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Abstract	3
Acknowledgments	4
INTRODUCTION	5
Context	5
Statement problem	5
Purpose of the research	5
Research Questions	6
Target Group	6
Expected Outcome	7
METHODOLOGY& DESIGN	7
Selection	7
Participants	7
Research Design	8
Data Collection	8
Training	9
DIGITAL LITERACY INDICATOR	10
Digital access indicator	10
Digital use indicator	11
Digital skills indicator	12
Digital Well-being indicator	12
FINDINGS OF THE RESEARCH	13
Demographic attributes	13
Youth-leader Demographic profile	13
Organization Demographic profile	16
Householder Demographic profile	17
Digital access by organizations and grassroots youth leaders	19
Digital access of the organization	19
Digital access of the grassroots youth leaders	22
Digital use by organizations and grassroots youth leaders	26
Digital use per organization	26
Digital use per grassroots youth leaders	29
Digital skills by grassroots youth leaders	34
Digital well-being grassroots youth leaders	36
Digital Impact by organizations among the householder	37
CONCLUSION	38

REFERENCES

Title: Digital Impact among rural grassroots youth-leaders organizations

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Abstract

In the digital era, having digital literacy requires not only the ability to use software or to operate a digital device but also a large variety of complex skills such as cognitive, motoric, sociological, and emotional skills that users need to master in order to use digital environments effectively.

Unfortunately, the research on digital literacy lacks a well-established theoretical framework. Given the growing importance of digital literacy and its challenges in daily life. This research aims to understand and Provide an overview of the impact of digital literacy among rural grassroots youth- leaders, build a digital profile of rural organizations, Outline the different types of digital services and products used and determine how satisfied rural grassroots youth- leaders are in the digital space. We are taking a hands-on and proximity approach to guarantee the success of the research in 2 phases.

- 1. Carry out a survey of 50 rural organizations in northern Haiti to be able to document the impact and constraints they face day to day in digital skills.
- 2- Train 2 organization representative youth leaders on digital skills while creating an environment and conditions conducive to their development.

Digital literacy is widely acknowledged as an essential skill that helps all people to cope with the growing competitiveness in the borderless world and is one of the elements necessary for their lifelong learning success.

Keywords: Internet, digital literacy, digital inclusion, digital impact,

Acknowledgments

This report presents the results of the study about the digital impact among grassroots youth leaders organizations in northern Haiti, which was conducted between September 2022 to November 2022.

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The opinions expressed and arguments employed in this paper are those of the author and do not necessarily reflect the official views of the Latin American and Caribbean Internet Addresses Registry (LACNIC).

INTRODUCTION

Context

Technology integration involves communicating ideas effectively, sharing knowledge and information, making learning more engaging, building learning communities, and creating a culture of empowerment. In Haiti, young people represent more than half of the population: thirty-one percent (31%) between ten (10) and twenty-four (24) years old, thirty-three percent (33%) between 0 and fourteen (14) years old, and five percent (5%) at sixty-five (65) years old or more. According to UNFPA, these young people are one of the most vulnerable groups. According to the report of the ISOC Haiti chapter, ninety percent (90%) of the Haitian population is connected to the Internet through their smartphone. Yet, many do not use their smartphones for educational purposes. This is because according to the said report, nine percent (9%) of the population uses the Internet for studies and six percent (6%) for work. Digital literacy is increasingly becoming an essential life competence, and the inability to access or use ICT has effectively become a barrier to social integration and personal development.

Statement problem

Internet access is a crucial means for rural grassroots Young- leaders. They carry the heaviest load when it comes to serving their respective communities. In spite of their contribution, they miss out on partnership opportunities and are ignored because they do not have solid digital literacy and stable internet access. When larger organizations target local communities they cannot assess the resources available from these grassroots young leaders, so they end up collaborating and supporting the ones that are more vocal and healthy- known; often urban organizations. The cycle continues, after years of challenges related to public access to information, online education, digital employment, the digital economy, and so on. These young leaders are emotionally depleted and unable to carry out their mission.

Purpose of the research

Main Purpose

This study aims to understand the state of digital literacy skills possessed by rural grassroots youth leaders and create an environment and conditions conducive to the development of their ability to seize opportunities related to mobile technology.

Specific Purpose:

• Check the digital impact on their daily work,

- Measure their ability to learn digital skills
- Improve access to digital skills for rural grassroots youth leaders organizations aged 15 to 30.
- Create and train digital youth leaders, actors, to influence workers' life in rural areas in Haiti

Research Questions

Main Question: How can digital literacy inclusion be improved in rural areas in Haiti? *Sub-Questions*

- 1 What are the challenges to the growth of digital literacy in rural areas in Haiti?
- 2 What are the current conditions in digital literacy inclusion in rural areas in Haiti?
- 3 What are the future trends in digital literacy in Haiti, especially in rural areas?
- 4 Are there gender differences in digital activity in rural areas in Haiti?
- 5 What is the role of knowledge in digital literacy?

Target Group

We hope our paper provides concrete information for:

IT investors

They will be able to see and comprehend what is happening in Information Technology areas in rural areas and to identify which kind of investment is important and beneficial as well as the infrastructure needed for their investment.

Civil Society, NGOs,s and others

It is beneficial to help affected people reduce digital poverty by shedding light on problem areas in policy-making and digital structure implementation.

To study the suitable mechanism by making changes to the previous structure of ICTs. To be able to know current internet and computer facilities availability needs and by gauging these needs, they are able to plan for improvements as well as prepare a solid computer curriculum in schools, institutions of learning, and so on.

Internet service providers

It is important that Internet service providers understand the needs of clients in terms of Internet access. They are also able to comprehend areas that need improvement and further

advancements. In addition, ISP companies are able to find out where to best invest their resources in order to earn maximum profit.

Expected Outcome

1- Collect data on the daily work digital impact

2- find the diversity of their cognitive capacity and potentiality among the rural grassroots youth leaders.

3-strengthening their ability to use digital skills

4- Emergence of new digital leaders

METHODOLOGY& DESIGN

Selection

To achieve our objective at the regional level, we use 2 phases:

1- A survey was conducted among 50 rural grassroots youth leaders organizations working at the level cap-Haitian and Limonade in northern Haiti to be able to document the impact and constraints in digital areas. We will use this data to produce a digital skills study guide for youth-Leaders, a digital tools guide for organization living in rural areas.

2- Intensive training and coaching session for 2 organizations representative youth leaders based on Eshet-Alkalai's six-skill holistic conceptual model: photo-visual digital skills, reproduction digital skills, branching digital skills, real-life time digital skills, information digital skills and socio-emotional digital skills to facilitate their day to day work.

Participants

All participants in this research were young citizens living in the north of Haiti. We set 5 questionnaires to be administered through Google forms, the questionnaires were divided into 3 categories. 2 for the rural organizations, 2 for the rural organization members, and the other for the rural householder serving by the organizations.

Participation was not mandatory, so not all of them responded to the survey. The response rate was particularly low among rural households (15), medium among the organizations(18), and much higher for the organization members (34).

Research Design

Every survey was designed to take approximately 15 to 20 minutes to complete. The majority of the questions were multiple-choice in the tree survey:

- 1. The survey focused on organizations and included 15 questions, 10 of which were multiple-choice;
- 2. The general survey, which focused on members of the organization from all 15 to 35 age, included 20 questions, including 16 multiple-choice questions, and
- 3. The survey targeting householders that the organizations serve consisted of 10 questions of which 8 were multiple-choice,

The first two surveys were combined and used to assess digital usage responses to provide representative characteristics of organizations.

Data Collection

We use 2 ways to collect all the data.

First, We were emailed one questionnaire to some specific organizations and the other we set it on our network where all the stakeholders distribute it. We did the same process with the questionnaire targeting the organizations' members and all householders targeted for this research.

Information on the type of broadband, online media used, digital tools used, internet usage, digital well-being, digital skills, the constraints usage digital, and field of interest attendance rates, among others, were collected for analysis.

The data collection was between September 12, 2022, to October 17, 2022, and distributed via Google Forms. All the questionnaires were used as the main source for data collection.

The questionnaire collected data on:

<u>*Photo-visual digital skills*</u>– this information will provide information on the ability that the organization members have to understand the message in the visual-graphic form. (e.g.digital content)

Internet accessibility – This information will provide information on information on the members get internet access and the type of devices used in the organizations e.g. (type of device, internet access type)

<u>Reproduction digital skills</u>- this information will provide information on the ability that the organization members have to create new concepts from preexisting concept forms. (e.g.editing audio or video)

Information digital skills— this information will provide information on the ability that the organization members have to analyze information receiving. (e.g. good news and fake news)

<u>*Hard skills*</u> – this information will provide information on the ability that the organization members have to accomplish specific tasks, and the expertise necessary to successfully do their job. (e.g. a presentation on google slide)

<u>Soft skills</u> – this information will provide information on the ability that the organization members have to interact with others and handle situations. (e.g. problem-solving)

real-life time digital skills— this information will provide information on the ability that the organization members have to accomplish different tasks simultaneously by keeping the attention from one to another.

Demographic data –this information will provide information on the rural grassroots youth leaders. (e.g. gender, location, age, education level)

All this data is important to further understand how the digital sphere is positively and negatively impacting the rural grassroots youth -leaders organizations.

Training

The second phase of this research is a training and coaching session for 2 organizations' representative youth leaders between September 27, 2022, to October 16, 2022, by some young professional leaders in different themes. We use zoom and google classroom to manage all the sessions. Thus, this is an overview of these concepts presented in the Training framework.

Internet & web: the lead of this theme explained the different concepts that anyone who involves in the web and the internet would know. (E.g. The evolution of the web and what each generation brings with it.)

Internet Governance: the lead of this theme explained the main characteristics of Internet governance, the Internet ecosystem, and the inclusive digital transformation and its benefits.

Digital identity: the lead of this theme showed them the different types of digital identities their organizations can have the advantage and disadvantages of them and how to protect their e-reputation.

Data management & protection: the lead of this theme formulated the different types of data, purpose, and results of the use of data within organizations, the different spheres where data can be used as well as how to protect them.

Digital Content: the lead of this theme showed them the relationship between people and traditional or online media, and strategies to create content to attract its audience. the right questions to ask.

Branding: the lead of this theme formulated the visual identity of the brand, the nature of the company, and the best way to be understood through e-marketing.

Digital Footprint: the lead of this theme explained what a digital footprint means, the meaning of large digital footprints and why they are important. And Identify if and how different devices produce digital footprints.

Building capacity with Soft skills: the lead of this theme help to identify how we can use Soft skills to become better co-workers by the way we interact with others and handle situations.

Digital tools: the lead of this theme help with Mailchimp for managing email, glide for creating some tools that we need, and a better experience with using an extension on chrome, google docs, slide, drive, Gmail, and so on. Advantages and disadvantages of using g-suit for an organization.

DIGITAL LITERACY INDICATOR

Digital literacy: It refers to technology's hard skills and soft skills allowing the use of software, digital tools, and digital devices in all aspects of current daily life.

Digital access indicator

I	Indicator	Definition
	Indicator	Definition

Digital Access indicator/organization (DAI/o)	The indicators included in this group provide an indication of the available ICT infrastructure and access to basic ICTs.
Proportion of organizations with computers	means there are a minimum of computers available for use by all members at any time work.
Proportion of organizations with mobile telephone	means that they can provide information by a mobile phone that the organization have and it is available for use by all members at any time work.
Proportion of organizations with Internet access	means that the Internet is available for use by all members at any time work.
Proportion of organizations with the type of internet access	means that the Internet is available for use by all members at any time work from different ISP.

Digital use indicator

Indicator	Definition		
Digital use indicator/organization members (DUI/om)	The indicators included in this group provide an indication of the usage of ICT		
Proportion of individuals using the Internet	refers to people who used the Internet for their work in the organization, irrespective of the device and network used in the last three months.		
Proportion of individuals using online Sevice	refers to people who used the online service for their work in the organization in the last three months.(e.g.cloud, Visio-conference, mailing platform)		
The proportion of individuals using social networks	refers to people who used the social network for their work in the organization in the last three months. (e.g. Facebook, WhatsApp,)		
Proportion of individuals using online	refers to people who set transactions online		

payment	for their work on the organization in the last three months. (e.g. Purchase article)

Digital skills indicator

Indicator	Definition/ Provided information		
Digital skills indicator/organization members (DSI/om)	The indicators included in this group provide an indication of the level of ICT skills		
Proportion of individuals with basic ICT skills	who are capable of using copy and paste tools to duplicate or move data, information and content in digital environments.(e.g., email, messaging service, SMS) with attached files (e.g., documents, pictures and videos)		
Proportion of individuals with intermediate skills	Individuals using g suite without difficulties; connecting and installing new devices (e.g., a modem, camera, printer; finding, downloading, installing and configuring software)		
Proportion of individuals with advenced skills	creating electronic presentations with presentation software (including text, images, sound, video or charts); and transferring files or applications between a computer and other devices		

Digital Well-being indicator

Indicator	Definition		
Digital well-being indicator/organization members (DWI/om)	The indicators included in this group provide an indication of level of people measuring ICT		
Proportion of persons who trust information obtained from social networking sites	Refer to people who trust information obtained from social networking sites without		

	any verification
Proportion of persons who don't trust information obtained from social networking sites	Refer to people who don't trust information obtained from social networking sites with in/out verification
Proportion of persons who verify information obtained from social networking sites	Refer to people who trust information obtained from social networking sites after verification
Proportion of persons who feel comfortable using online services	Refer to people who fell comfortable when they are on the internet for any purpose.

FINDINGS OF THE RESEARCH

Demographic attributes

The demographic is refer to the statistical characteristics of the respondents (e.g. gender, location, age, and so on) used to identify the sample research population. For this research, we present 3 demographic profiles: grassroots youth leaders (location, age, gender, organization name), organizations (location, field), and householders (age, location, gender).

Youth-leader Demographic profile

Overall, a total of 34 grassroots youth leaders participated in the survey. 25(73,5%) respondents resided in Cap-Haitian and 9 (26,5%) in Limonade. 22 (64.7%) respondents were females while 12 (35,3%) were males. In this case, Cap-Haitian includes (Acul du Nord, Plaine du Nord, Limbe), and Limonade (Caracol, trou-du-Nord).







Figure1.1: Gender representation of the grassroots youth leaders

Figure.1.2: Age representation of the grassroots youth leaders



14





Organization Demographic profile

Overall, a total of 18 organizations participated in the survey. 9(50.0%) respondents resided in Cap-Haitian, 7 (38,9%) in Limonade, and 2 (11,1%) in another location. In this case, Cap-Haitian includes (Acul du Nord, Plaine du Nord, Limbe), Limonade (Caracol, trou-du-Nord), and others (Saint Michel de l'attalaye).





Figure 2.1: Field representation of the organization



Householder Demographic profile

The householder is the citizen who has the opportunity to use a product or services of all of the organizations. Overall, a total of 15 Householder participated in the survey. 7(46.7%) respondents resided in Cap-Haitian, 5 (33.3%) in Limonade, and 3 (20.0%) in another location. 6 (40.0%) respondents were females while 9 (60.0%) were males. In this case, Cap-Haitian includes (Acul du Nord, Plaine du Nord, Limbe), Limonade (Caracol, trou-du-Nord), and others (Saint Michel de l'attalaye).





Figure 3.1: Gender representation of the householder



Figure 3.2: *Age representation of the householder*



Digital access by organizations and grassroots youth leaders

Digital access is the ability of the citizen to access ICT.

Digital access of the organization

The answer to the organization questionnaire is displayed in this table and represented in the graphs below.

Table 1: Table indicating questionnaire responses of the organization.NB: 0 means no respondent

Table indicating questionnaire responses of the organization					
	Yes,	No			
Do you use the internet?	18	0			
What kind of ISP(internet service	Natcom	Digicel	Access Haiti	Hainet	Other
provider)do you use?	10	6	2	0	0
What kind of internet access method do	Cellular broadband	Cable modem	Wireless Network	Fiber	
you have?	10	3	4	1	
	Ordinateur (desktop)	Laptop	Tablette	Smartphone	
What kind of Device do you use?	4	6	2	6	
On the scale below, please select your	Poor	Satisfactory	Good	Excellent	
view about the current ICT infrastructure in your area.	9	8	1	0	
Do you think the internet price is	Affordable	Unaffordable			
affordable in your area?	6	12			

Figure 4: ISP access representation per organization

For the internet service provider (ISP): Natcom 55.6% (N=10), Digicel 33.3%(N=6), Acess Haiti 11.1%(N=2), so most of them they are using Natcom and the reason is the connection is much more stable in their area, yet sometimes they use Digicel or Access Haiti as a second source.



Figure 4.1: Internet access method per organization

Most of them are using cellular broadband, this includes data subscriptions for mobile phone services as well as subscriptions to dedicated hotspot devices (containing SIM cards). Cellular broadband 55.6% (N=10), cable modem 16.7%(N=3), wireless network 22.2%(N=4), Fiber 5.6%(N=1).





Figure 4.2: ICT infrastructure satisfactory per organization

Figure 4.3: Internet connection price satisfactory per organization

Overall a total of 18 organizations most of them find unaffordable the price of their internet connexion.



Internet connection price satisfactory

Figure 4.4: Device for internet connection representation per organization

Devices for internet connection: Ordinateur (desktop) 22.2% (N=4), Laptop 33.3%(N=6), Acess Tablette 11.1%(N=2), Smartphone 33.3%(N=6), so most of them they are using both Laptop and smartphone.



Digital access of the grassroots youth leaders

The answer to the grassroots youth leaders questionnaire is displayed in this table and the graphs below.

Table 2: Table indicating question	onnaire responses	of the grassroots you	uth leaders.
NB: 0 means no responde	ent		

Table indicating quest	tionnaire responses of	f the grassroo	ts youth leader	rs	
	Yes	No			
Do you use the internet?	34	0			
					Othe
What kind of ISP(internet service	Natcom	Digicel	Access Haiti	Hainet	r
provider)do you use?	16	8	5	4	1
	Ordinateur (desktop)	Laptop	Tablette	Smartphone	
What kind of Device do you use?	3	4	7	20	
What kind of internet access method	Cellular broadband	Cable modem	Wireless Network	Fiber	
you have?			•	•	•

	25	3	6	10	
On the scale below, please select your	Poor	Satisfactory	Good	Excellent	
view about the current ICT infrastructure in your area.	22	10	2	0	
Do you think the internet price is	Affordable	Unaffordable			
affordable in your area?	7	27			

Figure 5: ISP access representation per grassroots youth leaders

For the internet service provider (ISP): Natcom 47.1% (N=16), Digicel 23.5%(N=8), Acess Haïti 14.7%(N=5), Haïnet 11.8%(N=4), Other 2.9%(N=1), so most of them they are using Natcom and the reason is the connection is much more stable in their area, yet sometimes they use Digicel or Access Haiti as a second source.



Figure 5.1: Internet access method per grassroots youth leaders

Most of them are using cellular broadband, this includes data subscriptions for mobile phone services as well as subscriptions to dedicated hotspot devices (containing SIM cards). Cellular broadband 73.5% (N=25), cable modem 8.8%(N=3), wireless network 17.6%(N=6), Fiber 0.0%(N=0).



Figure 5.2: ICT infrastructure satisfactory per grassroots youth leaders





Figure 5.3: Internet connection price satisfactory per grassroots youth leaders Overall a total of 34 grassroots youth leaders most of them find unaffordable the price of their internet connexion.





Devices for internet connection: Ordinateur (desktop) 47.1% (N=3), Laptop 23.5%(N=4), Acess Tablette 14.7%(N=7), Smartphone 11.8%(N=20), so most of them they are smartphone.



Device per grassroots youth Leaders

Digital use by organizations and grassroots youth leaders

Digital use refers to the frequency at which citizens/ organization access the Internet and involve comprehension patterns of internet use.

> Yes No

Digital use per organization





Figure 6.1: Principale Usage of the internet / organizations



Principal usage/organizations

Figure 6.2: Number of electronic devices/organization

Overall 18 organizations: 12 responded to this question. 1-3 devices 50%(N=6), 7-9 devices 25%(N=3), 16 & more 25%(N=3), for the 6 other, their members use their own devices in the organization.



Figure 6.3: *Platform usage organization*

This figure represents the principal platform they use in their day-to-day work.



Platform usage/ organizations

Figure 6.4: principal social network usage/organization in the last 3 months

Overall 18 organizations: 10 responded to this multichoice question. Facebook and Whatsapp is the most used 90%(N=9), Instagram and Twitter 60%(N=6), telegram 50 %(N=5), Linkedin, Pinterest, Youtube, Tik-tok 30% (N=3), and snapchat10%(N=1).



Figure 6.5: Most critical internet issue facing / organization

Overall 18 organizations: 18 responded to this multichoice question. Internet shut-down(N=12), Speed & bandwidth(N=16), Government regulation(N=10), Equal access for all(N=9), Pornography(N=1), Internet crime(N=5), Online payment(N=8), Internet Divide(N=10), Cyberbullying(N=11), Privacy(N=4).



Digital use per grassroots youth leaders

It is free to use technology as they see fit and for whatever purpose. Like the blacksmith with the iron, digital literacy is the iron in the hands of the citizens like an open door for performing user-controlled operations aimed at a given goal. Most youth leaders who participated in the survey do not use digital tools in their daily lives (professional or personal).

 Table 2. table indicating questionnaire (technical usage of the internet)

Tuble 2. tuble indicating questionnaire (rechnical asage of the internet)
Table indicating questionnaire (Technical usage)
I know how to open a new tab in my browser.
I know how to go to the previous page when browsing the Internet.
I know how to use the refresh function
I know how to use the shortcut keys (e.g. CTRL-C to copy, CTRL-V to paste)
I know how to bookmark a website
I know how to download files
I know how to adjust privacy settings
I know how to download/save a photo I found online
I know how to open downloaded files
I know which applications/software are safe to download

I know how to make pop-ups or ads disappear

I know some good ways to avoid computer viruses If a technical problem occurs while I am using the Internet

I know how to solve the problem Using Internet search engines

I know how to open a web address directly without using a search engine like Google.

I know how to fill in online forms

I know how to choose the best keywords for online searches.

I know how to find a website I have already visited.

I know how to find information on a website, regardless of its design.

I know how to use the advanced search features of search engines.

I know how to check if the information I find online is true.

I know how to determine if a website can be trusted.

Figure 7: Principal usage /youth leader

The data show that the communication and entertainment tools (Social media and watching movies 23.5%(N=8)) are the most used by the youth leaders.



Figure 7.1: Platform usage for work and online service/youth leader

This figure represents the principal platform they use in their day-to-day work. The most





Figure 7.2: Technical practice usage/youth leader in the last 3 months

In this question, we sought to understand the best technical practice among the respondent. 2 constraints that are most related to the respondents are: *I know how to open a new tab in my browser and I know how to use the shortcut keys (e.g. CTRL-C to copy, CTRL-V to paste)* both have the same value 85.2% (N=29).





Online payment hability/ youth leaders

Figure 7.4: *Most critical internet issue facing / youth leader*

In this question, we sought to understand the issues and difficulties regarding the use of the digital spaces, the 2 constraints that are most related to the respondents are the internet shut-down 76.4% (N=26) and lack of knowledge67.6% (N=23).



Digital skills by grassroots youth leaders

These data show us the level of technical competence of the grassroots youth leaders in the use of various digital tools that they were capable of performing. These tools were classified into four categories: I have no idea, basic, intermediate, and advanced. We can see that most of them have a basic level and some of them are completely illiterate.

figure 8: Utilization of cloud & Messagerie tools

The tools with the higher are Google drive 41.1%(N=14).



figure 8.1: Utilization of Website and design tools

The tools with the higher level are Canva 47.0% (N=16).



figure 8.2: Utilisation management project and team tools

The tools with the higher are Evernote 2.9%(N=1).



figure 8.3: Utilisation monitoring tools

The tools with the higher are Kindle 5.8%(N=2).



Monitoring tools / youth Leaders

Digital well-being grassroots youth leaders

Digital well-being may be defined as having the ability to handle online stress, engage in healthy digital behaviors, and use our technologies in ways that help us thrive. Figure 9: Digital well-being with the social networking sites



Digital Impact by organizations among the householder

Impact of Access and use organizations produced or services individuals and the community as a whole.

Figure10: householder satisfaction with the product and services of the organization. The most satisfaction provided by digital content is 20.5% (N=7), and digital expression is 17.6% (N=6). They explain that if the leader of those organizations had a better environment they can be more efficient in their work.



NB: digital expression: all the graphic design from each organization.

CONCLUSION

The major purpose of this study is to investigate the digital impact among grassroots youth leaders and their digital level. the interpretation of the result demonstrates that numerous challenges that the youth leaders face are poor infrastructure and lack of sufficient internet access.

The current ICT infrastructure limited the productivity of the youth vis a vis of the digital spaces. Most of the youth access internet on their mobile phone cause of the lack of facilities like electricity, and computer equipment. Due to limited access and resources, most organizations are unable to promote in the middle level their services and products on the web. Since most youth leaders are not familiar with some digital basic tools, trust needs to be cultivated to show them the importance of digital literacy.

The interpretation and the reality should be close to each other. It is important that in the near future how improving internet usage will benefit grassroots youth leaders. IT investors will be able to identify areas that provide great avenues for investment and which can lead to a high return rate on investment. The investors are also in a position to note the infrastructural needs to execute their goals. Civil society, on the other hand, will be able to identify new areas that require investigation and research. This research will also provide a basis for further research on the studied area. ISP is responsible to provide mechanisms and a conducive environment for Internet access and penetration by studying the needs of society. NGOs and other entities will be able to identify which of these areas are in need of enhancements, also will be able to single out the needs of the citizenry as well as monitor growth and proper management of resources.

Finally, Creating policy-making and implementation will play a very important role in the future seeking affordable and sustainable solutions for ICT infrastructural development. To conquer wired infrastructural constraints, the advancement of new wireless technologies is underway to provide possibilities to overcome social, and digital dives. There will be more investment in research and development in areas of ICT. This will lead to the emergence of more digital citizens in the region. These citizens will not require reinventing the already existing structures but need to adapt these technologies to meet local requirements, this will motivate more youth leaders to use digital tools in their daily lives.

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