Youth generation and geospatial technological innovations: A study in Nigeria

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Abstract:

This study evaluates awareness and use of geospatial technological innovations by youth in Nigeria. Among the research questions which the study addresses are: How are youths' knowledge of computer, cell phone and internet? How is youths' awareness of geospatial technological innovations? How are youths' use of geospatial technological innovations? Do youths have interest in being trained in geospatial technological innovations? Are they willing to pay for the training? What are the challenges facing youths in their use of geospatial technological innovations? The primary data used in the paper was obtained from 211 questionnaire administration survey carried out at University of Ibadan, Nigeria between January and April, 2017. Frequency analysis and descriptive statistics were used to analyze the data. The study shows among other things that majority of the youths were computer literate and had personal computer/laptops and cell phones that can browse. Majority of the youths were aware of global positioning systems technology and had interest to learn more about it and some were willing to pay for the training. Some of the youths were aware of geographical information systems/remote sensing technology and were willing to be trained and pay for the training. Among the challenges they faced were lack of finance, electricity problem/low battery capacity of cell phones and personal computers/laptops. Policy implications of the findings were discussed in the paper.

1. Introduction

As observed in the literature, varying definition of the term 'youth' exist. Some literature on youth uses the concept of "adolescence" as a benchmark for the definition of youth. Observation from the literature shows that adolescence established a biological foundation to the notion of age stages (ages 14-24) by creating a shift from childhood to a focus on the onset of puberty (Agbalajobi, 2014). The literature revealed that African countries have variations in their respective categorizations of youth (Agbalajobi, 2014). The Nigerian National Youth Policy (2001; 2009) defined youth as comprising all persons between ages 18 to 35 years who are citizens of the Federal Republic of Nigeria (Akinyemi et al, 2014; Agbalajobi, 2014 Olorunnisola, 2019). As observed in the literature the age structure of Nigeria population is youthful (Akinyemi et al, 2014; IIevbare and IIevbare, 2014). Although there is no universally accepted definition of the concept youth, the literature reveals that youth is defined as a special group of people with strong stamina and passion for realizing certain goals and objectives and that they share certain characteristics that distinguish them from other generation such as impatience for change, zealousness, radicalism, rebellion, curiosity, hard work, ego and ambition etc. (Agbalajobi, 2014). These distinguishing characteristics of youth could be harnessed positively to make contribution to national and international development. The importance of youth segment of the population as a source of economic productivity in any economy is critical, particularly in a less developed economy like Nigeria. The huge population of youths can be harnessed to stimulate national development (Akinyemi et al, 2014; Aremo and Orisadare, 2014) including development in the area of geospatial technological innovations. Young people would inevitably become national and global leaders with responsibility for national and global development, environmental stewardship and sustainability (IIevbare and IIevbare, 2014).

Dangermond (2011) underscored the importance of geography to human survival. According to him, geography has always been a critical type of information that humans – infact all animals – collect, organize, and use, and that place-based information is vital to survival on our planet. In our contemporary world geospatial technologies have advanced to aid individuals in applying geographic skills and understanding in personal and civic lives. These technologies include computer, cell phone, internet, maps, geographic information systems (GIS), remote sensing, and global positioning systems (GPS). These technologies are fundamentally changing how we see the world and interact with it (Bednarz and Kemp, 2011). Dangermond (2011) underscored the importance of geospatial technologies particularly GIS applications in our dynamic contemporary world characterized with rapid changes and facing many challenges and difficult problems - such as climate change, urbanization, security, poverty, inequality – which we must deal with and which are affecting us as individuals as well as impacting our organizations and governments. He notes that as our world has become complex and our ability to understand has grown, GIS technology (of course including other geospatial technologies) has evolved to help us process information about place and put it in a context that allows us to act (Dangermond, 2011:7).

This study is an addition to the literature and evaluates awareness and use of geospatial technological innovations by youth in Nigeria. Among the research questions which the study addresses are: How is youths' knowledge of computer, cell phone and internet? How is youths' awareness of geospatial technological innovations? How is youths' use of geospatial technological innovations? Do youths have interest in being trained in geospatial technological innovations? Are they willing to pay for the training? What are the challenges facing the youths in their use of geospatial technological innovations?

2. Method of the study

Both primary and secondary sources of data were used in the study. The primary data used in the paper was from questionnaire survey administered at University of Ibadan, Ibadan, Nigeria between January and April, 2017. A total of two hundred and eleven (211) questionnaires were administered. Information collected through the questionnaires include the awareness and use of geospatial technological innovations (computer, cell phone, internet, global positioning systems, geographical information systems/remote sensing). Frequency analysis and descriptive statistics were used to analyze the data.

3. Findings

3.1 Socio-demographic characteristics of the youths interviewed

Table 1 shows the socio-demographic characteristics of the youths interviewed. The table shows that 46.0% of the youths interviewed were male while 54.0% were female. Majority of them were

single (92.0%). Their age distribution shows that 59.0% of them aged between 20 years and 30 years old, 29.0% of them aged below 20 years, and 9.0% aged between 31 years and 40 years old. The mean age of the youths interviewed was 24 years while their median and the mode age were 25 years. The highest educational qualification of the majority of them was Secondary School Certificate (62.0%), followed by those who had first degree (B.Sc) (21.0%), Advance Level School Certificate (A/L) (9.0%) and Ordinary National Diploma (OND) (6.0%). Some of them engaged in extra vocational activities. They include Software Developers, Analysts, Fashion Stylists/ Fashion Designers/ Hair Dressers/Hair Stylists, Photographers, Coaches, Theatre/Media Practitioners/ Film Makers, etc. The mean number of years they have been engaged in extra vocational activities was 5 years while the median and the mode number of years they have been engaged in extra vocational activities were 4 years and 3 years respectively. The youths interviewed were from various Department/Institute of the University such as Special Education, Educational Management, Sociology, Geography, Political Science, Wildlife & Ecotourism, Crop Protection & Environmental Biology, Physics, Chemistry, Food Technology, Computer Science, Medicine & Surgery, etc. Most of the youths interviewed were in 200 level (28.0%), some were Postgraduate (23.0%), and others in 300 level (21.0%), 500 level (10.0%), 100 level (10.0%), and 400 level (7.0%).

Table 1: Socio-demographic characteristics of the youths interviewed

S/N	Socio-demographic characteristics	Response	% (n = 211)
1	Sex	Male	46.0
		Female	54.0
2	Marital status	Married	8.0
		Single	92.0
		Divorced	0.0
		Separated	0.0
3	Age	Below 20 years	29.0
		20 – 30 years	59.0
		31 – 40 years	9.0
		41 – 50 years	3.0
		51 – 60 years	0.0
		61 -70 years	0.0
		Above 70 years	0.0
		Mean age	24 years
		Median age	25 years
		Mode age	25 years
4	Highest educational qualification	Primary School Certificate	0.0
		Secondary School Certificate	62.0
		A/L Certificate	9.0
		OND	6.0
		HND	0.0
		B.Sc.	21.0

		Postgraduate Diploma (PGD)	1.0
		Master Degree	1.0
		PhD	0.0
5	Extra vocational activities	Entrepreneurship	1,0
		Software Developing	1.0
		Fashion Stylist/ Fashion Designer/ Hair Dressing/Hair Stylist	2.0
		Photographer	1.0
		Coaching (football)	1.0
		Teaching	2.0
		Theatre/Media Practitioner/ Film Making	1.0
		Geophysicist	1.0
		Analyst (Data analysis)	1.0
		Physiotherapy	1.0
		Health Official	1.0
6	What is the total number of years you have been engaged in extra vocational activities	1 – 2 years	3.0
		3 – 4 years	3.0
		5 – 6 years	2.0
		Above 7 years	3.0
		Mean	5 years
		Median	4 years
		Mode	3 years
7	Department/Institute of the youths interviewed	Special Education	1.0
		Wildlife & Ecotourism	2.0
		Adult Education	2.0
		Educational Management	2.0
		Agric Extension	2.0
		Agric Economics	3.0
		Guidance & Counselling	2.0
		Food Technology	2.0
		Crop Protection & Environmental Biology	2.0
		Library/Archival & Information Studies	2.0
		Early Childhood & Educational Foundation	2.0
		Yoruba	2.0
		Physics	1.0
		Statistics	1.0
		Human Kinetics & Health Education	2.0
		Botany	1.0
		Microbiology	2.0
		Biochemistry	1.0

		Nursing	1.0
		Medicine & Surgery	1.0
		Institute of African Studies	3.0
		Urban & Regional Planning	3.0
		Zoology	2.0
		Geography	4.0
		Computer Science	2.0
		Geology	3.0
		Disaster & Risk Management	1.0
		Sociology	3.0
		Psychology	2.0
		Economics	2.0
		Chemistry	1.0
		Science Education	2.0
		Archaeology & Anthropology	1.0
		Political Science	1.0
		Mathematics	1.0
		Physiotherapy	1.0
		Medicine & Surgery	7.0
		English	2.0
		Theatre Art	2.0
		Pharmacy	8.0
		Teacher Education	2.0
		Anatomy	1.0
		Classics	2.0
		Social Works	2.0
		Nursing	2.0
		Biomedical Laboratory Science	1.0
		Veterinary Medicine	1.0
8	What level are you?	100 Level	10.0
		200 Level	28.0
		300 Level	21.0
		400 Level	7.0
		500 Level	10.0
		Others (Postgraduate)	23.0

Source: Field survey, 2017

3.2 Youths' knowledge of computer, cell phone and internet

Youths were asked various questions relating to their knowledge of computer, cell phone and internet. The questions and their responses to the questions relating to their knowledge of computer, cell phone and internet were shown in table 2. The table shows that majority of the youths were computer literate (96.0%) and have personal computer/laptop (74.0%). When asked how long they have been using personal computer/laptop, most (46.0%) of them said between 1 to

5 years, while some (17.0%) of them said between 6 to 10 years. Only 8.0% of them said that they have been using personal computer/laptop for less than one year and 6.0% said that they have been using personal computer/laptop for more than 10 years. They were asked what they use their personal computer/laptop to do. Majority of them said that they use their personal computer/laptop for word processing (typing) purposes (68.0%) and to browse the internet (62.0%). Only 28.0% of them said they use their personal computer/laptop for statistical analysis while 19.0% said they use their personal computer/laptop for other things such as games, watching movies, and playing music. The youths interviewed were asked whether they know how to browse the internet with personal computer/laptops. Majority (92.0%) of them said that they know how to browse the internet with their personal computer/laptop. Majority (94.0%) of the youths interviewed have a cell phone. When asked how long they have been using cell phone, most (39.0%) of them said between 6 to 10 years, 29.0% of them said between 1 to 5 years, 21.0% of them said more than 10 years, while 6.0% of them said less than 1 years ago. When asked whether they were aware that some cell phones can browse the internet, majority (93.0%) of them said they were aware. When asked whether they know how to browse the internet with the cell phone, majority (96.0%) said that they know how to browse the internet with the cell phone. When asked whether they had a cell phone that can browse the internet, majority (96.0%) of them said that they have cell phone that can browse the internet.

Table 2: Youths' knowledge of computer, cell phone and internet

S/N	Questions	Response	% (n = 211)
1	Are you computer literate?	Yes	96.0
		No	4.0
2	Do you have personal computer/Laptop?	Yes	74.0
		No	26.0
3	How long have you been using personal computer/Laptop?	Less than one year	8.0
		1 – 5 years	46.0
		6 – 10 years	17.0
		More than 10 years	6.0
4	What do you use your personal computer/Laptop to do?	Word processing (Typing) purposes	68.0
		To do statistical analysis	28.0
		To browse the internet	62.0
		Others	19.0
5	Do you know how to browse the internet with personal computer/Laptops?	Yes	92.0
		No	5.0
6	Do you have a cell phone?	Yes	94.0
		No	3.0

7	How long have you been using cell phone?	Less than one year ago	6.0
		1 – 5 years ago	29.0
		6 – 10 years ago	39.0
		More than 10 years ago	21.0
8	Are you aware that some cell phones can browse the internet?	Yes	97.0
		No	3.0
9	Do you know how to browse the internet with the cell phone?	Yes	96.0
		No	3.0
10	Do you have cell phone that can browse the internet?	Yes	96.0
		No	3.0

Source: Field survey, 2017

3.3 Youths' awareness of geospatial technological innovations

Youths interviewed were asked various questions relating to their awareness of geospatial technology such as maps, Global Positioning System (GPS) and Geographical Information Systems (GIS)/Remote Sensing. Table 3 shows the results of the analysis of their responses. As shown in table 3, majority of the youths interviewed are aware of maps (96.0%), know how to read map (63.0%), and know what maps are used for (92.0%). Majority of them are aware of existence of maps on the internet (91.0%), and have browse map on the internet (66.0%). When asked how often they browse map on the internet, 39.0% of them said occasionally, 3.0% of them said once a mouth, and 8.0% of them said once a week. When asked which online maps they were aware of, 74.0% of them said Google Maps, 33.0% said Google Earth, and 10.0% said Bing Maps. When asked whether they were aware that some cell phones can browse maps on the internet, majority (91.0%) of them said that they are aware that some cell phone can browse maps on the internet. When asked whether they are aware of GPS (Global Positioning System) technology and the use of GPS technology, majority of them said that they are aware of GPS technology (80.0%) and the use of GPS technology (62.0%). When asked whether they are aware of Geographical Information Systems/Remote Sensing, some (38.0%) of them said they are aware while 58.0% of them said that they are not aware.

Table 3: Youths' awareness of geospatial technological innovation

S/N	Questions	Response	% (n = 211)
1	Are you aware of maps?	Yes	96.0
		No	4.0
2	Do you know how to read map?	Yes	63.0
		No	35.0
3	Do you know what maps are used for?	Yes	92.0
		No	8.0

4	Are you aware of existence of maps on the internet?	Yes	91.0
		No	7.0
5	Have you ever browsed maps on the internet?	Yes	66.0
		No	34.0
6	How often do you browse map on the internet?	Daily	3.0
		Once a week	8.0
		Once a month	3.0
		Occasionally	39.0
		Rarely	26.0
7	Which online maps are you aware of?	Google Earth	33.0
		Google Maps	74.0
		Bing Maps	10.0
		None	12.0
8	Are you aware that some cell phone can browse Maps on the internet?	Yes	91.0
		No	9.0
9	Are you aware of GPS (Global Positioning System) technology?	Yes	80.0
		No	19.0
10	Are you aware of the use of GPS technology?	Yes	62.0
		No	36.0
11	Are you aware of Geographical Information System/Remote Sensing technology?	Yes	38.0
		No	58.0

Source: Field survey, 2017

3.4 Youths' use of geospatial technological innovations

Youths were asked various questions relating to their use of geospatial technology. The analysis of their responses to the questions are shown in table 4. When asked whether they use their personal computer/laptop to search for location, table 4 shows that most of the youths use their personal computer/laptop to search for location on the internet (45.0%). Most of them said that they have used their personal computer/laptop to search for direction to places on the internet (40.0%). When asked whether they have ever browsed the internet to get location of places, direction to places and distances to places. Majority of them said that they have browsed the internet to get location of places (82.0%), to get direction to places (74.0%), and to get distances to places (67.0%). The youths interviewed were asked what they use their cell phone to do apart from using them to make phone calls. Table 4 shows that majority of them used their cell phone to browse the internet (92.0%). `Most of them said that they use their cell phone to get location to places (63.0%), to get direction to places 53.0%), and to get distances to places (40.0%). When asked whether they have ever used map, majority (74.0%) of them said that they have used map. When asked which online maps they have browsed and used, 67.0% of them said Google Maps, 29.0% said Google Earth and 5.0% of them said Bing Maps, while 19.0% said none. The youths interviewed were asked

whether they use cell phone and computer/laptops to browse maps on the internet, most of them 66.0% and 45.0% respectively said they used cell phone and computer/laptops to browse maps on the internet. Nevertheless, it was observed that majority of the youths asked from people information about location, direction, distances and other needed information about places they do not know. The explanation for this may include: to conserve the battery energy of their cell phone and laptops, to conserve internet data for browsing, consideration of network situation, that is, not sure if the network will not disappoint at that moment, uncertainty as to whether the place in question has been captured on the map, consideration of the sensitivity of smart phones, fear of misplacing or losing the smart phone/laptops to the thieves or fear of thieves snatching the smart phone/laptop away from their hand, the issue of privacy, that is, not wanting to be tracked, lack of sharpness of the face screen of most cell phones, that is, blurred visibility, and the fact that smart phones/laptops are costly and need be carefully taking care of, etc.

Table 4: Youths' use of geospatial technological innovations

S/N	Questions	Response	% (n = 211)
1	Do you use your personal computer/Laptops to search for location on the internet?	Yes	45.0
		No	42.0
2	Do you use your personal computer/Laptops to search for direction to places on the internet?	Yes	40.0
		No	46.0
3	Have you ever browsed the internet to get location of places?	Yes	82.0
		No	18.0
4	Have you ever browsed the internet to get direction to places?	Yes	74.0
		No	24.0
5	Have you ever browsed the internet to get distance to places?	Yes	67.0
		No	32.0
		To browse the internet	92.0
		To get location to places	63.0
		To get direction to places	53.0
		To get distances to places	40.0
6	What do you use your cell phone to do?	To browse the internet	92.0
		To get location to places	63.0
		To get direction to places	53.0

		To get distances to places	40.0
7	Have you ever used map?	Yes	74.0
		No	25.0
8	Which online maps have you browsed and used?	Google Earth	29.0
		Google Maps	67.0
		Bing Maps	5.0
		None	19.0
9	Do you use cell phone to browse Maps on the internet?	Yes	66.0
		No	32.0
10	Do you use computer/Laptops to browse Maps on the internet?	Yes	45.0
		No	49.0

Source: Field survey, 2017

3.5 Youths' interest in being trained in geospatial technological innovations

Youths were asked various questions relating to their interest in being trained in geospatial technological innovations. The analysis of their responses to the questions are shown in table 5. When asked whether they have interest in learning more about maps and GPS technology; majority of the youths interviewed said that they have interest to learn more how to read maps (70.0%), and to learn more how to use GPS technology (71.0%). The youths interviewed were asked as to whether they have interest to be trained in Geographical Information Systems (GIS)/Remote Sensing technology and on the use of geospatial technology. Most of them said that they have interest to be trained in Geographical Information Systems (GIS)/Remote Sensing technology (54.0%) and on the use of geospatial technology (60.0%). They were also asked whether they know where they can be trained. While majority of the youths said that they did not know where they can be trained, some of the youths (28.0%) said that they know where they can be trained on how to read maps, 23.0% said that they know where they can be trained on the use of GPS technology, 22.0% said that they know where they can be trained in Geographical Information Systems (GIS)/Remote Sensing technology, and 20.0% said that they know where they can be trained in geospatial technology.

Table 5: Youths' interest in being trained in geospatial technological innovations

S/N	Questions	Response	% (n = 211)
1	Do you have interest to learn more on how to read maps?	Yes	70.0
		No	29.0
2	Do you know where you can be trained on how to read maps?	Yes	28.0
		No	68.0
3	Do you have interest to learn how to use GPS technology?	Yes	71.0
		No	27.0

4	Do you know where you can be trained on the use of GPS technology?	Yes	23.0
		No	72.0
5	Do you have interest to be trained in Geographical Information System/Remote Sensing technology?	Yes	54.0
		No	44.0
6	Do you know where you can be trained in Geographical Information System/Remote Sensing?	Yes	22.0
		No	74.0
7	Do you have interest in training on the use of geospatial technology	Yes	60.0
		No	36.0
8	Do you know where you can be trained in geospatial technologies	Yes	20.0
		No	76.0

Source: Field survey, 2017

3.6 Youths' willingness to pay for the training

Youths were asked if they will be willing to pay for the training on how to read maps, on the use of GPS technology, in Geographical Information Systems (GIS)/Remote Sensing technology and on the use of geospatial technology. The analysis of their responses to the questions are shown in table 6. The table shows that while majority of the youths are not willing to pay for the training, some of the youths (34.0%) are willing to pay for the training on how to read maps, 34.0% are willing to pay for the training on the use of GPS technology, 37.0% are willing to pay for the training in GIS/Remote Sensing, and 39.0% are willing to pay for the training in geospatial technology.

Table 6: Youths' willingness to pay for the training

S/N	Questions	Response	% (n = 211)
1	Are you willing to pay for the training on how to read Maps?	Yes	34.0
		No	61.0
2	Are you willing to pay for the training on the use of GPS technology?	Yes	34.0
		No	63.0
3	Are you willing to pay for the training in Geographical Information Systems and Remote Sensing?	Yes	37.0
		No	58.0
4	Are you willing to pay for the training in geospatial technologies?	Yes	39.0
		No	56.0

Source: Field survey, 2017

3.7 Challenges facing the youths in their use of geospatial technological innovations

The youths interviewed were asked the challenges facing them in their use of geospatial technological innovations. Table 7 shows the results of the analysis of their responses to the question. The table shows that top on the list of the challenges facing the youths in their use of geospatial technological innovations was lack of finance to buy cell phone and personal computer that can browse/lack of finance to pay for training in geospatial technologies (69.0%), followed by electricity (power supply) problem/low battery capacity of the cell phone and of the personal computer/Laptop (54.0%), lack of understanding of map terminology/did not understand how to read map (36.0%), technical nature of smart related technology (10.0%) and others such as lack of good network in the area, lack of time to undergo the training, lack of interest, etc. (2.0%).

Table 7: Challenges facing the youths in their use of geospatial technological innovations

Question	Response	% (n = 211)
What are the challenges you face in your attempt to use geospatial technologies?	Lack of finance to buy cell phone and personal computer that can browse/ Lack of finance to pay for training in geospatial technologies	69.0
	Electricity (power supply) problem/Low battery capacity of the cell phone and of the personal computer/Laptop	54.0
	Lack of understanding of map terminology/Do not understand how to read map	36.0
	It is too technical	10.0
	Others (Lack of good network in the area; Lack of time to undergo the training; Lack of interest)	2.0

Source: Field survey, 2017

4. Summary of findings and conclusion

This paper examined youths' awareness and use of geospatial technological innovations in Nigeria. The mean age of the youths interviewed was 24 years while their median and the mode age was 25 years respectively. The highest educational qualification of most of them was Secondary School Certificate, followed by those who had first degree, Advance Level School Certificate (A/L) and Ordinary National Diploma (OND). Some of them engaged in extra vocational activities such as Software Developers, Analysts, Fashion Stylists/ Fashion Designers/ Hair Dressers/Hair Stylists, Photographers, Coach, Theatre/Media Practitioner/ Film Makers, etc. The mean number of years they have been engaged in extra vocational activities was 5 years while the median and the mode number of years they have been engaged in extra vocational activities were 4 years and 3 years respectively. The youths interviewed were from various Department/Institute of the University such as Special Education, Educational Management, Sociology, Geography, Political Science, Wildlife & Ecotourism, Crop Protection & Environmental Biology, Physics, Chemistry, Food

Technology, Computer Science, Medicine & Surgery, etc. Youths interviewed were in various level/class in the University ranging from 100 level to 500 level and some were Postgraduate students. Majority of the youths interviewed were computer literate and had personal computer/laptop. Most of them had been using personal computer/laptop between 1 years to 5 years. Majority of them said that they used their personal computer/laptop for word processing (typing) purposes and to browse the internet. Only few of them used their personal computer/laptop for other things such as games, watching movies, and playing music. Majority of them know how to browse the internet with their personal computer/laptop. Majority of them have cell phone and some of them had been using cell phone between 6 years to 10 years. Majority of them were aware that some cell phones can browse the internet, know how to browse the internet with the cell phone, and had cell phone that can browse the internet. Majority of the youths interviewed are aware of maps, know how to read map, and know what maps are used for. Majority of them were aware of existence of maps on the internet, and had browsed map on the internet. Some of them browse maps on the internet occasionally, only few of them browse maps on the internet once a week. They were aware of online Google Maps, followed by Google Earth, and Bing Maps. Majority of them were aware that some cell phone can browse maps on the internet. Majority of them were aware of GPS technology and the use of GPS technology. Some of them were aware of Geographical Information Systems/Remote Sensing. Most of the youths had used their personal computer/laptop to search for location on the internet and to search for direction to places on the internet. Majority of them had browsed the internet to get location of places, to get direction to places, and to get distances to places. Most of them had used their cell phone to get location of places, to get direction to places, and to get distances to places. Majority of them had used map. Most of them had browsed and used the following online maps Google Maps, followed by Google Earth and Bing Maps, only few had browsed and used none of the online maps. Most of them used cell phone and computer/laptops to browse maps on the internet. Majority of the youths interviewed had interest to learn more on how to read maps, and to learn more on how to use GPS technology. Most of them had interest to be trained in Geographical Information Systems (GIS)/Remote Sensing technology and on the use of geospatial technology. Few of the youths knew where they can be trained and were willing to pay for the training. Top on the list of the challenges facing the youths in their use of geospatial technological innovations was lack of finance to buy cell phone and personal computer that can browse/lack of finance to pay for training in geospatial technologies, followed by electricity (power supply) problem/low battery capacity of the cell phone and of the personal computer/Laptop, lack of understanding of map terminology/do not understand how to read map, technical nature of geospatial technology, and others such as lack of good network in the area, lack of time to undergo the training, lack of interest, etc.

The findings of this study shows that some of the youths in Nigeria particularly those that are in higher institutions are aware and even had used some of the geospatial technologies. Nevertheless, as the findings from this study indicate they need more training particularly as the geospatial technologies are dynamic and advances rapidly within short periods of time. Thus there is need for the education and enlightenment of youths on geospatial technologies. For youths to acquire more practical experience of geospatial technologies there is the need for training centres to be created and financial support provided by the government to procure personal computer/laptops and smart phones. The training should be made more accessible and at very reduced cost or better still at no

cost at all. Geospatial information technology firms should have branches at accessible locations and provide their services and products at affordable rates. More places need to be put on maps and internet facilities and power supply needs to be improved.

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