Challenges and Prospects of Information and Communication Technologies Application Among Mass Communication Students of Tertiary Institutions in Lagos, Nigeria

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Abstract

This paper assesses the challenges and prospects of the application of information and communication technologies by mass communication students of tertiary institutions, focusing on three educational institutions in Lagos, Nigeria. Survey research method through a questionnaire as an instrument was applied in collecting data for the study. A sample size of 300 respondents drawn from the three institutions was used. Findings revealed that students' use of these technologies have steadily risen in recent years due to the derivable utilitarian and gratifying values, among which are accessibility, versatility, speed, cost effectiveness and entertainment. Indeed, the application of these tools, according to the findings, is a necessity if the students must cope with the current demands of their studies. The outcome of the study also revealed that students' use of ICTs in their studies is not without some inherent difficulties. These include inadequate information and communication technology literacy, epileptic power supply, high costs and negative application by unscrupulous users. Following the inevitability of the use of information and communication technologies by mass communication students and media practitioners, some useful recommendations made include, among others, stepping up of comprehensive ICTs appreciation training for students, improved accessibility, qualitative service delivery by communication service providers and constant public power supply.

Key Words: challenges, prospects, technology application, mass communication, tertiary institutions.

1. Introduction

The level of acceptability and embrace of the application of information and communication technologies by virtually every member of the society, especially among the youths, can best be described as overwhelming and astronomical. This, perhaps, may not be surprising, considering man's insatiable quest for information and communication and of course what the twin items stand for mankind. These technological tools "…provide access to information through telecommunications", according to Murray (2011) and the communication technologies include "the Internet, wireless networks, cell phones, and other communication mediums." They represent unification and convergence. Joseph and Gujbawu (2012: 171) quote Venkatesh (1998) as observing that "the unprecedented convergence of information and communications technology has created possibilities unthinkable only a few years ago", adding that they have continued to enhance "means through which people communicate".

Their wide range of areas of service coverage is unimaginable as it is mind-bogging. The capacities and capabilities they have afforded members of the society, especially in the last few decades has been awesome. They now provide the opportunity of people communicating in real time with the assistance of instant messaging, voice over IP (VoIP), and video-conferencing. These are besides social networking websites like Facebook, Twitter, Pinterst, LinkedIn and others which give seamless chances for users' interaction and linkage. Indeed, their influence of every segment of the society has been irresistible, having singularly enabled man to even instantaneously interconnect with others across the globe without restriction, through the linkage "…of telecommunications (telephone lines and wireless signals), computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information", FOLDOC (2008). Linked computers have become as essential to the life of our society as the

central nervous system is to the human body. Both private and public corporate organisations, for instance, industries and businesses rely on computers for assistance in their productive ventures. It is in the same context that McNair (2002: 56) asserts that "access to a computer is one way to define class, with those who cannot or will not plug themselves into a terminal standing on the bottom rung of the social ladder." Therefore, information and communication technologies are critical needs of every member of the society, organisations and governments that must function effectively in accordance with the dictates of needs of their diverse publics, customers and stakeholders in an information-driven age. Among those in dire need of effective appreciation and application of these technological innovations are, undoubtedly, students of mass communication.

For the purpose of laying hypothetical credence to the study, the following served as its hypotheses:

- Ho1 Students undergoing mass communication studies in Lagos do not have access to information and communication technologies.

- Ho2 Students of mass communication in Lagos are not proficient in computer appreciation.

- Ho3 Information and communication technologies are of no benefits to students of mass communication.

- Ho4 Information and communication technologies are of no value to communication and media practitioners.

- Ho5 Students of mass communication do not experience any challenges in their use of information and communication technologies.

The study went ahead to examine the respondents' perceptions of the impact of ICTs on the education of future practitioners of mass communication. Among the research questions applied are: Is the present level of students' use of these innovations of any negative consequence on the quality of service delivery of future media practitioners? How can the trend guarantee the efficiency and effectiveness of those who are going to man media organisations as practitioners and managers in these emerging nations? It is against the backdrop of these bugging issues that this study is carried out to explore the difficulties and prospects of the use of information and communication technologies by mass communication students of three tertiary institutions in Lagos, Nigeria.

To source data for the study, survey research method was applied. The population was the mass communication students of National Open University of Nigeria, Victoria Island, Lagos; University of Lagos, Akoka, and Lagos State University, Ojo Lagos. A sample representation of 300 students across all their programmes (undergraduate and postgraduate) was uniformly selected from the three universities for the study. A structured questionnaire was purposively administered on the sample population. Of the 300 copies of the questionnaire administered on the respondents, 294 representing 98% were collected back. The collected data were

analysed with descriptive statistics of simple percentages, frequency distribution tables and Chi-Square.

2.   The Concept of ICTs

The popularity of the phrase 'Information and Communication Technology' came following its use by some British academic researchers since the 1980s, from where their gratifying benefits spread. This became so obvious prompting the United Nations General Assembly in 2001 to recommend United Nations Millennium Declaration's goal of implementing ICT in order to achieve some aspects of the Millennium Development Goals, thereby underscoring the recognition of their pivotal roles in contemporary society and its development, ITU (2006).

Globally, information and communication technologies typified by the internet represent invaluable assets aiding both students and practitioners in every field of endeavour. They afford values which almost out-rightly outweigh the advantages of the mainstream media. It is then not surprising that they have application in the learning process that has gone beyond the uses of traditional tools. Undoubtedly, this stems from their numerous features, among which is the incorporation of the old media through digitalisation and convergence, as Ngu, Oso and Soremekun (2013:6) observe. As learning tools, ICTs have revolutionised the educational experience by providing interactivity, equality, uninhibited accessibility, cost effectiveness, speed, immediacy, efficiency, documentation and universality. It cannot be better than this. This, perhaps, partly informs the massive patronage they have had among students in every society, developed or still developing.

They, therefore, understandably became the right and wise choice of most students who are in search of better options as they quest for the Golden Fleece. It is more so for mass communication students for whom ICTs mean more than derivable benefits and gratifications. They are also platforms for research, data analysis and confirmation of research findings, storage of data and their retrieval. As reported by Kent and Taylor (2014), a research carried out by Annenberg Centre for the Digital Future indicated that these digital technologies are more at home with the younger generation of users of 18 to 34 years of age than others above that age bracket. This is the age of studentship, age of inquisitiveness and age of adventurism. ICTs are perfect companions in achieving any of these goals. In their observation, an average student or communication professional is likely to have:

…multiple email accounts (work and private), accounts on LinkedIn, Twitter,
Facebook, Pinterest, and other social media, as well as an obligation to keep in touch
with teachers, organizational members, and external stakeholders and publics. The
sheer amount of virtual communication that individuals navigate and engage in on a
daily basis dwarfs anything that has ever existed and expectations for connectivity only
keep growing, (Kent and Taylor, 2014: 31).

Burnham (1984: 7) lends his voice to the above contention when he says that "the overwhelming influence of computers is hard to exaggerate" in a globalised world.

3. Theoretical Framework

The study is anchored on the Technological Acceptance Model (TAM), Diffusion of Innovation and Uses and Gratification theories. The first concerns itself with users' embrace of technology. It postulates that with the availability of technology, some dynamics decide how and when it is used. Davies (1989) insists that gratification and convenience are among those influential factors affecting the choice and application of technologies, which in turn influence the individual's behaviour resulting in its acceptance. As a result of their apparent simplicity and gratification, most students and indeed potential mass communication practitioners utilise these instruments for both personal and professional reasons.

Propounded by Everett Rogers in 1962, the Diffusion and Innovation theory is about how, why and the rate new thoughts and technology spread within cultures. To him, diffusion is the communication of an innovation to people within a social group. It stipulates that acceptance of a new technology begins with excited innovators and users and move on to other majority who join when the tool is more trustworthy. Mass communication students form the basis of this study as they are potential users of information and communication technologies in the various fields of mass communication they may find themselves on graduation from tertiary institutions. This underscores its applicability here.

Uses and Gratification theory proposes that people use the media in order to achieve some benefits. Baran (2012: 384), McQuail (2005: 424), Baran and Davis (2001) and Bittner (1989: 380-381) note that audience use of the media stem from their attainment through the tools of such gratifications like socialisation, education/research, information and entertainment. Folarin (1998: 65) further additionally states that as active listeners, viewers and readers, media audience filter avalanche of available media products and select ones gratifying to and in tune with their aspirations. The theory suites this study with its position that media users here represented by mass communication students choose for use those media organs from where they would derive the desired benefits, including professional knowledge and experience, social interaction and being abreast with daily global developments.

4. Testing and Interpretation of Hypotheses

Hypotheses are untested generalisations. The reason for testing them was to examine and determine whether the researcher's assumptions were correct or wrong. If correct, the extent of its correctness will be proven and vice-versa. The hypotheses which also form a cornerstone of this research endeavour was tested statistically using mainly Z score and where necessary, supporting it with correlation analysis. The hypotheses were tested under the accepted region of -1.96 and +1.96.

$Z = \overline{x} - \mu$, where x = sample mean

μ = population mean $(\overline{x}\ 1.\ 96\ \dfrac{S}{\sqrt{N}})$

S = Standard deviation
Z = Statistical score
N = Sample size

Standard Error mean = $\dfrac{S}{\sqrt{N}}$

The following weights are applied and attached to each option where the questions required the respondents to rank their responses:

Options   Weights
Strongly Agree   5
Agree   4
Indifferent   3
Disagree   2
Strongly Disagree   1

In ranking, all options categorised as first are given the highest score of "5" and in a descending order reducing the others.

H01 Students undergoing mass communication studies in Lagos do not have access to information and communication technologies.

Table 1: Hypothesis One

Variables	X	F	Fx	$X - \bar{x}$	$(x - x)2$	$F(x - x)^2$
Strongly	5	8	40	2.87	8.24	65.92
Agreed	4	7	28	1.87	3.50	24.5
Indifferent	3	20	60	0.87	0.76	15.2
Disagreed	2	20	40	-0.13	0.02	0.4
Strongly disagreed	1	45	45	-1.13	1.28	57.6
∑ (Summation)		100	213			163.62

Applying the formula already stated

$$\bar{x} = \frac{\sum fx}{\sum f}$$

$$= \frac{213}{100} = 2.13$$

Standard Deviation =

$$S = \sqrt{\frac{f(x - \bar{x})^2}{f}} \quad \sqrt{\frac{163.62}{100}}$$

Standard error mean =   1.28
Standard error mean = S

$$\sqrt{N}$$

$$= \frac{1.28}{\sqrt{100}} = 0.13$$

Population mean = 2.13 + 1.96 (0.13)
          = 2.13 = 0.25
          = 2.38
Negative   = 2.13 – 0.25
          = 1.88
An assumed mean of 1.80 will be used

Z $\quad = \dfrac{2.13 - 1.80}{0.13} \quad \dfrac{0.33}{0.13} = 2.54$

Decision:
Since the value of the calculated Z score of 2.54 did not fall within the acceptance region of -1.96 and +1.96, the null hypothesis was rejected. This, thus, implies that students who are undergoing studies in mass communication in Lagos have access to information and communication technologies.

H₀₂ Students of mass communication in Lagos are not proficient in computer appreciation.

Table 2: Hypothesis Two

Variables	X	F	Fx	$X - \bar{x}$	$(x - \bar{x})2$	$F(x - x)^2$
Strongly	5	38	190	1.37	1.88	71.44
Agreed	4	17	68	0.37	0.14	2.38
sIndifferent	3	23	69	-0.63	0.40	9.2
Disagreed	2	14	28	-1.63	2.66	37.24
Strongly disagreed	1	8	8	-2.63	6.92	55.36
∑ (Summation)		100	363			175.62

Applying the formula already stated

$\bar{x} \quad = \dfrac{\sum fx}{\sum f}$

$\quad = \dfrac{363}{100} \quad = 3.63$

Standard Deviation

$S = \sqrt{\dfrac{f(x - \bar{x})^2}{f}} \quad = \sqrt{\dfrac{175.62}{100}}$

Standard error mean $\quad = \quad 1.33$
Standard error $\quad = \dfrac{S}{\sqrt{N}}$

$= \dfrac{1.33}{\sqrt{100}} \quad = 0.13$

Population mean = 1.33 + 1.96 (0.13)
$\qquad = 3.63 + 1.96 \times 0.13$
$= 3.63 + 0.25$
$\qquad = 3.88$
Negative $\qquad = 3.63 - 0.25$
$\qquad = 3.88$

In testing the hypothesis, an assumed mean of 3.00 will be used which is a value that falls between 3.88 and 3.38 as shown above.

Standard error mean

$$Z = \frac{2.13 - 1.80}{0.13} = \frac{0.33}{0.13} = 2.54$$

= 4.85.

Decision:

Since the value of the calculated Z score fell outside the acceptance region of -1.96 and +1.96, the null hypothesis was rejected, therefore, accepting the alternate hypothesis that students of mass communication in Lagos are proficient in computer appreciation.

H$_{03}$ Information and communication technologies are of no benefits to students of mass communication.

Table 3: Hypothesis Three

Variables	X	F	Fx	X - $\bar{x}$	(x - $\bar{x}$) 2	F (x - x)^2
Strongly	5	38	190	1.37	1.88	71.44
Agreed	4	17	68	0.37	0.14	2.38
Indifferent	3	23	69	-0.63	0.40	9.2
Disagreed	2	14	28	-1.63	2.66	37.24
Strongly disagreed	1	8	8	-2.63	6.92	55.36
∑ (Summation)		100	363			175.62

Applying the formula already stated

$$\bar{x} = \frac{\sum fx}{\sum f}$$

$$= \frac{363}{100} = 3.63$$

Standard Deviation

$$S = \sqrt{\frac{f(x - \bar{x})^2}{f}} = \sqrt{\frac{175.62}{100}}$$

Standard error mean = 1.33

Standard error mean = $\frac{S}{\sqrt{N}}$

$$= \frac{1.33}{\sqrt{100}} = 0.13$$

Population mean = 1.33 + 1.96 (0.13)
= 3.63+1.96x 0.13
= 3.63 + 0.25
= 3.88

Negative = 3.63 – 0.25
        = 3.88

In testing the hypothesis, an assumed mean of 3.00 will be used which is a value that falls between 3.88 and 3.38 as shown above.

Standard error mean

Z   = 2.13 – 1.80 =   0.33 =2.54

            0.13   0.13

= 4.8.

Decision:
Since the value of the calculated Z score fell outside the acceptance region of -1.96 and +1.96, the null hypothesis was rejected, therefore, accepting the alternate hypothesis that information and communication technologies are of benefit to students of mass communication.

H04 Information and communication technologies (ICTS) are of no value to communication and media practitioners.

Table 4: Hypothesis Four

Variables	X	F	Fx	X - $\bar{x}$	(x - $\bar{x}$) 2	F (x - x)^2
Strongly	5	38	190	1.37	1.88	71.44
Agreed	4	17	68	0.37	0.14	2.38
Indifferent	3	23	69	-0.63	0.40	9.2
Disagreed	2	14	28	-1.63	2.66	37.24
Strongly disagreed	1	8	8	-2.63	6.92	55.36
∑ (Summation)		100	363			175.62

Applying the formula already stated

$\bar{x}$ = $\dfrac{\sum fx}{\sum f}$

    = $\dfrac{363}{100}$ = 3.63

Standard Deviation

S = $\sqrt{\dfrac{f(x - \bar{x})^2}{f}}$ $\sqrt{\dfrac{175.62}{100}}$

Standard error mean   =   1.33
Standard error mean   = $\dfrac{S}{\sqrt{N}}$

= $\dfrac{1.33}{\sqrt{100}}$ = 0.13

Population mean = 1.33 + 1.96 (0.13)

$= 3.63 + 1.96 \times 0.13$

$= 3.63 + 0.25$

$= 3.88$

Negative $= 3.63 - 0.25$

$= 3.88$

In testing the hypothesis, an assumed mean of 3.00 will be used which is a value that falls between 3.88 and 3.38 as shown above.

Standard error mean

$$Z = \frac{2.13 - 1.80}{0.13} = \frac{0.33}{0.13} = 2.54$$

$= 4.8.$

Decision:

Since the value of the calculated Z score fell outside the acceptance region of -1.96 and +1.96, the null hypothesis was rejected, therefore, accepting the alternate hypothesis that information and communication technologies are of value to communication and media practitioners.

H05 Students of mass communication do not experience any challenges in their use of information and communication technologies.

Table 5: Hypothesis Five

Variables	X	F	Fx	X - $\bar{x}$	$(x - \bar{x})^2$	F $(x - x)^2$
Strongly	5	38	190	1.37	1.88	71.44
Agreed	4	17	68	0.37	0.14	2.38
Indifferent	3	23	69	-0.63	0.40	9.2
Disagreed	2	14	28	-1.63	2.66	37.24
Strongly disagreed	1	8	8	-2.63	6.92	55.36
∑ (Summation)		100	363			175.62

Applying the formula already stated

$$\bar{x} = \frac{\sum fx}{\sum f}$$

$$= \frac{363}{100} = 3.63$$

Standard Deviation

$$S = \sqrt{\frac{f(x - \bar{x})^2}{f}} \quad \sqrt{\frac{175.62}{100}}$$

Standard error mean $= 1.33$

Standard error mean $= \dfrac{S}{\sqrt{N}}$

= 1.33

$$\sqrt{100} = 0.13$$

Population mean = 1.33 + 1.96 (0.13)
          = 3.63 + 1.96x 0.13
= 3.63 + 0.25
          = 3.88
Negative   = 3.63 – 0.25
          = 3.88

In testing the hypothesis, an assumed mean of 3.00 will be used which is a value that falls between 3.88 and 3.38 as shown above.

Standard error mean

Z   = 2.13 – 1.80   =   0.33 = 2.54

          0.13   0.13

= 4.8.

Decision:

Since the value of the calculated Z score fell outside the acceptance region of -1.96 and +1.96, the null hypothesis was rejected, therefore, accepting the alternate hypothesis that students of mass communication experience challenges in their application of information and communication technologies.

5.   ICTs and the Future of Mass Communication Practice

The emergence of ICTs is seen as one of the best things to ever happen to humanity. Still, notwithstanding the jubilant heralding of their entrant all over the world, developing nations somewhat bemoan the inadequacy of these innovations and essential resources. Nworgu (2008) affirms this by contending that information and communication technologies are still essential commodities to some parts of the world. Nwafor and Odoemelam (2012: 190) on their part note that the debutant of "computer, internet, GSM and satellite has enhanced speed, quality, quantity, efficiency and accuracy of transmission and distribution of information across borders". This is, perhaps, why the yawning gulf in their availability and application or digital divide is becoming an issue in front burner of policy makers. This fact has necessitated the serious concern some communication scholars are expressing about the ICT fate of emerging regions of the world, among them Africa. Osuala (2005: 18), Eze (2007: 173 and Ndukwe (2005: 23) argue that low tele-density, inadequate interconnectivity, epileptic power supply, stumpy adoption capacity have impaired developing countries like Nigeria's participation in the dividends of information and communication technologies. This, according to them, directly translates to slow pace of development in these nations.

The low capacity utilisation of these innovations in Nigeria generally, for instance, has similarly negatively permeated into other facets of the society like institutions of higher learning; among them the tertiary institutions this study is narrowed. This, therefore, impairs the uses this class of people put the ICTs, as Aririguzoh (2012: 84-85) identifies. The media are variously used by different kinds of people, including students in tertiary institutions. According to her:

They are exposed to different types of media including the traditional and media…The new media are spawned by the digitalisation of media technologies. The internet is a major tool that both journalists (media practitioners) and students use to send and receive information. Some students source for some of their study resources from the internet. Others submit their assignments, pay their fees, buy books or even do their registration online.

The assertion by McNair (2002: 56) that the new information and communication technologies (NICTs) would exact much impact "on the form and content of media and on the role of the media in society" is at play already. The interactive attributes of these new media: internet, cell phones, iPod, iPad, game stations and other platforms, give students leverage of personal, creative and social applications, besides the advantage of text messaging, online instant messaging and blogging all of which have led to personalisation in the use of the new media in the views of Aririguzoh (2012: 85) and Ingle (1986: 255).

These derivable gratifications drive home why information and communication technologies are inevitable companions to students and practitioners of mass communication. Both in school and in the office, they provide invaluable services to these classes of users. Kent and Taylor (2014: 31) buttress this. "A typical student or communication professional probably has multiple email accounts (work and private), accounts on LinkedIn, Twitter, Facebook, Pinterest, YouTube, Skye, MySpace 2Go and other social media, as well as an obligation to keep in touch with teachers, organizational members, and external stakeholders and publics."

In her study of the social media and the social behaviour of students, Achalonu (2012: 133) found that apart from using them to improve the users' social status, enhancing their academic fortunes was another cardinal reason for the application of these new technologies by students and according to her, this is in agreement with the earlier findings of Ellison, Steinfield and Lampe (2007) in their research. Doubtlessly, these gadgets are crucial necessities to mass communication students and potential media practitioners.

Still Mohammed and Suleiman (2013:103) quote a study carried out by Wisconsin Centre for Education Research (2011: 1) as indicating that "Every day about 250 million people log into Facebook. Twitter has 15 million regular users…send 65 million messages each day. People watch more than 2 billion video clips on YouTube daily. Every hour, more than 90 percent of college students visit a social network site". Therefore, as Redecker, Ala-Mutka and Punie (2010: 4, 8) postulate, ICTs "provide opportunities for innovating and modernising education and training institutions and for preparing learners for the 21st century", especially in areas of access to learning content, creating digital content, connecting users to others and enabling collaboration between learners and teachers.

Similarly, Tine (2009: 134), Ezea, Ozibo and Hassan (2013: 153), and Benson-Eluwa and Kajaig (2012: 341) acknowledge the unique place of these media in contemporary practice of advertising and public relations. According to them, clients are taking advantage of the vast opportunities the new media present. Ezea, Ozibo and Hassan (2013: 153), for instance, note that "Owing to the huge marketing potential inherent in digital media as part of the overall marketing mix, coupled with the increasing use of the internet by Nigerians, brands are seeking to hire agencies (digital agencies) with in-depth knowledge of digital marketing…" to market their goods and services.

On their application in the field of journalism, Ekeli and Enobakhare (2013: 118) quote Wikipedia as saying, "Through social media, people or group can create, organise, edit, comment on, combine, and share contents, in the process helping agencies achieve their mission goals." Their research showed that Nigerian electronic and print media practitioners "have come to terms with the existence of the social media in their day-to-day activities." This affirmation tallies with Bruno's (2010: 10) view that the new media are "not only innovative, real-time distribution channel for mainstream media, but one of the news sources preferred by the final users as well". Imelda (2011: 3) agrees while arguing that they are powerful tools of communication by news establishments and practitioners who want to reach wide audience beyond the conventional system. "Most of them are embracing YouTube, Facebook and Twitter, the most popular and widely used of social media forms, in posting updated stories and finding news sources."

As a follow-up, these researchers, however, observe an apparent challenge posed by social media on journalism. In their opinion, the increasing tendency of today's readership to shift their attention to the new media for news, especially among the youth, which according to them implies redefining journalism, is a fresh poser. From the look of things, it is a challenge there may be no immediate viable solution. The meteoric, dazzling and swaggering posture of these new technologies may not guarantee any sign of reversal of the current trend, at least for now. Hence, tolerance, cooperation and collaboration may be the realistic option, for the mainstream media, not rival relationship.

Mohammed and Suleiman's (2013: 99) study on final year students of mass communication of Nuhu Bamalli Polytechnic, Zaria, Nigeria, showed that the new technologies affect these users both positively and negatively. This motivated the investigators' conclusion that "government and managements of tertiary institutions should provide guidance and enlightenment on students' access and potentials of the social media. This may be necessary for their effective use, after all as Dominick (2011: 73) notes, they are "relatively new and their cultural impact is (still) evolving."

Such influence is real and could often be devastating. Just as the positive sides of ICTs are numerous so are their negative implications. They often pose threats communication scholars must find ways out of to avoid their overshadowing the positive sides of these inventions. For instance, information and communication technologies provide several opportunities for insecurity. Hackers, pornographers, cyberbullies and other criminal elements are having field's day engaging in fraudulent activities and unleashing mayhem on innocent citizens through them. Meanwhile and unfortunately, law enforcements agents are finding it extremely difficult to checkmate these crimes even in advanced countries with better equipped police and other security agencies.

In another vein, some users of these instruments get obsessed with them to a level of burying themselves in these devices and getting addicted to the detriment of their health and relationship with others. That is technophobia which is the fear, anxiety and nervousness associated with the acquisition and utilisation of technology. This is known to have led to serious psychological and mental disorders of some of those heavy users. Hence, any x-ray of the uses and gains of the acquirement and deployment of these technologies must as a necessity go hand-in-hand with critical examination of their obvious negative values.

6.   Challenges Facing the Use of ICTs by Nigerian Students

Information and communication technologies are of exceptional value to students especially those studying mass communication. Apart from the varied uses of the tools for personal, interactive and social purposes, they are special complementary aids to their studies. Indeed, they are indispensable innovations to all students in today's digital age who are concerned with acquiring basic and requisite knowledge and experience with which to deliver on public expectations on their chosen field of communication. Sophistication of the field of communication today has got to a level no practitioner can effectively live up to audience aspiration without vast understanding and skills in technology appreciation. Yet, its intricacy is aggravated by the daily emergence of entirely new innovations. Kent and Taylor (2014: 7) succinctly put this astronomical and astonishing development this way: "A phone that was "state of the art" in 1991 is considered a museum piece in 2014."

There is yet additional factors bothering on students' use of new technologies and their qualitative service delivery to media audience. Contemporary media audience has such dynamic and complex tastes and needs that only the well prepared practitioner can satisfy. This in turn brings into mind the issue of competition in the communication/media industry. Prospective practitioners have to be well trained and well equipped to face the cut-throat competition in their calling. This preparedness can only come from institutions of learning which are technologically equipped up to current global standard with the accompanying human capacity. How many of the institutions of learning in developing countries like Nigeria are so endowed? Besides availability, the students must be ready and able to apply the tools in order to acquire the needed dexterity that will enable them serve their audience.

Among the challenges the media industry, especially in developing countries, are facing is the quagmire of ill-equipped practitioners. This class of media workers, some of who, perhaps, grew through the ranks, as a result of poor education and training hardly compete effectively with their peers as they lack the essential technical knowhow and desirable efficiency in today's technology-driven industry. This is worrisome for a local industry that has to vie for share of market with world class media institutions in a globalised domain. It, therefore, becomes pertinent to take the issue of adequately grooming budding media practitioners very serious in line with global demands and standard. The choosy tendency of today's consumers brings into focus the need not to compromise quality in the training of future communication practitioners. This is an issue that is not helped by the low capacity utilisation and accessibility of these technologies in some countries, including Nigeria, according to Bello, et al (2004) and Idowu, et al (2008). There is the urgent need, therefore, for positive actions to reverse the ugly trend.

The table below is a synopsis of the major challenges facing communication and media trainees as obtained from the data provided by the research respondents:

Table 6: Challenges encountered in the use of ICTs by students

Variables	Frequency	Percentage
Inadequate knowledge of uses of all platforms	286	97.28
Poor service delivery	275	93.54
Frequent power outage	266	90.48
Misuse by students	242	82.31
Technophobia	237	80.61
Insecurity	224	76.19

Analysis of the content of the above table shows that the respondents who use the technologies were like the proverbial wearers of shoes who best know where they pinched most. Accordingly, majority of them massively reacted to the question on the challenges facing the application of the tools. This they indicated by availing wide range of problems believed to be militating against the smooth application. The respondents provided a 6-point core answers extending from 286(97.28%) to 224(76.19%) in their descending order. Among their responses were: insufficient knowledge of the uses of all platforms; poor service delivery by communication service providers; epileptic power supply; misapplication; fears and anxieties, and in security.

Of particular interest among the students' responses was the acknowledgement of indulgence in negative application of the tools. These include texting, browsing, surfing and watching videos while lectures are going on. It is a tacit acceptance by the students themselves of their constituting impediments to their own academic development. By allowing the novelty and euphoria of information and communication technologies to distract their attention from lectures and other academic activities, they are literally shooting themselves by the feet, they seem to acknowledge.

7. Utilisation of ICTs Deliverables by Tertiary Institution Students in Lagos

The study yielded these data in the tables below in furtherance of illuminating the various aspects and angles of the investigation as covered by the research questions.

Table 7: Students' knowledge and application of ICTs

Variables	Variables	Percentage
Yes	281	95.58
No	13	4.42
Total	294	100%

This question sought to find out if the students knew about and use information and communication technologies. The responses were overwhelmingly affirmative, as a majority of them, 281(95.58%) agreed, while only 13(4.42%) disagreed. This actually aligns with the general belief in communication circles that the ICTs market/knowledge in the country is one of the fastest growing in the continent, particularly as a result of its copious consumption by those within the youth age bracket.

Table 8: The regularity of students' use of ICTs like the internet

Variables	Variables	Percentage
Regularity	268	91.16
Often	22	7.48
Not at all	4	1.36
Total	294	100%

Next, the questionnaire sought to find out the regularity of the respondents' use of ICTs. As shown in Table 3 above, 268(91.16%) of the respondents indicated regularly; 22(7.48%) said often, while only 4(1.36%) chose not at all. This clearly shows the wide use of these technologies by students of mass communication of these three higher institutions.

Table 9: Reasons for the application of the technologies

Variables	Frequency	Percentage
Research	291	98.98
Interaction	288	97.96
Accessing mails	273	92.86
Entertainment (music, video/movie)	270	91.84
News/information	256	87.07
Games	238	80.95

A follow up question was naturally on the reasons and areas they were applying these technologies. Their responses to this open-ended question were as robust as the variety of the answers. A total of 291(98.98%) indicated research; 288(97.96%) gave interaction; 273(92.86%) signposted accessing their mails; 270(91.84%) answered entertainment (music, video/movie); 256(87.07%) offered news/information; while 238(80.95%) presented games.

Numerous other minor responses that could not fit into these broad perspectives were however discarded. The data in this table broadly point to the major motives of these students' utilisation of information and communication technologies. The majority of the students' choice of research as their reason for using these tools is understandable. Too, that this was followed by interaction is logical as it is the main reason for the application of the social media which is the priding place of people in this age bracket. Their responses here actually touched the core of some aspects of the objectives of the study.

Table 10: ICTs as aids to students in their studies

Variables	Variables	Percentage
Yes	241	81.97
No	51	17.35
Do not know	2	0.68
Total	294	100%

Data in the table above show that information and communication technologies have assisted the students in their studies, as indicated by a majority of 241(81.97%). However, 51(17.35%) of the respondents were of the view that the tools do not aid them, while 2(0.68%) had no answers. The outlook of this table is still in line with the responses to the earlier questions and in tandem with the goal of the research.

Table 11: Specific benefits students derive from the use of ICTs in their studies

Variables	Frequency	Percentage
Ease of accessibility	285	96.94
Availability of numerous platforms	277	94.22
Interactivity and sharing of information	271	92.18
Very convenience	260	88.44
Speed	253	86.05
Efficiency	245	83.33
Storage and documentation of data	240	81.63
Very cheap compared with other media	236	80.27
Versatility/choice	211	71.77

Asked to name specific benefits they derived from their use of these technologies, the students' responses were as could be seen in the table above. They named variety of gratifications, ranging from ease of accessibility, presence of numerous avenues/platforms, interactivity, convenience, speed, efficiency, documentation, cheap and versatility. The number of those who gave these reactions stretched from 285(96.94%) to 211(71.77%) respectively in their descending order.

Table 12: Assessment of the level of students' proficiency in ICTs application

Variables	Variables	Percentage
Very High (76-100%)	66	22.45
High (51-75%)	129	43.88
Low (26-50%)	72	24.49
Very low (0-25%)	27	9.18
Total	294	100%

It was also pertinent to explore the respondents' level of competence and proficiency in their appreciation and application of information and communication technologies. The responses presented a startling and encouraging revelation. Notwithstanding the general believe by scholars of the general under-utilisation of ICTs in developing nations, the findings included an indication of awesome enthusiasm among the student users of ICTs. This translates to a good number of them being proficiently well equipped to apply the tools: 66 or 22.45% of the respondents, as shown in the table above, are very high. The second segment of the proficiency classification named as high had 129 or 43.88% of the respondents. This was followed by low competent users who numbered 72 or 24.49%, while the very low cadre in proficiency appliers were 27 or 9.18%. This is in tune with the outcome of the hypothetical analysis. Their proficiency level may not be the best now, but surely will continue to improve by the day.

Table 13: Areas ICTs would be professionally useful to mass communication students

Variables	Frequency	Percentage
Sourcing of data, info, leads for news writing and reporting	232	78.91
Authentication and confirmation of news and their sources	214	72.79
Analysis and interpretation of data and information	200	68.03
Data and information storage and documentation	185	62.93
Interaction and partnership with other media practitioners	146	49.66
Constant monitoring and observing of other news avenues	123	41.84
Collection of graphics, designs and other news elements	108	36.73
Acquisition of additional knowledge, skills and expertise	101	34.35
Sundry derivatives like news focus and entertainment	87	29.59

Responses to this open-ended question were no less revealing as they were interesting. The insight they added stemmed from the fact that the study was not merely on ordinary users' utilisation of the social media and new information and communication technologies, but a review of the experiences of potential and budding mass media and communication practitioners who make use of these gadgets. This brought into focus the imperative of a question on how beneficial they felt these tools would be to them even as practitioners in their various chosen professional communication areas. The results were these imaginative answers

shown on Table 8 above. Respondents who provided these ranged from 232 or 78.91% to 87 or 29.59% respectively. The replies they gave realistically agreed with the very reasons and uses of information and communication technologies in contemporary global mass communication practice.

The responses also substantiate the viewpoints of the reviewed literature of the study. As well, the findings of the study concur with the postulations of the applied theoretical constructs. The collected data showed that (a) such factors like necessity and convenience led the students to welcome these innovations; (b) the acceptance which was with excitement has spread to other classes of users, and (c) their embrace by the students of mass communication stem from the enormous benefits derived from their uses. These, thereby, justify the application of Technological Acceptance Model (TAM), Diffusion of Innovation and Uses and Gratification theories, respectively, in the study.

8.   Conclusion and Recommendations

The data collected in the course of this study provided deep insights into the subject matter. They clearly shaded light on the unquantifiable benefits students and media/communication practitioners derive from the use of these digital tools as well as the challenges also inherent in their application. The data encompassed the wide areas the respondents applied these instruments, among them research, interactivity, accessing mails, entertainment (music, video/movie) and news/information, all which centre on the applicants' academic and social needs. As well they justified their choice and use of the gadgets, naming ease of accessibility, availability of numerous platforms, interactivity and sharing of information, convenience, storage and documentation of data as among the many accruable benefits they get from the uses.

Interestingly, their responses equally showed their acknowledgement of the vast areas of application of the technologies in media and communication practices. Expectedly, these areas were topped by sourcing of data, information, leads for news writing and reporting; confirmation and analysis of data, among others as given by as many as 232 or 78.91% of the 294 students. This conforms to Kent (2014), Yang and Kent (2013), and Kent and Taylor's (2014) assertion that there has been steady increase in the application of digital technologies by communication researchers and practitioners since their emergence. Irrespective of the specific area of communication today, good knowledge and effective application of these modern tools is an enormous advantage to the practitioner, whether it is journalism, broadcasting, advertising, public relations, publishing or film production, the data seemingly confirm. Majority of the respondents' identification of this fact is not only remarkable, but also a pointer to their apparent readiness to adhere to current global best practices.

The findings also included a catalogue of the challenges facing mass communication students and practitioners who use these digital technologies. Such limitations, according to them, vary from inadequate knowledge of uses of all technology platforms; poor service delivery; frequent power outage; misapplication by the students and insecurity. However, as Zerfass and Schramm (2014) observe, such challenges are not peculiar to any place, hence they have for long continued to receive the attention of researchers. For instance, to them, "The potentials and limitations of online and social media platforms in public relations (communication) as well as the actual use in the profession have been a focus of research during the last few decades".

Worthy of note also is the problem of inadequate knowledge of uses of all the platforms of the technology. The 286 or 97.28% of the respondents who gave this as an impediment justify the poor figure of 66 or 22.45% of the respondents who were found to be the number of the respondents proficient in the use and application of these tools. Two other serious challenges named include poor service delivery by communication service providers and frequent power outage. The telecommunication networks through which these platforms are accessible render anything but quality service in Nigeria, in addition to unreliable public power supply. These are twin headaches which hamper the efficiency and quality of the technologies even for those who are proficient in the digital gadgets application and therefore, deserve serious attention. This collaborates the outcome of Fab-Ukozor and Okalla's (2015) study on the likely challenges posed by internet use among public relations and advertising practitioner's which indicated that majority of their respondents agreed that "lack of power supply, training and retraining, cost and difficulties in internet use pose serious challenges to practitioners."

To enhance the full application of information and communication technologies by students of mass communication, there is the urgent need to widen the scope of the availability of the technologies; improve the efficiency of the service delivery as well as uplift the quality of the internet service provided by communication providers in line with global standards. Constant network outage which impairs the efficiency of their utilisation should be handled too. The level of capacity and proficiency of the users is encouraging. However, further improvement in the area can be tackled by stepping up computer education and training for the users. This should commence right from primary school level, more so for those pursuing professional courses like mass communication. Additionally, computers, laptops and tablets should be made cheaper and readily more available either free or at affordable costs to every pupil or student at all levels of education in the country.

Authorities of educational institutions and governments should go into partnership with the private sector for such collaborative arrangements that will assist efforts to equip schools with information and communication technologies for easier accessibility by all classes of students. This has become necessary as the issue of affordability makes it difficult for even some of those who are highly proficient in their use to acquire them.

Poor electricity supply in the country should also be taken head long. A situation where Nigeria, a country of overt 170 million people, currently gets less than half of the megawatts of electricity requirement of the population is totally unacceptable. This not only negatively affects socio-economic activities, but also the effective use of information and communication technologies by students, researchers, businesses and media/communication practitioners. As Fab-Ukozor and Okalla (2015) succinctly observe, "…incessant power outage, the disgusting network failure and limited number of (available) cyber cafés are also not helping matters at all." They should, therefore, be addressed once and for all.

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