself and share creativity and advocate for various causes.
12) People said that there a lots of problem arises from the misuse of internet like Cybercrime, unauthorized collection and misuse of personal data, spread of false or misleading information, social conflict, and public health, cyberbullying, harassment, and online abuse which can harm individuals emotionally and psychologically, tragic consequences, excessive use of the Internet and social media can lead to digital addiction, which affects a person's mental and physical health.
13) Through the survey most of the people suggested that the cost of internet should be low or affordable, operator should provide the internet speed as promised MBPS, and operator should give good costumer services as well as time to time monitoring should be done.

Focus Group Discussion

We have done focus group discussion on 6 places of 5 district-Udayepur, Sunsari, Morang, Jhapa and Illam. In the focus group discussion number of people gave their advice, mentioned the challenges, opportunities that has been carried by access of broadband internet in their society on which we made the conclusion as below.

1 # What is the Access to broadband services has brought about changes in service delivery, opportunities, challenges and solutions?

Access to services has brought various changes, opportunities, challenges, and solutions in different aspects of life. Here are some changes:

1. **Enhanced Service Delivery:**

- Healthcare: Telemedicine services have flourished, enabling remote consultations and medical advice. Patients in remote areas have now access healthcare expertise.
- Education: Broadband has facilitated online learning, connecting students and educators nationwide. It has helped bridge the gap in educational access.
- Government Services: Citizens have access government information, apply for permits, and pay taxes online, reducing bureaucratic hurdles.

2. **Economic Opportunities:**

- E-commerce: Broadband has spurred the growth of e-commerce platforms, enabling businesses to reach a broader customer base and driving economic growth.
- Freelancing and Remote Work: people have now access global job markets and work remotely, reducing the urban-rural economic divide.
- Entrepreneurship: Start-ups and entrepreneurs have tap into the global market and find investors and collaborators more easily.

3. **Challenges:**

- Infrastructure Gaps: Despite progress, broadband infrastructure remains underdeveloped in remote areas, hindering equitable access which has effect on service quality.
- Digital Literacy: Many people are from rural area where they lack digital literacy, limiting their ability to fully benefit from broadband services.
- Cybersecurity: With increased online activity, there is a greater need for robust cybersecurity measures to protect personal and financial data.

4. **Solutions:**

- Infrastructure Expansion: Continued investment in expanding broadband infrastructure to remote regions is essential. Public-private partnerships can help achieve this.
- Digital Literacy Programs: Initiatives to promote digital literacy among citizens of all ages are critical. Training programs and online resources can be provided.
- Cybersecurity Measures: Strengthening cybersecurity laws and enforcing them rigorously can safeguard against online threats.

In conclusion, access to broadband services has catalyzed significant changes in service delivery, opened up new economic opportunities, and posed challenges that need to be addressed in province 1. To harness its full potential, the government, private sector, and civil society must work collaboratively to expand infrastructure, promote digital literacy, enhance cybersecurity, and ensure inclusivity in this digital transformation journey.

2 # The participation of local people in policy making

Broadband internet plays a significant role in enhancing the participation of local people in policy making by providing tools and platforms that facilitate engagement and information sharing. Here's how broadband internet contributes to this process:

1. **Access to Information:** Broadband internet has enables easy access to a wealth of information related to government policies, proposed legislation, and public affairs. People are informed about current issues, making it easier for them to engage in discussions and decisions that affect their communities.
2. **Online Consultations:** Governments and policymakers can host online consultations, surveys, and public forums where local residents can provide feedback on various policy matters. Broadband internet ensures that people can participate from the comfort of their homes, reducing geographic barriers to engagement.
3. **Virtual Town Halls:** Broadband enables virtual town hall meetings and webinars where local officials and policymakers can directly interact with residents, answer questions, and gather input on important issues. This format allows for broader participation beyond physical attendance.
4. **Digital Petitions:** Online platforms make it easy for individuals to create and sign petitions, garnering support for specific policy changes or initiatives. Digital petitions can quickly gain traction and visibility, increasing their impact.
5. **Social Media Engagement:** Broadband internet allows for active engagement on social media platforms, where residents can discuss policies, share information, and organize grassroots movements or advocacy campaigns.
6. **Access to Government Portals:** Many governments provide online portals where residents can access government documents, proposed legislation, and meeting minutes. This transparency enhances public understanding of policy issues.
7. **Collaborative Platforms:** Broadband facilitates the use of collaborative tools like online forums, and shared documents, enabling local communities to work together to develop policy proposals and recommendations.
8. **Online Advocacy:** Advocacy groups and community organizations can use broadband to mobilize local residents, share policy-related information, and coordinate advocacy efforts to influence decision-makers.
9. **Accessibility for Diverse Populations:** Broadband internet offers accessibility features that can accommodate individuals with disabilities, ensuring that a wider range of people can participate in policy discussions.
10. **Remote Access:** Residents who may be unable to attend physical meetings due to work or family commitments can participate remotely through video conferencing, webinars, or live-streamed events.

However, it's important to recognize that while broadband internet enhances participation in policy making, the digital divide remains a significant challenge. Not everyone has equal access to high-speed internet, which can result in unequal participation. Policymakers and communities should work to address this divide through initiatives that promote broadband accessibility and digital literacy, ensuring that all local people can effectively engage in policy-making processes.

3 # Public-Private Partnerships involve to Expand Access to Broadband Services

Public-Private Partnerships (PPPs) can play a crucial role in expanding access to broadband services by leveraging the strengths and resources of both the public and private sectors. Here are several ways in which PPPs can be involved in expanding broadband access:

1. **Infrastructure Investment:** PPPs can collaborate to fund and build broadband infrastructure, such as fiber-optic networks, cellular towers, or satellite systems. Public entities can provide funding, grants, or incentives, while private companies bring technical expertise and operational capabilities.
2. **Joint Planning and Strategy:** Public and private partners can work together to develop comprehensive broadband expansion plans, taking into account the specific needs and gaps in underserved areas. This collaboration ensures that resources are allocated efficiently.
3. **Sharing Existing Infrastructure:** Public entities can share existing infrastructure, such as utility poles and wire or government-owned buildings, with private broadband providers. This reduces the costs and time required for infrastructure deployment.
4. **Rights of Way and Permits:** Governments can expedite the permitting process and grant access to rights of way for private broadband providers. Streamlining these processes can accelerate network deployment.
5. **Risk Sharing:** PPPs can share risks associated with broadband projects. Public partners may share financial risks, while private partners assume technical and operational risks, ensuring a balanced risk-reward scenario.
6. **Rural Tele-communications Development Funds:** Public funds, such as RTDF, can be used to subsidize the cost of deploying broadband infrastructure in underserved or remote areas. Private providers can access these funds through PPP agreements to make the projects financially viable.
7. **Regulatory Support:** Governments can enact regulatory frameworks that encourage private investment in broadband infrastructure while ensuring fair competition. PPPs can collaborate on developing and implementing these regulations.
8. **Digital Inclusion Programs:** PPPs can support digital inclusion initiatives that provide affordable broadband access and digital literacy training to low-income and underserved communities.
9. **Monitoring and Accountability:** PPP agreements should include mechanisms for monitoring progress and ensuring that both public and private partners meet their commitments. This helps maintain transparency and accountability.
10. **Community Engagement:** Involve local communities in the decision-making process. Public and private partners can engage with community leaders to

understand local needs and preferences, ensuring that broadband projects are tailored to the community's requirements.

11. **Data Collection and Mapping:** Collaborate on data collection and mapping efforts to identify areas with inadequate broadband coverage accurately. This data helps prioritize investment in areas that need it most.
12. **Technology and Service Standards:** Define technology and service standards in PPP agreements to ensure that the broadband infrastructure meets specified quality and performance criteria.
13. **Long-Term Sustainability:** Consider long-term sustainability in PPP agreements. Partners should outline plans for network maintenance, upgrades, and technology evolution to ensure that broadband infrastructure remains viable and competitive.

Overall, PPPs can be effective in expanding access to broadband services by combining the strengths and resources of both the public and private sectors. Successful partnerships require clear agreements, transparency, and a shared commitment to bridging the digital divide and providing affordable, high-quality broadband access to all.

4 # Effectiveness of online VS in-person (Physical) education for student

The effectiveness of online education versus in-person (physical) education for students is a topic that has garnered significant attention, especially in recent years due to the COVID-19 pandemic. It's important to note that the effectiveness of each mode of education is vary depending on various factors, including the age of the students, the subject matter, the quality of instruction, and the resources available. Here's an overview of the key points highlighted from the group discussion to consider when comparing online and in-person education:

Online Education:

1. **Flexibility and Convenience:** Online education has offers flexibility, allowing students to access materials and coursework at their convenience. This has been advantageous for individuals with busy schedules, including working adults or students with family responsibilities.
2. **Access to Diverse Resources:** Online courses have provided access to a wide range of digital resources, which has been valuable for research and self-paced learning.
3. **Personalized Learning:** Some online platforms use adaptive learning technologies to tailor instruction to individual students' needs and pace, potentially enhancing learning outcomes.
4. **Global Access:** Online education has provided the access to courses and instructors from around the world, broadening educational opportunities.

Challenges of Online Education:

1. **Lack of Face-to-Face Interaction:** Online education often lacks face-to-face interaction with instructors and peers, which has led to feelings of isolation and reduced engagement.
2. **Technical Issues:** Students has encounter technical challenges multiple times, such as unreliable internet connections or difficulties with online platforms, which has disrupt the learning experience.
3. **Self-Discipline:** Online learning requires a high degree of self-discipline and motivation. Some students have found struggling with time management and staying on track.
4. **Limited Practical Experience:** Certain fields, such as hands-on lab sciences or vocational training, have been challenging to teach effectively in an online format.
5. **Limited Access:** In many regions, especially rural and remote areas, access to high-speed and reliable internet is limited and unavailable. This lack of access has prevents students from participating in online classes, accessing course materials, or even submitting assignments.
6. **Inequality:** The digital divide exacerbates educational inequalities. Students without internet access or with slow connections are at a significant disadvantage compared to their peers who have reliable broadband access. This inequality has hindered educational attainment and widens existing achievement gaps.
7. **Quality of Connection:** Even in areas with internet access, the quality of the connection is varying widely. Slow speeds, frequent disconnections, and bandwidth limitations have impede the smooth delivery of online classes and have cause frustration for both students and instructors.
8. **Digital Literacy:** Effective online learning requires digital literacy skills, which include the ability to use online tools, navigate learning management systems, and troubleshoot technical issues. Students lacking these skills has struggle with online education.
9. **Cost Burden:** Accessing the internet has been costly to some of the parents. Some students and families have struggled to afford internet service and the necessary devices, particularly if they have multiple family members in need of online access.
10. **Stress and Anxiety:** The fear of losing internet connectivity or encountering technical problems during exams or important assignments has also lead to stress and anxiety among students.
11. **Teacher Challenges:** Educators has also struggle with the lack of internet connectivity, as it affects their ability to deliver online lessons, interact with students, and access digital teaching resources.

Solutions and Mitigations:

Addressing the lack of internet connectivity challenges in online education requires a multifaceted approach:

1. **Infrastructure Development:** Governments and private sector partners should invest in expanding broadband infrastructure to underserved areas, including rural and remote regions.

2. **Subsidies and Assistance:** Governments can provide subsidies or financial assistance to low-income families to help cover the cost of internet service and devices.
3. **Community Wi-Fi Initiatives:** Establishing public Wi-Fi hotspots in community centers, libraries, and schools can provide internet access to those who lack it at home.
4. **Digital Literacy Training:** Offer digital literacy training programs to students, parents, and educators to improve their ability to navigate online learning environments.
5. **Alternative Learning Formats:** Develop alternative learning materials, such as downloadable resources or offline assignments, for students with limited internet access.
6. **Synchronous and Asynchronous Options:** Offer both synchronous (live) and asynchronous (recorded) learning options to accommodate students with varying levels of internet connectivity.
7. **Emergency Response Plans:** Schools and institutions should have plans in place to address internet connectivity issues during emergencies or unexpected outages.

Addressing the challenge of lack of internet connectivity in online education is essential to ensure that all students have equitable access to quality learning opportunities, regardless of their geographic location or socioeconomic status.

In-Person Education:

1. **Immediate Interaction:** Traditional in-person education provides immediate interaction with instructors and peers, facilitating real-time feedback, discussion, and hands-on activities.
2. **Structured Environment:** Physical classrooms offer a structured and controlled learning environment, which can be conducive to certain types of learning and skill development.
3. **Social and Emotional Development:** In-person education supports social interaction, teamwork, and the development of interpersonal skills.
4. **Access to Resources:** Physical campuses often provide access to libraries, laboratories, and face-to-face consultations with instructors.

Challenges of In-Person Education:

1. **Lack of Flexibility:** In-person education follows a set schedule and location, which may not accommodate students with busy or non-traditional schedules.
2. **Geographic Limitations:** Students may need to relocate or commute to attend a specific institution, limiting their choices and access to education.
3. **Resource Constraints:** Physical campuses may have limited resources, and class sizes can be large, affecting the quality of instruction.

In summary, the effectiveness of online versus in-person education depends on various factors, including the individual student's learning style and preferences, the subject matter, and the quality of instruction. Some students may thrive in an online learning environment, while others may benefit more from the structure and immediacy of in-person education. Hybrid models that combine elements of both online and in-person education have also

emerged to leverage the strengths of each approach. Ultimately, the choice between the two should consider individual needs and the specific context in which learning is taking place.

5 # The positive and negative impacts of online services in students mind

Online services, including online education, social media, and entertainment platforms, have both positive and negative impacts on students' minds and overall well-being. It's important to recognize that the effects have varied widely depending on individual usage, habits, and the specific online services in question. Here are some of the positive and negative impacts founded:

Positive Impacts:

1. **Access to Information:** Online services have provided easy access to a vast amount of information, which has been beneficial for research, learning, and staying informed about current events.
2. **Convenience:** Online services have offered convenience and flexibility, allowing students to access resources and communicate with peers and instructors from virtually anywhere, at any time.
3. **Educational Opportunities:** Online education platforms provide has access to a wide range of courses and learning materials, offering flexibility for students to acquire new skills and knowledge.
4. **Communication and Collaboration:** Online services have facilitated communication and collaboration with peers and educators, fostering a sense of community and enabling group projects and discussions.
5. **Resource Sharing:** Students are able to share and access educational resources, notes, and study materials online, enhancing the learning experience.
6. **Skill Development:** Engaging in online activities has help students develop digital literacy and technological skills, which are valuable in today's digital age.

Negative Impacts:

1. **Digital Addiction:** Excessive use of online services, especially social media and entertainment platforms, has lead to digital addiction, causing students to spend excessive time online to the detriment of other responsibilities.
2. **Information Overload:** The abundance of information online has been overwhelming, making it challenging for students to discern credible sources from unreliable ones.
3. **Distraction:** Online services have been a source of distraction during study sessions, leading to decreased productivity and focus on academic tasks.
4. **Social Isolation:** Spending too much time online hasd reduce face-to-face social interactions, potentially leading to feelings of loneliness and social isolation.
5. **Negative Influences:** Exposure to negative or harmful content, cyberbullying, or online peer pressure has adverse effects on students' mental health and self-esteem.
6. **Physical Health Impacts:** Extended screen time has lead to physical health issues, such as eye strain, poor posture, and sleep disturbances, negatively affecting overall well-being.

7. **Academic Performance:** Overuse of online services for non-academic purposes have lead to a decline in academic performance and time management skills.
8. **Reduced Face-to-Face Communication Skills:** Excessive online communication can diminish students' ability to engage in effective face-to-face conversations and interpersonal relationships.

It's essential for students to strike a balance between online and offline activities and to develop healthy digital habits. Educators, parents, and guardians should play a crucial role in guiding students to use online services responsibly, manage their time effectively, and navigate potential risks and challenges.

6 # Cyberbullying challenges among students with the introduction of technology, prevention strategies

Cyberbullying among students has become a significant concern with the widespread use of technology and the internet. Here are some of the key challenges associated with cyberbullying among students, along with prevention strategies:

Challenges:

1. **Anonymity:** Perpetrators can hide behind anonymous online profiles, making it difficult to identify and address cyberbullies.
2. **24/7 Accessibility:** Cyberbullying can happen at any time, day or night, due to the constant availability of technology.
3. **Wide Reach:** Hurtful messages and content can spread quickly and reach a large audience, causing more harm.
4. **Emotional Impact:** Cyberbullying can have severe emotional and psychological effects on victims, potentially leading to depression, anxiety, and other mental health issues.
5. **Peer Pressure:** Students may feel compelled to join in on cyberbullying behaviors due to peer pressure or a desire to fit in with a particular group.

Prevention Strategies:

1. **Education and Awareness:** Schools should educate students, parents, and teachers about the consequences of cyberbullying and promote responsible digital citizenship.
2. **Open Communication:** Encourage students to report cyberbullying incidents to trusted adults, such as parents, teachers, or school counselors, and assure them that they will be taken seriously.
3. **Anti-Cyberbullying Policies:** Schools should have clear and comprehensive anti-cyberbullying policies in place that outline consequences for those involved in cyberbullying.
4. **Safe Online Environments:** Schools and parents should promote the use of safe online platforms and social media networks, where moderators actively address cyberbullying.
5. **Digital Empathy:** Teach empathy and kindness both online and offline. Encourage students to think about the feelings of others before posting or sharing content.

6. **Parental Involvement:** Parents should stay involved in their children's online activities, set boundaries, and monitor their internet usage, especially for younger children.
7. **Mental Health Support:** Schools should have resources in place to support the mental health and well-being of students who are victims of cyberbullying, including counseling services.
8. **Cyberbullying Reporting Mechanisms:** Establish a clear process for reporting cyberbullying incidents within the school community and ensure that reports are handled promptly and discreetly.
9. **Peer Support Programs:** Implement peer mentoring or support programs where older students can help younger ones navigate online challenges and provide guidance on responsible online behavior.
10. **Legal Consequences:** Make students aware of the legal consequences of cyberbullying, as some actions may constitute harassment or defamation, leading to legal repercussions.

It's essential to address cyberbullying comprehensively by involving schools, parents, and the community. By combining education, awareness, and effective policies, we can work to prevent and mitigate the challenges posed by cyberbullying among students.

7 # Accessibility and conditions of service for those with disabilities or special needs from broadband Internet access

Broadband internet has significantly improved the lives of people with disabilities by providing them with access to a wide range of opportunities, resources, and support. Here are several ways in which broadband internet has positively impacted individuals with disabilities:

1. **Accessible Information and Communication:** Broadband internet enables people with disabilities to access information, communicate with others, and participate in social, educational, and professional activities more easily. It has allows them to use various online tools, platforms, and resources, such as email, social media, and messaging apps, which has been adapted to their specific needs.
2. **Assistive Technologies:** Broadband internet has facilitates the use of assistive technologies, such as screen readers, text-to-speech software, voice recognition systems, and Braille displays. These tools have empowered individuals with disabilities to interact with digital content, including websites, documents, and applications.
3. **Online Learning and Education:** Broadband internet has opened up new educational opportunities for people with disabilities. It has enables them to access online courses, digital textbooks, and educational resources. Additionally, virtual classrooms and video conferencing platforms support remote learning, making education more accessible.
4. **Employment and Telecommuting:** For individuals with disabilities who have face barriers to traditional employment, broadband internet offers opportunities for remote

work and freelancing. Telecommuting has allowed them to participate in the workforce from the comfort of their homes, reducing commuting challenges.

5. **Healthcare Access:** Telemedicine and online healthcare services have become more prevalent to the disable people to consult with healthcare providers, receive medical advice, and order prescriptions online. This has been particularly valuable for individuals with mobility or transportation limitations.
6. **Social Inclusion:** Social media platforms and online communities have enable individuals with disabilities to connect with others who share their experiences, interests, or challenges. This has reduced social isolation and provides a sense of belonging.
7. **Access to Entertainment and Culture:** Broadband internet has offers access to a wide range of digital entertainment, including streaming services, audiobooks, and podcasts. These platforms have often provided closed captioning and other accessibility features.
8. **Online Shopping and Services:** E-commerce websites and delivery services allow individuals with disabilities to shop for goods and services online, eliminating the need for physical store visits.
9. **Emergency Alerts and Information:** Broadband internet has ensures that individuals with disabilities receive timely emergency alerts and access information during critical situations.

Overall, broadband internet has played a transformative role in improving the quality of life and expanding opportunities for individuals with disabilities. It has enabled them to overcome many of the traditional barriers they face in education, employment, healthcare, and daily living, leading to increased independence and inclusion in society. However, it's important to continue advocating for accessible technology and internet services to ensure that all individuals, regardless of their abilities, can fully participate in the digital age.

8 # Telemedicine/Remote Patient Monitoring - Challenges and Opportunities

Telemedicine and remote patient monitoring (RPM) has offer significant opportunities to improve healthcare delivery, especially in remote or underserved areas and during times of crisis like the COVID-19 pandemic. However, they also come with various challenges that need to be addressed. Here are some key challenges and opportunities found associated with telemedicine and RPM:

Challenges:

1. **Access to Technology:** Not everyone has access to the necessary technology, such as smartphones, computers, and reliable internet connections, which has limit the reach of telemedicine and RPM.
2. **Privacy and Security Concerns:** Maintaining patient privacy and data security has become a significant challenge in telemedicine. Healthcare providers must ensure that the technology they use complies with relevant privacy laws.
3. **Clinical Limitations:** While telemedicine can address many healthcare needs, there have been situations where physical examinations, tests, or procedures ware necessary, making it unsuitable for certain conditions.

4. **Digital Divide:** The digital divide, which refers to the gap between those who have access to digital technology and those who don't, have hinder equitable access to telemedicine and RPM services.

Opportunities:

1. **Increased Access to Care:** Telemedicine and RPM has extended healthcare access to underserved or remote areas where traditional healthcare facilities been scarce. This has lead to earlier diagnosis and intervention.
2. **Convenience and Reduced Costs:** Patients has access medical advice and monitoring from the comfort of their homes, reducing the need for travel and associated costs.
3. **Chronic Disease Management:** RPM has allowed healthcare providers to monitor patients with chronic conditions more closely, potentially reducing hospital readmissions and improving outcomes.
4. **Emergency Response:** Telemedicine has been invaluable during emergencies and pandemics. It has enables rapid assessment, triage, and consultation, helping to reduce the burden on healthcare facilities.
5. **Improved Patient Engagement:** Telemedicine and RPM technologies have often encouraged patients to take a more active role in their healthcare by providing them with real-time data and enabling regular communication with healthcare providers.
6. **Mental Health Services:** Telemedicine has expanded access to mental health services, making it easier for individuals to seek therapy and counseling.
7. **Provider Flexibility:** Telemedicine allows healthcare providers to offer services remotely, which has improved their work-life balance and expand their reach to patients beyond their local area.
8. **Global Reach:** Telemedicine has enables healthcare providers to collaborate across borders, offering specialized expertise to patients worldwide.

To fully realize the potential of telemedicine and remote patient monitoring, it's crucial to address the challenges, such as expanding technology access, improving regulations, and ensuring data privacy. Additionally, ongoing research and innovation in these fields can help overcome limitations and unlock new opportunities for improving healthcare delivery.

9 # Social/economic transformation brought about by access to broadband services

Access to broadband services has the potential to drive significant social and economic transformation in various ways. Here are some of the key ways in which broadband access has brought or can bring positive changes:

1. **Economic Growth and Job Creation:** Broadband access has stimulated economic growth by fostering innovation, entrepreneurship, and business development. It has enables the creation of new online businesses and services, leading to job opportunities and increased economic activity.
2. **Rural Development:** In rural and underserved areas, broadband access has reduced geographic barriers and connects communities to the global economy. It attracts investments, improves agricultural practices, and supports local businesses.

3. **Education:** Broadband connectivity enhances educational opportunities. It has enables online learning, remote access to educational resources, and interactive teaching methods, bridging the gap between urban and rural education.
4. **Healthcare:** Telemedicine and remote healthcare services made possible by broadband access improve healthcare delivery in underserved areas. It has allowed for remote consultations, patient monitoring, and the exchange of medical records.
5. **Access to Information:** Broadband internet has provided access to a vast amount of information, fostering digital literacy and enabling individuals to stay informed about current events, research topics, and access educational content.
6. **E-Government Services:** Governments has provided online services such as e-filing for taxes, and digital access to public records. This streamlines bureaucracy can reduces corruption, and enhances transparency.
7. **Digital Inclusion:** Broadband access has helped in bridging the digital divide by providing equal opportunities for all, regardless of location or socioeconomic status. It promotes digital inclusion and reduces disparities.
8. **Telecommuting and Remote Work:** Broadband has enables telecommuting and remote work, allowing employees to work from home or remote locations. This reduces commuting time, and office space costs.
9. **Social Connectivity:** Broadband services enhance social connectivity by enabling communication through video calls, social media, and instant messaging. This is especially valuable for maintaining relationships across distances.
10. **Cultural Exchange:** Broadband facilitates cultural exchange by connecting people from different parts of the world. It supports international collaborations in the arts, sciences, and various cultural endeavors.

In summary, access to broadband services has the potential to transform societies and economies by fostering innovation, improving access to essential services, and promoting digital inclusion. Governments, businesses, and communities should work together to expand broadband infrastructure and ensure that the benefits of connectivity are accessible to all.

10 # Access to broadband services has brought about changes in economically weaker, targeted groups (women, disabled) and communities (backward areas).

Access to broadband services has indeed brought about transformative changes in economically weaker and marginalized groups, including women, people with disabilities, and communities in backward areas. Here's how broadband access has impacted these groups and communities:

1. **Empowerment of Women:**

- **Education:** Broadband access has opened up educational opportunities for women, especially in regions with limited access to schools and colleges. Online courses and resources empower women to pursue education and skills development.
- **Employment:** Women in economically disadvantaged areas have access remote work opportunities through broadband, allowing them to contribute to their family's income while overcoming traditional barriers.
- **Entrepreneurship:** Women entrepreneurs have started and grow businesses online, reaching a broader customer base. E-commerce platforms and digital marketing tools enable them to compete in the market.

- **Healthcare:** Telemedicine services accessible through broadband have help women in rural areas accessing healthcare services and maternal care, reducing maternal mortality rates.
- **Safety:** Broadband-enabled communication tools enhance women's safety through emergency services, GPS tracking, and reporting mechanisms. These technologies have provided a sense of security.

2. **Inclusion of People with Disabilities:**

- **Access to Information:** People with disabilities have access information, educational resources, and support networks online, reducing isolation and promoting inclusion.
- **Employment Opportunities:** Telecommuting and remote work options has made possible by broadband access provide individuals with disabilities greater access to employment opportunities.
- **Assistive Technologies:** Broadband has facilitated the use of assistive technologies, such as screen readers and communication devices, enhancing the independence and productivity of people with disabilities.
- **Healthcare Services:** Remote patient monitoring and telehealth services has allow people with disabilities to receive medical care without the need for frequent travel, particularly for those with mobility impairments.

3. **Development in Backward Areas and Communities:**

- **Economic Growth:** Broadband access has attracted investment and foster economic development in backward regions. It enables local businesses to reach wider markets and participate in e-commerce.
- **Education:** In remote and underprivileged areas, broadband internet has provides students with access to online educational resources, improving educational outcomes and reducing disparities.
- **Agriculture:** Farmers in these regions has access weather information, market prices, and agricultural best practices online, which has lead to improved yields and income.
- **Entrepreneurship:** Broadband access has nurture local entrepreneurship by providing aspiring business owners with online resources, training, and access to global markets.
- **Social Inclusion:** Broadband has enables residents of these areas to connect with the outside world, fostering social inclusion and reducing isolation.

It's important to note that while broadband access has the potential to bring about positive changes, challenges such as the digital divide, affordability, and digital literacy must be addressed to ensure that these benefits are accessible to all members of economically weaker groups and communities. Governments, NGOs, and private organizations play a crucial role in bridging these gaps and promoting equitable access to broadband services.

Interaction Program

Program Highlights

The interaction program on “Discussion and interaction program on impact assessment of broadband access network projects provided under Rural Telecommunication Development Fund (RTDF) in Ilam, Jhapa, Morang, Sunsari, and Udaipur districts” was conducted in auditorium of Suryodaya Municipality, Phikkal, Ilam. The program was started at 10:00 am on December 04, 2023, Monday with welcoming and doing the registration of the all participants and guests.

The arrival of all participants, guests and chief guests were welcomed by all organizing members. The Inauguration program was started at 11:00 am. The program was conducted by Master of Ceremony (MC).

Inauguration Session

The inauguration session started with announcement of the program beginning. The program proceeds with chairing of dignitaries. The program was chaired by the Chairman of Nepal Telecommunications Authority (NTA), Mr. Purshottam Khanal, the program Chief Guest was the Parliamentary member of House of Representatives Nepal, Mr. Mahesh Basnet. The Special guest were the Kosi Province, Province Assembly Member Mrs. Khinu Langwa (Limbu), Mr. Ranabahadur Rai, Mayor of Suryodaya Municipality and Mrs. Chitrakala Baraili, Deputy Head of District Coordination Committee Ilam. The Guest were Mr. Mr. Idradev Yadav, Chief District Officer of Ilam, Mr. Dipesh Acharya, Director, Nepal Telecommunications Authority, Dr. Surendra Lal Hada, Director, Nepal Telecommunications Authority, Mr. Ramesh Pandey, Deputy Secretary, Ministry of Communications and Information Technology, Mr. Tirtha Raj Chapagai, Officer, Ministry of Communication and Information Technology and Mr. Binod Chandra Shrestha, Deputy Director of Nepal Telecommunications Authority were welcomed on the dais.

Chairing of the dignitaries

Chief Guest - The Parliamentary member of House of Representatives Nepal, Mr. Mahesh Basnet, Inauguration the program by lighting panas.

Participants of the interaction program

The participants in the program were Chairperson and deputy Chairperson of different Rural Municipality, Municipalities, representatives, head of district education coordination of different districts, district health head of different districts and journalist from different media.

Director of NTA Dr. Surendra Lal Hada, welcoming the participants and guest to the program

Welcoming the participants in the program Dr. Surendra Lal Hada says, Government of Nepal In 2073, the Nepal Telecommunications Authority has decided to provide free broadband internet service to the local level, ward offices, health centers and schools of each district using the Rural Telecommunication Development Fund to provide free service for two years. The network project was brought into operation.

Broadband internet services have been completed and placed into operation at 1,378 places, including municipalities and rural villages in the districts of Udaipur, Sunsari, Morang, Jhapa, and Ilam; these locations include 511 ward offices, 291 health centers, 517 schools, and 59 local levels.

Moreover, I want to let you know that the project has increased the broadband network, making it easier for the general people to access essential services like broadband internet service at that area.

As he says further, the main purpose of the program organized today is to publicize the results of the study of the impact of the broadband access network project to be conducted by the authority in the project area and to take opinions, suggestions and feedback from the people's representatives and stakeholders of the project area.

Hopefully, this program will shed more clarification on the achievements of the projects run by the authority and the current needs of the sector.

Mr. Tirtha Raj Chapagain, Officer of Ministry of Communication and Information Technology, Giving his speech

Mr. Tirtharaj Chapagain says, Under the policy of the Government of Nepal, the Rural Telecommunication Development Fund, established under the Telecommunication Act, has been set up to expand the infrastructure of telecommunication in the rural areas, its easy access and the quality of service to reach all the people.

Among the various programs under RTDF, we are in the evaluation and interaction program of the impact evaluation of the program in these 5 districts. We certainly hope that this program has been completed as intended.

Mr. Dipesh Acharya, Director of Nepal Telecommunications Authority, Giving his speech

Mr. Dipesh Acharya begins his speech saying that the main objective of the Nepal Telecommunications Authority, which was established in accordance with the Telecommunication Act 2053, is to develop, expand and provide universal access to telecommunication services in villages, cities and the state.

With the aim of making telecommunication services of the same quality available in the villages at the same price as in the city, the Telecommunication Authority has provided Internet access to all local bodies, health centers and secondary schools across the state of Nepal using the Rural Telecommunication Development Fund.

He goes on saying; the technology of telecommunication services has been changing and changing every five years. As we initially provided 512Kbps internet speed, today the need for it has increased. Now we are working on providing internet service of at least 20 Mbps through such broadband internet access network.

Now we have started a strategy to work through the rural municipality and municipality by making an agreement with them so that the local level should be made more responsible in the broadband access network.

Mr. Indra Dev Yadav said, there have been changes between the previous and contemporary teaching methods in addition to the availability of internet services and the growth of computer laboratories in schools. Similarly, internet connection has made it possible for medical facilities to offer higher-quality medical care.

Since everyone has a mobile phone in their hands, people are connected to the Internet in some way. The Internet has helped reduce the gap between rural and urban areas.

Mr. Indra Dev Yadav, CDO of Ilam District, giving his speech

Mrs. Chitrakala Barailiy, Deputy Head, District Coordination Committee, Ilam, givig her speech

Mrs. Baraili started her speech giving her sincere gratitude to the organizers for choosing Ilam to conduct the Impact Analysis among the five districts.

Before establishing the Broad Band Access Network, it would have been better if the work had been carried forward by discussing with the heads or representatives of the local level governments of all the districts. But even after the completion of the work, we are still engaged in the discussion, this is a good thing.

It is felt that this Broad Band Access Network has had a good impact on government services, education and health and it should be further refined and modified.

Special Guest Mr. Ran Bahadur Rai, Mayor, Suryodaya Municipality, giving his Speech

Mayor Mr. Ran Bahadur Rai says, with the cooperation of Nepal Telecommunication Authority, Internet access has reached all ward offices and all government schools of Suryodaya Municipality. There have been positive changes in the education and health sector after the internet access in this municipality.

The internet needs to be utilized responsibly, whether for private, professional, or educational purposes. Positive social growth is impossible if it is not used appropriately.

Mr. Rai continued his speech, now we have started planning how to increase production and commercialized the agro sector by using the internet and other fields as well. It is necessary to expand the Internet to the villages that can connect and influence the entire region.

If the Internet is accessible everywhere, it can increase transparency, accountability and reduce corruption.

We have gone from Kbps to Mbps to Gbps, but the Internet of the company that provides Broadband Access Network here through Nepal Telecommunications is very slow, I hope that it will improve.

In the lower part of Antu Danda, the mobile coverage is not good and Indian SIMs are in operation, so I request the Nepal Telecommunications Authority to take a special initiative to provide network coverage here.

Special guest Mrs. Khinu Langwa (Limbu), Province Assembly Member, Kosi Province*, Nepal, giving her speech*

Mrs. Khinu Langwa (Limbu) says, From Rong Rural Municipality to Buddhshanti Rural Municipality of Jhapa, there is a problem of mobile network in some places and it needs to be improved. Similarly, there is no network in the various interior rural areas of Santapur Rural Municipality and people are compel to use the sim and internet of India. I request the Nepal Telecommunications Authority to conduct a physical study and take the initiative to solve this problem.

I urge you to make internet and mobile services accessible to everyone and make them accessible even to the poor.

Chief Guest Mr. Mahesh Basnet, Member of the House of Representatives, Federal Parliament Nepal, giving his Speech

Mr. Mahesh Basnet, the chief guest of the discussion and interaction program, said, today we are discussing on the Impact Assessment of Broad Band Access Network which is a Pilot Project of Telecommunications Authority. Such an Impact Assessment provides a roadmap for what plans should be made in the future.

Planning for the future is very important. If we are not able to evaluate our work objectively, and if we formulate a program based on an occult method, our future program cannot be oriented towards success. In considering this, I consider this initiative to be significant.

Mr. Basnet continued his speech, technology and information are now recognized as essential components of the human condition as well as a way of life or a system of existence. Information technology will, without a doubt, be the foundation of our prosperity. Thus, it would appear that we need to keep moving forward with the growth and development of the telecommunications industry.

The entire planet is now a house or a village. Sitting in one place we can work globally and monitor. Everything has evolved to be information technology friendly. When used properly, it has simplified our daily lives.

However, an over-reliance on technology can also be dangerous since, while it is incredibly powerful, it is unable to read the thoughts of individuals who undergo gradual changes in themselves. Reliance on technology is unable to stop disasters brought on by people's changeable minds. Use of intelligent, secure, dependable, and need-based technology is therefore important.

Chairman of discussion and interaction program and Chairman of Nepal Telecommunications Authority Mr. Purushottam Khanal, giving his speech

Chairman of this discussion and interaction program and Chairman of Nepal Telecommunications Authority Mr. Purushottam Khanal said, The Government of Nepal has conducted a special rural telecommunication program with the aim of providing access to information to all the citizens of the state. The Government of Nepal brought a program called Digital Nepal Framework. Under that program, we envisioned developing telecommunications services on three bases and increased the plans accordingly.

We envision a society where all citizens have access to services like 3G. Next, ward offices, medical facilities, and educational institutions should all have broadband internet connections. In addition, the optical fiber telecommunication infrastructure should be extended from the district headquarters to the municipality via the Madya Pahadi Highway. This will allow the infrastructure to be shared and the long-term investments in it to be terminated. Equitable access to high-quality telecommunication services in all towns and villages is the mission of the Nepal Telecommunications Authority.

Likewise, in order to make computers and the Internet a supporter of high-quality education in schools, the Nepal Telecommunications Authority created ICT laboratories in four to six secondary schools in each constituency.

Mr. Khanal carried on with his remarks, in recent times, it has been felt that there is no feeling of the ownership to the local level in the plans advanced by the authority. Therefore, we have made plans to make the local people responsible and make them feel ownership.

Effective access to the Internet and its use can only be ensured by the coordinating role of all these bodies at the local level, the provincial government and the federal government. Now, in order to make the internet multi-use, I request the local bodies to develop the content according to their needs and provide services.

The Chairman, Mr. Khanal, concluded his speech saying that the technology is advancing, but so are the difficulties it faces. I kindly ask everyone to exercise precaution and use safe internet since the cyber security threat has grown for us.

Second Session (Presentation Session)

Presenting the presentation, by Mr. Shambhu Pahadi, Director of Himalayan Green Corporation Pvt. Ltd.

In the presentation, the outcome of the evaluation of the impact of broadband access network projects funded by the Rural Telecommunication Development Fund (RTDF) in the districts of Ilam, Jhapa, Morang, Sunsari, and Udaipur are presented. Also the presentation covered in the topic of Economic Impact, Education Impact, Healthcare Impact, Government Services impact, Social Impact and Infrastructure Development.

Panel Discussion

The panel discussion program was held after the presentation and the panelists in this panel discussion program were as follows:

1. Mr. Ramesh Pandey, Deputy Secretary, Ministry of Communications and Information Technology
2. Mr. Nagendra Subedi, Planning Officer, National Planning Commission
3. Mr. Binod Chandra Shrestha, Deputy Director of Nepal Telecommunications Authority
4. Mr. Kalyan Thapa, Chief Operation Officer of Techmind Network Pvt. Ltd.

The panel discussion program was facilitated by Mr. Shambhu Pahadi, Director of Himalayan Green Corporation Pvt. Ltd.

Panelist participating in the program

The participants were asked various questions related to the Broadband Internet Access Network Project and the Mobile Network in the program and the panelist answered these questions.

Participants in the program asking questions to the panelists:

Some of the questions asked by the participants in the program were answered by the panelist:

1. In some places connected under the project, the internet did not work properly even for 6 months, despite repeated complaints to the connecting service provider, it could not be resolved. Please try to resolve this complaint as the relevant body has not regulated it despite this scenario.
2. Please let the general public know whether the project funds have been properly utilized or not.
3. It would be better if the projects were based on demand rather than supply.
4. Has this project been disused after giving it for free for 2 years? Should something be modified in this matter? Get the attention of the relevant authorities.
5. I heard that internet service will be extended to primary schools under RTDF, please clarify more about it.
6. The mobile network is not working in Jhapa rural municipality office, when we will get the solution and shall be able to use mobile phones in the municipality?
7. The issue of quality is not being monitored enough; let the appropriate agencies take note of this. Who do you call when there's an internet issue if the service provider doesn't respond?
8. We request to provide basic level training to the technical persons of the rural municipality and municipality to solve the basic problem in the internet or in the infrastructure of the internet.
9. We request you to arrange the numbers of the service provider's call center to reach the customer.
10. The maintenance service of the service provider organization is very slow; it seems that the manpower should be increased.
11. Before connecting the broadband access network project, if the related service customers had been informed in the same way as today's program, the adoption of the project would also have been achieved and the problems would have been resolved soon. We would like to say that we have been informed in advance about such upcoming plans.

Program closing

Mr. Purushottam Kahanal, Chairman of Nepal Telecommunications Authority, giving closing remarks

Concluding the program, Mr. Purushetham Khanal, Chairman of Nepal Telecommunications Authority, said that Since telecommunications infrastructure has expanded to previously unreached areas, it is now the duty of service consumers to utilize it in accordance with their requirements. It has been seen that a number of issues exist, and in order to address them, action must be taken by all three levels of government. If local government plays an important role to resolve the issue which can be handled in local level then these recipients will benefit from excellent service. We are always prepared to solve problems that cannot be resolved locally.

If there is no match between things like changes in technology and our needs, some problems may appear. Similarly, due to our geographical structure, we are not able to build or provide the infrastructure as we want, and the infrastructures that have been provided are also having problems. We are working consciously in this direction. The Nepal Telecommunication Authority is determined to bring quality and reliable telecommunication services to everyone and solve the problems that have arisen.

Chairman Mr.Khanal concluded by answering the many questions raised during the program and drawing it to an end.

Impact Assessment:

From the survey we find the following impacts by the broadband internet connectivity.

Economic Impact:

Although there is no relative return on economic activities after broadband internet connection, but it has had some positive impact. These economic impacts are broad and have affected different sectors of society in several ways. Here are some key outputs of the economic impact on society resulting from broadband internet access:

1. **Job Creation:** Even though there is no employment creation due to internet in 82.9 percent of the public schools, health institutions and local bodies, employment creation is seen in 17.1 percent of the places. Creating employment even in some numbers is a positive thing.
   Similarly, the internet available to the general public seems to contribute to employment. Internet service has contributed for employment to 68 percent. This has become another positive aspect.
2. **Entrepreneurship:** Broadband access has support the growth of small businesses and startups by providing a platform for online entrepreneurship. Individuals have started and promote businesses more easily. Entrepreneurs have access to broadband internet; they can easily connect with other entrepreneurs, mentors, and investors. They have learned about new technologies and trends. This has lead to the development of new products and services that has benefited both the entrepreneur and the community.
3. **Economic Development**: Access to broadband internet has attracted investment and foster economic development in underserved and rural areas. It enables local businesses to compete in broader markets and also new ISP is also investing in those area.

4. **Education and Training:** Broadband facilitates online learning and skills development, expanding access to quality education and training programs. This, in turn, has lead to a more skilled and competitive workforce.
5. **Access to Markets:** Small and medium-sized enterprises gain access to broader customer bases through e-commerce and online marketing, which has lead to increased sales and growth opportunities.
6. **Efficient Healthcare:** Broadband internet has make healthcare more effective like Telemedicine and remote healthcare services improve healthcare delivery and reduce healthcare costs, leading to a healthier and more productive workforce.
7. **Agricultural Productivity:** Farmers has access agricultural information, market prices, and weather forecasts online, leading to improved agricultural practices and increased yields.
8. **Government Efficiency:** E-government services made possible by broadband access streamline government processes, reduce administrative costs, and enhance transparency, leading to better governance.
9. **Financial Inclusion:** Access to online banking and financial services has promoted financial inclusion, allowed more people to access banking services and manage their finances more efficiently.

These economic impacts have contributed to improved living standards, reduced inequality, and increased opportunities for individuals and communities.

However, due to the lack of digital literacy every people of this era haven't got the benefit. Efforts to bridge the digital divide and ensure equitable access to broadband are essential to maximize the positive economic impact on society.

Education Impact:

The impact of broadband internet connectivity on education is profound and far-reaching, resulting in various positive outcomes for society. Access to broadband internet has transformed the way education is delivered and accessed, leading to numerous educational benefits that extend to individuals, communities, and society as a whole. Here are some key outputs of the educational impact on society resulting from broadband internet access:

1. **Increased Access to Education:** Broadband connectivity has extended access to education, allowing individuals of all ages to enroll in online courses, access educational resources, and pursue degrees and certifications.
2. **Diverse Learning Opportunities:** Broadband has enables diverse learning opportunities, including Online Courses, online degree programs, and specialized courses in various subjects.
3. **Education for Underserved Communities:** Broadband connectivity has reached underserved and remote communities, providing educational opportunities to regions that lack physical educational institutions.
4. **Teacher Professional Development:** Teachers has access professional development opportunities online, staying up-to-date with the latest teaching methodologies and technologies.
5. **Education for Special Needs:** Online education platforms have adapted to cater to individuals with special needs, offering accessible content and assistive technologies to promote inclusive education.

The educational impact of broadband internet connectivity on society is multifaceted, fostering learning opportunities, enhancing skills, promoting access, and contributing to societal development. It has plays a crucial role in building a more educated and informed society, ultimately leading to improved quality of life and economic prosperity.

The provided broadband internet in government schools aren't in good condition and have slow connection which has affect the teachers and students that they are unable to take the full benefits of internet.

Healthcare Impact:

Access to broadband internet connectivity has had a profound impact on healthcare, leading to various positive outcomes for individuals, healthcare providers, and society as a whole. The healthcare impact on society resulting from broadband internet access includes:

1. **Telemedicine and Remote Consultations:** Broadband connectivity has allowed patients to access healthcare services remotely through telemedicine platforms.
2. **Reduced Healthcare Costs:** Telemedicine has lead to cost savings for both patients and healthcare systems. It has reduces travel expenses, minimizes hospital stays, and lowers the overall cost of healthcare delivery.
3. **Access to Health Information:** Broadband internet has provides access to a wealth of health-related information and resources. Patients have research their conditions, medications, and treatment options which has lead to better-informed healthcare decisions.
4. **Improved Healthcare Infrastructure:** Due to the online services people has easy access to get the information regarding their health issues and it also has make easy to health care center to work through online services.

In summary, the impact of broadband internet connectivity on healthcare has the potential to improve access, reduce costs, enhance patient outcomes, and promote public health. It has contributes to a more efficient and accessible healthcare system which benefits individuals and society as a whole.

Due to the bad internet connectivity provided through the NTA in health post they are unable to work smoothly using internet.

Government Services:

E-governance services and citizen engagement have been gradually growing contributing to more efficient government operations, has increased transparency, and enhanced public participation. Here are some notable ways in which e-governance and citizen engagement are being used:

1. **Online Services:** The Government of Nepal has launched various online platforms which is used by local bodies and also used by public to get the government services easily. These services include tax filing, obtaining official documents, and applying for permits and licenses.

2. **E-Taxation:** People have used the internet for the services like e-filing system for taxpayers to submit their tax returns electronically which is provided by the Inland Revenue Department (IRD) of Nepal.
3. **E-Payments:** People have used internet for the E-payment systems like mobile banking and online payment gateways, pay government fees, utility bills, and taxes electronically.

   Through the broadband internet connectivity public are getting different types of government services easily and for the government it has been easy to provide the public services as well.

   Although the local bodies aren't satisfied because of low connectivity of internet provided through NTA which has really hamper in daily operation so that most of them has connect the alternative connection.

Social Impact:

Access to broadband internet connectivity has had significant social impacts on society, resulting in various positive outcomes that affect individuals, communities, and the broader society. These social impacts encompass a wide range of areas and contribute to societal development and well-being. Here are some key outputs of the social impact on society resulting from broadband internet access:

1. **Increased Information Access:** Broadband connectivity has provided access to a vast amount of information, news, educational resources, and cultural content, fostering knowledge dissemination and information sharing.
2. **Digital Inclusion:** Broadband has promotes digital inclusion by reducing disparities in access to information and opportunities. It has helped bridging the digital divide, ensuring that more individuals, regardless of their socioeconomic background, have equal access to online resources.
3. **Communication and Social Networking:** Broadband internet has enabled real-time communication through email, social media, video calls, and messaging platforms. This has enhanced personal connections, maintains relationships across distances, and promotes social networking.
4. **E-Government Services:** Citizens have access government services, such as paying taxes, licence form, passport form, NOC, police report and accessing public records, online. This streamlines bureaucracy have enhances transparency, and simplifies interactions with government agencies.
5. **Community Engagement:** Online platforms have facilitated community engagement and activism, allowing individuals to participate in civic discussions, advocacy, and social causes.
6. **Educational Opportunities:** Broadband has access supports online learning, virtual classrooms, and educational resources, expanding access to quality education for learners of all ages.
7. **Cultural Exchange:** The internet has fosters cultural exchange by connecting people from different parts of the world. It has promotes the cross-cultural understanding and appreciation.

8. **Entertainment and Leisure:** Broadband has provides access to a wide range of digital entertainment, including streaming services, gaming, online videos, and social media, offering opportunities for relaxation and leisure.
9. **Remote Work and Telecommuting:** Broadband enables remote work and telecommuting options, reducing commuting time and improving work-life balance for employees.
10. **Economic Empowerment:** Access to online marketplaces, e-commerce, and freelancing platforms has allowed individuals to start businesses, earn income, and access economic opportunities.
11. **Healthcare Access:** Telemedicine and online healthcare services has provided individuals with greater access to medical consultations, advice, and health information, particularly in remote or underserved areas.
12. **Emergency Response:** During emergencies and natural disasters, broadband connectivity supports communication, emergency alerts, and coordination among first responders and affected communities.
13. **Digital Literacy:** Broadband has access promoting digital literacy, enhancing individuals' ability to use technology effectively, find information online, and protect them in the digital environment.
14. **Support for Individuals with Disabilities:** Broadband has enables the use of assistive technologies and online resources tailored to the needs of individuals with disabilities, improving their access to information and services.
15. **Reduced Social Isolation:** Online communities and social networks help reduce social isolation, providing a sense of connection and support, especially for individuals who may be physically isolated.
16. **Innovation and Entrepreneurship:** Broadband connectivity has fosters innovation and entrepreneurship by providing access to global markets, enabling online collaboration, and facilitating the development of digital startups.

These social impacts contribute to a more connected, informed, and inclusive society. However, challenges related to digital literacy, online safety, and equitable access to broadband services need to be addressed to maximize the positive social impact of broadband internet connectivity.

Infrastructure Development:

The condition of infrastructure development and investments in broadband connectivity in 5 districts has been improving, but there are still challenges and disparities, particularly in rural and remote areas.. Here is a general overview of the situation of 5 districts.

1. Urban Areas:

- In urban areas, including major cities, there is relatively better broadband infrastructure with access to high-speed internet services.
- Fiber-optic networks and cable systems have been increased to provide broadband connectivity to businesses and households in urban centers.
- Private internet service providers (ISPs) compete to offer a range of broadband packages to consumers, driving innovation and improving service quality.

2. Rural and Remote Areas:

- Rural and remote regions of 5 districts face challenges in terms of broadband access and infrastructure development.
- Geographical constraints, including rugged terrain and difficult terrain, make it challenging and expensive to deploy broadband infrastructure in these areas.
- The government and various organizations have initiated efforts to expand broadband access to underserved regions through initiatives like the Rural Telecommunication Development Fund.

3. Government Initiatives:

- The Government of Nepal has recognized the importance of broadband connectivity for economic development and digital inclusion.
- The ISPs have been involved in infrastructure development and expanding network coverage.

4. Challenges:

- Despite progress, challenges such as limited access to reliable electricity, lack of digital literacy in some communities, and affordability barriers persist.
- Ensuring equitable access to broadband, particularly in rural and disadvantaged areas, remains a priority.
- In remote area still there is lack of skilled manpower.
- Problem in timely maintenance in connectivity due to the geographical barrios.

In summary, Nepal has been making efforts to improve infrastructure development and investments in broadband connectivity, but challenges related to geographical terrain and disparities between urban and rural areas remain.

Recommendations

Here are some recommendations for the Impact Assessment of Broadband Connectivity Provided under RTDF funded Broadband Access Network Projects in the five districts (Udayapur, Sunsari, Morang, Jhapa and Ilam) of Koshi Province, Nepal:

1. **Expansion of Broadband Coverage:**

- Consider expanding the broadband network to cover additional rural and remote areas within Province 1, focusing on underserved regions.
- Prioritize areas that have limited access to digital services, as this can significantly contribute to bridging the digital divide.

2. **Infrastructure Maintenance:**

- Develop a sustainable maintenance plan for the broadband infrastructure to ensure its longevity and uninterrupted service delivery.
- Allocate resources and establish partnerships for regular maintenance, upgrades, and repairs.

- Due to the geographical situation it is difficult to carry out maintenance in rural areas within the time limit mentioned in the Bylaw, so special arrangements should be made for such geographical areas.
- Making the arrangement of providing basic level training to the technical persons of the rural municipality and municipality to solve the basic problem in the internet or in the infrastructure of the internet.

3. Digital Literacy and Training:

- Implement digital literacy programs in the target communities to empower residents with the skills needed to fully utilize broadband services.
- Collaborate with local educational institutions and organizations to provide training and workshops on digital skills and online safety.

4. Affordability and Accessibility:

- Explore ways to make broadband services more affordable for low-income households, possibly through subsidies or discounted packages.
- Ensure that broadband services are accessible to all, including individuals with disabilities and those in remote areas.
- It would be good if all the ordinary people below the poverty line as certified by the Nepal government could be included in this Broad Band Internet in some way.

5. Community Engagement:

- Foster community engagement and ownership of the broadband infrastructure by involving local communities for awareness campaigns.
- Establish community centers or hubs where residents can access the internet for educational, entrepreneurial, and informational purposes.

6. Education and Healthcare Integration:

- Collaborate with the education and healthcare sectors to integrate broadband connectivity into schools, colleges, and healthcare facilities for improved access to quality education and healthcare services.

7. Business and Entrepreneurship Support:

- Promote entrepreneurship and the growth of small businesses by providing support, such as e-commerce training and access to online marketplaces.
- Encourage the development of local digital startups to stimulate economic growth.

8. Public-Private Partnerships:

- Strengthen collaboration between the government, private sector, and development partners to mobilize resources and expertise for broadband expansion projects.
- Attract private investment in the broadband sector to promote competition and innovation.
- For service continuity in such geographic areas, service providers should be encouraged for service continuity and reliable service.

9. **Monitoring and Evaluation:**
- Establish a robust monitoring and evaluation framework to track the impact of broadband connectivity over time.
- Regularly assess the effectiveness of interventions and make data-driven decisions for further improvements.
- If the local level can also be made responsible for monitoring, it will be effective so that the presence of the authority can be seen.

10. **Data Privacy and Cybersecurity:**
- Develop and enforce data privacy and cybersecurity regulations to protect users' personal information and ensure safe online experiences.

11. **Collaboration with Local Governments:**
- Collaborate with local governments in the five districts to align broadband initiatives with local development plans and priorities.

12. **Public Awareness Campaigns:**
- Continue public awareness campaigns to inform residents about the benefits of broadband connectivity and how to utilize it effectively.

These recommendations aim to enhance the impact of broadband connectivity projects, promote digital inclusion, and contribute to the overall development of Koshi Province in Nepal. It's essential to tailor these recommendations to the specific needs and context of the target communities and regularly assess progress toward achieving the desired outcomes.

Conclusion

The Impact Assessment of Broadband Connectivity Provided under RTDF funded Broadband Access Network Projects in the districts of Ilam, Jhapa, Morang, Sunsari, and Udayapur represents a significant endeavor to evaluate the transformative potential of broadband connectivity in rural and underserved areas of Koshi Province, Nepal. This assessment has sought to analyze the multifaceted impact of these projects on economic development, education, healthcare, entrepreneurship, and community well-being.

The impact assessment indicates that the RTDF funded Broadband Access Network Projects have initiated a positive transformation to some extent in the target districts of Koshi Province but comparatively the service of other operator is good. The benefits of broadband connectivity are not limited to economic growth but extend to improved education, healthcare, entrepreneurship, and community engagement. Digital inclusion and affordability measures have paved the way for a more equitable distribution of opportunities.

It is important to recognize that the journey towards comprehensive digital transformation is ongoing. As broadband connectivity continues to evolve, it is imperative to sustain the momentum by investing in digital literacy, maintaining infrastructure, and promoting an environment conducive to innovation and entrepreneurship.

The success of these projects is a testament to the power of collaboration and community engagement. Moving forward, it is recommended that the stakeholders involved continue to work closely with local communities, adapt to evolving technologies and market dynamics, and ensure that the benefits of broadband connectivity reach the farthest corners of Koshi Province.

The Impact Assessment of Broadband Connectivity in these districts serves as a valuable resource for policymakers, government agencies, development partners, and local communities as they chart the path toward a digitally inclusive and prosperous future.

Appendices

1. Presentation Document
2. Program Schedule
3. Brochures
4. Attendance

Acknowledgments

The completion of this Impact Assessment Report would not have been possible without the support, collaboration, and contributions of numerous individuals, organizations, and stakeholders. We would like to express our sincere gratitude to all those who played a pivotal role in the success of this endeavor.

Government of Nepal:

We extend our appreciation to the Government of Nepal, particularly the Nepal Telecommunications Authority, the Ministry of Communications and Information Technology, and National Planning Commission. Their vision and commitment to digital inclusion and rural development have been instrumental in the implementation of the broadband access network projects.

Local Communities:

Our heartfelt thanks go out to the residents of Ilam, Jhapa, Morang, Sunsari, and Udayapur districts in Koshi Province, Nepal. The active participation, enthusiasm, and valuable insights shared by community members have been invaluable in shaping the impact assessment and ensuring its accuracy.

Project Implementers and Service Providers:

We recognize the dedicated efforts of the project implementers and broadband service providers who have worked tirelessly to build and maintain the broadband network infrastructure. Their commitment to delivering services has been pivotal in achieving the project's objectives.

Schools and Health post:

We extend our gratitude to the schools and health post in the project areas. Their collaboration in integrating broadband connectivity into education and healthcare services has made a substantial difference in the lives of students and healthcare beneficiaries.

Local Authorities and Community Leaders:

We would like to acknowledge the support and cooperation of local authorities, community leaders, and representatives. Their guidance and facilitation have been essential in navigating the local context and ensuring the success of the projects.

Project Beneficiaries:

Last but not least, we would like to thank the ultimate beneficiaries of the broadband connectivity projects—the residents and communities who have embraced the opportunities offered by digital inclusion. Your stories of transformation and empowerment inspire us.

This report stands as a collective achievement, reflecting the collaborative efforts of a wide range of individuals and organizations committed to advancing digital inclusion. Contributions of all participants, supporting team is admirable and has made a lasting impact on the communities of Province 1, Nepal, and we are deeply grateful for your support.

Thank you for being an integral part of this journey.