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Paradoxical Modeling of the Negative Uses of ICT and their Implications among Secondary School Students in Oyo State, Nigeria: A Phenomenographical analysis towards a Grounded Theory

By

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Abstract

This study investigated negative uses of ICT and its Implications among secondary school students in Oyo State, Nigeria: A Phenomenographical analysis towards a Grounded Theory. A multi stage sampling technique was deployed and used in this study which involves the convenient sampling at the first stage, random sampling at the second stage, purposive sampling technique at the third stage and the purposive sampling technique was also used at the fourth stage to select respondents of the study. Information obtained were recorded and transcribed and used for analysis, and a thematic analysis was done. Findings of the study revealed that in a hierarchical order, the negative uses of ICT among students can affect and reduce: their concentration on academic work; students learning, cognitive and assimilation; students academic performance and achievement; the nation’s education system in achieving its goals and objectives; and poses challenge to national development through high rate of poverty and unemployment. It recommends that the stakeholders of the Nigeria education system such as teachers, parents, governments and policy makers should monitor and provide policies that would help the mitigation of the negative uses of ICT among students in Nigeria to be able to tap into the benefits that ICT brings. Also, it is expedient to train teachers on how they can control and manage students in classroom in this ICT generation to ensure effective performance.

Keywords

Negative uses of ICT, Paradoxical Modeling of Negative uses of ICT, ICT uses in Nigeria, negative uses of ICT in developing countries, Implications of the negative uses of ICT, ICT for Development
Introduction

Information and Communication Technology (ICT) has become part of everyday activities and includes the internet, social networking sites, e-mail, the mobile phone, CD-ROM, DVD, hand-held personal devices, and an ever-growing array of new technological inventions. ICTs are powerful tools that can increase access to improved and quality education (Ifijeh, Michael-Onuoha, Ilogho and Osinulu, 2015). Academic institutions and development agencies look to ICT to help find ways to enhance students’ effective learning. This is because of the elastic effect it plays in development efforts around the world, especially in the education sector. ICT has changed the way people communicate, learn, and conduct businesses. It can help in tackling development and learning challenges in many ways. These include enabling information and knowledge to travel faster and farther, supporting information and knowledge sharing on a large scale especially in the education sector, making available just-in-time information and knowledge for learning, bringing about revolutionary advances in teaching and learning, significantly reducing learning costs, among others.

In the education system, ICTs are being deployed with the aim of aiding students’ academic achievements and employability in the long run. Improved and modern education in developing countries such as Nigeria provides the promise of meaningful employment for graduates, movement towards a knowledge-based economy, and rapid national economic growth (Olson, Codde, deMaagd, Tarkleson, Sinclair, Yook and Egidio, 2011). However, African countries such as Nigeria have been found to lag behind other developing countries in educational attainment and other aspects of the human capital development required in the knowledge-based and global economy. Secondary schools in African countries such as Nigeria are underperforming (Olson et al., 2011). Thus, there is need for development strategies in the use of ICT that would enhance the development of the education sector especially in Nigeria.

It has been noted that ICT has played a central role in young people’s rise to prominence on a global scale and has helped them mobilize and collaborate. It has also given them a voice where they had none before (Olson et al., 2011). It also brought them together in response to social concerns and has connected them across vast geo-political barriers. In addition, young people including those in secondary schools are rising to the challenge by pioneering the use of ICT.
While the good news is that young people are using ICT to enhance their development as it is in developed countries, the challenge is to inspire them to use it to change their world in a positive way.

Ifijeh et al. (2015) stated that for most students, the advent of ICT such as the mobile phones, and other handheld devices such as digital readers and the internet has greatly enhanced interpersonal communication and education. Handheld devices have enabled users to access and retain awesome amounts of information for future references. Indeed, the emergence of these technological tools has greatly enhanced scholarship in the education system. In Nigeria, the breakthrough in cell phone technology (otherwise known as mobile technology) in 2001 has revolutionized the education sector.

Despite its positive effects, it is paramount to draw attention to the fact that the use of ICT among secondary school students has caused more harms than its positive impacts. In studies related to the effects of ICT usage on students, there are evidences for both positive and negative impacts. Also, result of studies that correlate academic performance of student with the use of ICT have been mixed, with some findings stating that students who use ICT received slightly higher grades (Wurst, Smarkola, & Gaffney, 2008), and others finding show a negative correlation between the use of ICTs and students performance (Grace-Martin & Gay, 2001; Fried, 2008). On the positive side, it has been deployed and used to enhance teaching and learning and to increase pedagogical strategies in teaching. Teachers may use ICT to post questions online where students can contribute. Such questions and contributions have been found to be better than those that occur in the traditional classes (Anderson et al., 2003; Caron & Gely, 2004; Samson, 2010). On the negative side, students have reported that ICT devices, both their own (Barak, Lipson, & Lerman, 2006; Maxwell, 2007) and those of their classmates (Fried, 2008; Mazzie, 2008) are distraction in the classrooms.

Alaba (2011), states that there is issue of poor ICT use. For example, disregard for basic phone etiquette among users has constituted a social menace. In Nigeria for example, some of the undesirable side effects of mobile phone use include “Extra cool”- a term coined for the use of mobile phones in the night around 12.30am because the tariff is free or very low; indiscriminate
use of phones in public places such as on the highways, in hospitals, while driving, in churches and even in classrooms. These have led to many societal problems and even death, in the case of driving while using the phones. Alaba (2011) stated that active steps have been made at inculcating socially acceptable mobile phone etiquette among the youths but to no or little effect. Nigeria as a developing country welcomed mobile technology with enthusiasm. However the enthusiasm soon began to fade as a result of myriad problems associated with the use of mobile phone by students in schools. Some of these problems include: indiscipline, examination malpractices and mobile bullying (Alaba, 2011). Srivastava (2005) stated that the introduction of mobile phone in schools have brought about concerns for lack of discipline in the classroom. Ling (2000) also opined that ICT usage in schools by students is a great problem which can lead to underachievement of the goals and objectives of schools and in extension the Nigerian education system.

Zhu, Kaplan, Dershimer and Bergom (2011) affirmed that it is important to note that studies showing a positive association between the use of ICTs and student learning or performance involved courses in which the integration of technology had received significant attention from the faculty. This implies that, in most cases, use of ICTs among students in schools can cause negative effect on them, the society, the education system and the nation except such use of ICT is directed toward their academics. For example, Shimbun (2008) cited by Ishii (2011) noted that every year, about 1,000 children get involved in rape and other crimes through online social networking or dating sites. Violence and obscene images are only a couple of clicks away. In some ways, these obscene images and video streams lead to threatening or break up of relationships or homes, with the less privileged such as women suffering the repercussions. This may not be so if ICT use is directed toward academic of class works. According to Bianco and Mariño (2008), the adverse effect of ICT use has raised debates among feminists and women’s groups, despite women’s considerable use of this technology. Also, women do not have a significant say in the formulation of regulation and policies pertaining to new technologies, thus allowing for the existence of aspects that are generally negative and are particularly harmful to women..
In the case of youth, the Japan’s Prime Minister, Yasuo Fukuda clearly stated that, “I can’t think of one good reason for letting youngsters have a mobile phone” (which of course is a part of ICT). Ishii (2011) stated that ICT does more harm to children or rather school students than it helps in enhancing educational goals and objectives with respect to students owning them. This has made many governments to find ways of shielding youths and students from harmful information obtained through ICT and also cyber bullying. Also, Ishii (2011) stated that individuals who use mobile phones are more involved in juvenile delinquency than those who do not. This implies that ICT use among students and youths can lead to serious multiple problems in the community and society. Juvenile delinquency has been linked to problems such as family, community, educational and national problems (Ramirez, 2008). To this end, Duncan, Hoekstra and Wilcox (2012) stated that ICT devices such as mobile phones, laptops, internets, among others may be more likely to distract students in a classroom setting, thus, hampering the objectives and purpose of education. Toomey (2013) stated that digital technology can have a detrimental effect on students’ focus and learning behaviours and hence be a risk factor for ICT in the learning environment. Such detrimental effects on focus include wondering if anyone commented on their Facebook post, or wondering if their friends responded to the text message they sent few minutes ago.

Another example was extracted from the experiment and study of Brian (2013). Brian (2013) conducted an experiment with two teens who would go without phones for 48 hours. First, prior to conducting the experiment, Brian asked the two teens about their phone habits and the amount of time they spend with their devices. She found that the two students woke up several times during the night to text. One student even slept with his phone beneath his pillow. It’s common for teens’ sleep to be interrupted by text messages. Sometimes teens even send texts filled with nonsense. Brian claims that many teens have problems when they try to go without mobile phones or technology. In Brian’s study, students had to give up their phones and electronic media for 24 hours. The results showed that people experienced changes in their bodies or emotions that are signs of possible addiction to ICTs. Participants thought they heard their phone ring or vibrate, even when it wasn’t with them. They had strong cravings to reach for their phone to check missed messages or calls. Also, people were fidgeting and unable to be still, in addition
to feeling anxious, worried and lonely- thus, another major problem of ICT is addiction among students, which at the long run may affect their academic performance and achievements.

Also, students use Information and Communication Technology facilities to perpetrate examination malpractices in various forms. This is also known as e-cheating (Ifijeh et al., 2015). E-cheating includes (but not limited to) the use of cell phones, programmable calculators, pagers, personal digital assistants (PDAs), computers, internet and so on to gain unfair advantages. ICTs were originally designed and meant to enhance the education process and not to distort it. The use of technological tools for examination malpractices does not make technology a culprit- it is only a case of good things finding themselves in the hands of bad users, and possible abuse should not be a reason to discredit such technologies and the elastic streams of advantages it has in the education system (Ifijeh et al., 2015). E-cheating has taken examination malpractices to a new dimension in Nigeria. ICT services provide students with smart ways to beat the efforts of examiners and invigilators. The Joint Admissions and Matriculation Board (JAMB), a body saddled with the responsibility of conducting admission examinations into tertiary institutions in Nigeria reported that out of 40,043 candidates caught cheating during the examination in 2007, 1,948 used mobile phones (Sunday, 2014).

In 2008, the number of e-cheats increased to 3,039, while in 2009, about 200 mobile phones were seized during the examination, with evidence of prepared answers sent via short message service (SMS). In 2014, JAMB blacklisted 23 examination centres for massive examination malpractices including e-cheat attempts. Various forms of e-cheating include: coded information stored in handheld devices which are brought into the examination hall; leaked question papers with answers downloaded from dubious websites; use of mobile devices in exchange of answers among candidates and touts (outside the halls) during examinations; copying of notes into ipods which are taking into examination centres; stuffing needed information in cell phones and taking such into the examination hall; taking pictures of notes with phones and using same to gain unfair advantage during examinations; voice recordings of notes for use during examinations; taking a photo of question papers and sending same to someone outside the examination hall, with answers sent back as images or text messages; storage of needed notes and formula in programmable calculators for use during examinations; use of phones calculators in examination
where calculators are not allowed; use of handheld devices to browse for solutions during an examination; among others.

According to Busayo (2008) examination malpractice is an improper and dishonest act associated with examination, with a view to obtaining an unmerited advantage. Also, the Examination Malpractice Act (2012) defines examination malpractice as ‘any act of commission or omission by a person who in anticipation of, before, during or after any examination, fraudulently secure any unfair advantage for himself or any other person in such a manner that contravenes the rules and regulations to the extent of undermining the validity, reliability, authenticity of the examination and ultimately the integrity of the certificate issued. The reasons students engage in examination malpractices are very much elastic. According to Alonge (2003), some of the important reasons are: pressure from parents and the society to get good grades; the value attached to certificates; fluid examination procedures; low intellectual ability; low moral judgment and inappropriate operation of continuous assessment; teachers/lecturers’ inability to impart knowledge; laziness and indolence on the part of students; peer pressure; inadequate preparation; fear of failure; among others.

Examination malpractice which include e-cheating has firm grip upon Nigerian educational system because of the various agents that are involved (Onuka and Durowoju, 2013). These agents are not limited to the students, they also include all educational stakeholders and those in governance. In the view of Oredein (2006), Wilayat (2009), and Onuka and Durowoju (2013), the agents of examination malpractice are parents and guardians, teachers, students, schools' management and their staff, examination officer(s)/supervisors and invigilators, security men, corrupt government officials, traditional institutions, host communities of examination centres, and mercenaries such as students’ friends and family members. Even the annual report of WAEC (2009) attested to the fact that teachers, invigilators, supervisors and even proprietors of schools are major participants of examination malpractices. According to the report, in Nigeria, 47.08% of the 100,428 candidates that were involved in various forms of examination malpractice in the May/June 2008 WASSCE were involved in collusion. This situation was not significantly different in other countries (Onuka and Durowoju, 2013). Taking a keen observation on the mentioned agents, it could be observed that the major stakeholders of the education system are
major agents for examination malpractice including e-cheating. Thus, this shows that if any action needs to be taken, it should commence from these major players and stakeholders. If deterrent actions are taken against students only, it would be to no avail and the vice would continuation to fester.

According to Ifijeh et al. (2015), examination is an important tool for objective assessment and evaluation of what individuals have achieved after a period of training especially with regards to the formal education system. With e-cheating or e-exam malpractices, definitely, the goals of the educational system would be truncated and the efforts of all stakeholders towards development would be lost in the long run thus, resulting in underdevelopment or at best a development that is not sustainable. In addition, according to Ifijeh et al. (2015), the proper conduct of examination is a critical factor in the realization of educational objectives in any society, and failure to properly conduct examinations portends doom for the future of the citizenry of the nation, because when examinations are not properly conducted, the educational objectives may not be achieved.

As a result of the foregoing, when the society and the stakeholders of education system simply believe only in the positive effect of ICT on education without investigating its negative effects, it would lead to wrong judgments and decisions which would negatively affect learners, teachers, education industry and the society at large. This was why Siraj-Blatchford and Siraj-Blatchford. (2003) stated that to ensure that the ICT meets its educational purpose and objectives, it is proper to ensure that students are using it for educational purpose by encouraging effective collaboration of stakeholders for its use; integrating it with other aspects of curriculum; ensuring the student/child is controlled so that one could reduce its negative use to the barest minimum; choosing applications that are transparent; avoiding applications containing violence or stereotyping; being aware of health and safety issues. In addition, parental, teacher and other stakeholders’ involvement should go hand-in-hand with them.

This brings us to the questions posed by Clarke (2006) that at what age/period should a child/student:
- own a mobile phone?
- Use the internet so consumedly to have their own domain name, create and maintain their own web page?
- Start blogging, or MSN type messaging, or start using chat rooms such as Whatsapp, 2go, FB, among others?
- Be allowed to use chat rooms unsupervised?
- Be allowed to take ICTs such as mobile phones, laptops, etc. to schools?
- Do parents and teachers have a right to follow up child’s text messages, emails, or blogs?

To this end, important questions to be answered by and are of interest to this study include:
- Should teachers and parents be involved in the monitoring of students ICT usage, internet usage, social media or networking such Whatsapp, 2go, FB, among others?
- What are students beliefs about and attitudes toward the use of ICTs?
- How do students use ICT for cheating in the examination hall?
- Are students involved in the use of ICT to post or watch sexual images or video streams on the internet or on their phones?
- Does the use of ICT in classrooms really cause distraction to students and in class?
- Are students addicted to ICT use in classroom and out of schools?
- What other negative use of ICT could be found among students?
- What could be the consequences of these to students, education system and the nation at large?

**Previous Studies**

Previous studies have shown that the ICT could have either positive or negative effect on students performance. According to Pappas (2013), watching "sexually explicit media" especially on the Internet, has increased people's exposure to sexual content by 0.3 to 4.0 percent of behavior changes. Also, in a study, Kuznekoff and Titsworth (2013) investigated the impact of mobile phone usage on student learning. They found that students who were not using their mobile phones wrote down 62% more information in their notes, took more detailed notes, were able to recall more detailed information from the lecture, and scored a full letter grade and a half higher on a multiple choice test than those students who were actively using their mobile phones. They added that in modern classrooms, instructors such as teachers are faced with many challenges as they compete for students' attention among a variety of communication stimuli.
such as the ICTs. Rapid growth of ICT types such as mobile computing which include smart phones and tablets presents a double-edged problem and causes distractions to students especially in the classroom. Of major concern to many school administrators, teachers, parents and caregivers is the potential distraction caused by students using their mobile devices to text, play games, check Facebook, tweet, or engage in other activities available to them in a rapidly evolving digital terrain (Kuznekoff and Titsworth, 2013). According to Lenhart (2012), Lenhart, Ling, Campbell, & Purcell (2010) and Wei, Wang, & Klausner (2012), use of mobile phones by students during classes reduces students’ ability to self-regulate and give sustained attention to classroom tasks thus may have negative effect on their performance in the long run, and also may affect the educational system and national development.

Also, studies such as Hoekstra (2009) and Duncan et al. (2012) have affirmed that the use of ICTs such as mobile phones in classrooms by students could cause distractions in classrooms. To this end, Hoekstra (2009) and Duncan et al. (2012) suggested the traditional lecture instruction, and Crossgrove and Curran (2008), Smith, Wood, Adams, Wieman, Knight, Guild and Su (2009) also suggested the active learning strategies which may produce more effective learning in the classroom. However, in modern era of global use of ICT in various sectors and the advantages it has over the traditional teaching and learning, it would be a retrogression against development to introduce the traditional mode of instructing as better option over the use of ICT in any education system.

According to Duncan et al. (2012), the use of mobile phones in classrooms by students led to a drop of students’ performance in their study. Also, Ophir, Nass and Wagner (2009) stated that in most occasions, students think that they can multitask by listening to the lectures in class and at the same time playing with their ICTs. However, students cannot multitask nearly as effectively as they think they can. To this end, it is good to correct these views and opinions of students in order to bring out the negative effect of ICT and its consequences on them. This would assist in remediating the destructive and negative effect or consequences of ICT on students and the Nigeria educational system and national development- This is a major gap this study seeks to fill.
Research Framework

The proposed research framework of this study addresses social consequences of the deployment of ICTs, however this time among students and youths. According to Clarke (2006), the use of new technology in ways never originally envisaged has negative consequences for society. These negative social consequences arise through providing young children with new communications facilities without having a clear understanding of their needs for communication or their ability to deal with such new ICTs or communications channels, or how to encourage the positive usage and to discourage, or prevent usage leading to negative social consequences. Today’s ICTs are about to be replaced and surpassed by a new range of communication technological products and services. The next generation of ICT products and services will extend the power, reach, and universality of interworking and internetworking products. Pervasive and ubiquitous computing products, embedded and wearable communicating devices, and ad hoc networking technologies will bring a paradigm shift greater than that precipitated by the present ICTs such as the mobile phone, and also the complementary use of the internet and the mobile phone (Clarke, 2006). If these major problems and negative consequences, effects, and uses are not dealt with now, they will increase in a geometric progression that would outweigh the benefits of ICTs, thus affecting development in the long run. To this effect, this study investigates the negative use of ICTs and its implication on students, the education system, the community, and the nation. A tentative research framework is presented in Figure I.
Research Methodology

The study took the form of a qualitative research- a phenomenographical analysis to establish a grounded Theory. On a general perspective, phenomenographical analysis focuses on the various ways people approach experiencing a phenomenon, their ideas and the various ways of thinking about the phenomenon, with the aim of presenting hierarchical relationships. The analysis, unlike phenomenological analysis, does not focus directly on experiences of phenomenon. There are various orientations of phenomenographical analysis which may approach other qualitative methods of analysis. The orientations are, for example: discursive, experimental, naturalistic, hermeneutical and phenomenological phenomenography.
The Phenomenographical perspective of this study is based on the fact that it focuses on the various ways stakeholders of the Nigerian secondary school which include secondary school students such as junior and senior secondary school students; and also the teachers, school counselors, school heads, parents, among other have experienced the negative use of ICT among students, their ideas and the various ways of thinking about the use of ICT among students, with the aim of presenting a hierarchical relationships of its effect on the society.

Also, a multi stage sampling technique was deployed and used in this study which involves the convenient sampling at the first stage, random sampling at the second stage, purposive sampling technique at the third stage and the purposive sampling technique was also used at the fourth stage. First, Oyo State was selected conveniently, because researcher finds it easier to reach the respondent at low cost and less time interval, since the study was self funded. Also, two local governments were randomly selected from the thirty three (33) local government areas in Oyo State. These are: Akinyele and Ibadan North local government areas. Also, two public and two private secondary schools were selected purposively; one private and one public from each local government area also for the sake of easy access to respondents. Names of schools were kept anonymous due to the sensitivity of the phenomenon of this study.

The purposive sampling technique was used to select schools and respondents based on choice of convenience of the researcher. The purposive technique was used because in other schools, the researcher may not be able to meet the important personnel slated for interview due to their tight schedule, so the researcher used the schools that were more convenient to reach. Also, ten students: five junior and five senior secondary students; five teachers, two school counselor, three school head- giving a total of twenty respondents were used for this study and were conveniently selected. In addition, informed consents were obtained from respondent before slating them for the research interview, and personal information of the respondents and schools selected were kept anonymous.

Information obtained was recorded and transcribed and used for analysis, and a thematic analysis was done- this involved the arranging of respondents’ responses with regards to the research objectives/questions or themes of the study and presenting the result in that same pattern and manner. The result and findings of this study would be used to establish a theory- thus the grounded theory aspect of the study. It aims at producing theories and conceptual models
through exploring empirical data on the negative use of ICT among students and its implications on the society at large.

**Results and Discussions of Findings**

The findings of this study showed the negative use of ICT by students and its implication to the society. It further showed that besides the use of ICT to enhance students cognitive and academic performance and achievement, it is also being deployed and used by secondary school students for examination malpractices, posting and watching of sexually pervert images and videos (pornography), it causes distraction in classroom. It could lead to ICT addiction which would have grave negative consequences on the educational sector, and on personal and national development.

**Should teachers and parents be involved in the monitoring of students ICT usage of internet, social media or networking sites such Whatsapp, 2go, FB, among others?**

With regard to this question, a respondent who was a teacher in one of the selected schools stated that:

“It is good for the government and policy makers and also school heads to find ways to curtail negative use of ICT, especially the mobile phones.”

Another teacher stated that:

“Well, the original slogan for ICT among teens is ‘wonders shall never end’. ..., there was a time when a case was brought to our notice in this school that some students were trying to record the nudity of their teacher as she sat down in class. It is a pity that instead of students coming to school for learning so as to achieve the principal objectives of education, they come to do all sorts of nonsense. Well, we just keep doing our best as teachers for them, and ...”

Also, one respondent who was a teacher stated that:

“I think there are lots of things to do to be able to enjoy the benefits of ICTs in Nigeria. Of a truth, these ICTs have so much affected our youths.”

Also, one of the respondents stated that:

“In most cases, my parents would have to ask me and my siblings to drop the phone and read our books especially in periods of examinations and I think that has been helpful to us. Even though most times we nag at this when we are commanded to because deeply rooted in us we wanted to
continue to play with our phones. And even sometimes our parents have to seize the phones.”

From the responses, it would be important to draw attention to the fact that there is need to curtail the negative use of ICT among secondary school students. A major key to this is to involve the parents/caregivers, teachers, school administrators, school heads to monitor students use of ICT. This could extend beyond the boundary of the classroom. The findings of this study supported the work of Ishii (2011) that the negative effect and harm of ICT to children or rather school students has made it impossible for nations to achieve educational goals and objectives and this has made many governments to find ways of shielding youths and students from harmful information obtained through ICT and also cyber bullying. Also, the findings of this study supported why Siraj-Blatchford and Siraj-Blatchford.(2003) noted that to ensure that the ICT meets its educational purpose and objectives, it is important to ensure that students are using it for educational purpose; encourage collaboration in enhancing its use; integrate it with other aspects of curriculum; ensure the student/child is controlled so that one could relegate its negative use to the barest minimum; choose applications that are transparent; avoid applications containing violence or stereotyping; and be aware of health and safety issues, parental, teacher and other stakeholders’ involvement to relegate the negative use and effect of ICT on students. Thus, it can be affirmed that teachers and parents should be involved in the monitoring of students ICT usage, internet usage, social media or networking sites usage such Whatsapp, 2go, FB, among others to ensure that the benefits of ICT is being achieved successfully.

What are students’ beliefs and attitudes to the use of ICTs?
Students’ beliefs and attitudes somehow seem different in the use of ICTs. To this end, one student, in arguing that ICT use is not synonymous to negativity stated that:

“I think it depends on personality differences. For example, I once heard of a guy who said that ICT was behind the secret of his success in life. He downloaded all textbooks he needed for his academics on his gadgets and any opportunity he had, he reads them. But as for me, I really cannot do with ICT in academics because I will definitely be distracted by it. One thing or another would eventually come to my mind to do on the system which I will just have to attend to and this may last for hours, thus distracting me from the main purpose- reading. I may from there decide to visit my SNS page, check messages, Whatsapp, among others.”
Another respondent (a student) stated that:

“..., to me, I may be sitting on the fence because I just think it depends on how one can handle it and control him or herself in the use of ICT. If you are an extremist in the use of ICT, definitely one doesn’t need to be told that it could affect one but it is very unfortunate to state that students may find it difficult to control the extremism in the use of ICT because it is in vogue. We want to reach everywhere with ICT.”

Students’ belief and attitude toward ICT is mix. On the one hand, it is believed to be a major source of enhancement of academic achievement and on the other hand, could be a distraction from students’ academic activities when deployed and used in the extreme. A major positive effect of ICT is on student academic achievement and is known to be an enhancer for academic activities. This buttressed the work of Olson et al. (2011) that it has been noted that ICT has played a central role in young people’s rise to prominence on a global scale and has helped them mobilize and collaborate. It has also given them a voice where they had none before. Also, the findings of this study support the work of Ifijeh et al. (2015) that for most students, ICT such as the mobile phones and other handheld devices such as digital readers and the internet has greatly enhanced interpersonal communication and education. Findings from this study revealed that the effect of the use of ICT have been found to be mixed and this correlates with findings such as Anderson et al. (2003); Caron & Gely (2004); Wurst et al. (2008) and Samson (2010) that students use of ICT affects their academic performance positively, and other findings such as Grace-Martin and Gay (2001); Barak et al. (2006); Maxwell (2007); Fried (2008); Mazzie, (2008); and Fried (2008) concluding that ICT use can affect students negatively through waqys such as pornography, addiction and distraction in the class. Thus, one can affirm that although the mix belief of the effect of ICT cannot be denied however, a major fact is that ICTs are been used negatively among students.

**How do students use ICT to cheat during examination?**

One respondent who was a student, when asked how ICT is being used by student to cheat in examination stated that:

“..., in some cases, in WAEC and NECO examinations, the results or answers to the questions are posted on Whatsapp and when you are part of the group (you need to belong to this group of course to be able to
access information pasted on the group page), you receive whatever message is posted. From this you can access the answers to questions for the examinations (WAEC, NECO or JAMB examinations).

In other instances, one can post the question as a query on a group within the SNS and your friends, colleagues, and other acquaintance will now send the answers to these questions by posting it on this group page from which you and other colleagues in need of such answers can access it.

Also, students use their mobile phones to access the internet to check answers to questions especially when related to drawing and diagrams or function of some organs or systems in sciences.

In other cases, they may also send SMS to a particular person which of course should be their friend and such individual would reply to their message which would now be spread among students in the exam hall.

Most often, students use all of these from the above and the one which provides quick response and answer is eventually used owing to their time constrain.”

Also, another respondent who was a teacher added that:

“So many times students have been caught cheating with mobile phones. They deploy so many strategies that they are even smarter than their invigilator. It is as if they do it in group: one does it while others watch for the fellow or distract the invigilators/teachers during exams or class tests. Most often, they get higher scores but at the end they are unable to defend this. That is why you see in most cases, with good scores in WAEC and JAMB exams, they are dropped at the post UTME screening exercises … .

Recently, in JAMB exams, you do not go into the examination hall with your mobile phones. Although, this has raised the issue of theft because students place their mobile phones in their bags outside the examination halls and before they finish, another person searches their bags and steals their phones. Nevertheless, it is a major strategy to curtail the use of ICT in examination malpractice in Nigeria.

Also, many do free night calls, chats, etc. and they come to the class to sleep. This leads to loss of concentration in their academics especially when the class is going on. Many can even be communicating and chatting on social networking sites during classes. This is pathetic and is affecting the students and the whole education system even at the national level. Recently, the Oyo state governor called on the attention of Oyo state education teachers to the poor performance of students. This is a pathetic situation and can affect national development if not tackled.”
Another respondent who was also a teacher stated that:

“..., also, I heard that despite using the CBT method in various examinations such as Jamb exams, students still cheat. They post the questions and answers to them on the internet and on SNSs with the raw answer- this time not the A,B,C,D form options but the raw answers so that when the alphabetical order is changed, they can trace the answer to choose which of the option is correct.”

The prevalence of the use of ICT by students to cheat in examination seems high in Oyo State, Nigeria. The findings of this study supported the work of Grace-Martin and Gay (2001); Barak et al. (2006); Maxwell (2007); Fried (2008); Mazzie, (2008); and Fried (2008) that ICT use can and do affect students negatively, such as when they use it to perpetrate examination malpractices. The result of this study also supported the work of Alaba (2011) that some of the problems associated with the negative use of ICT among students are examination malpractices and mobile bullying. The findings of this study supported the work of Ifijeh et al. (2015) that students use information and communication technology facilities to perpetrate examination malpractices in various forms- also known as e-cheating. One can affirm that in Oyo State, Nigeria, students use ICT such as mobile phone, internet, SNSs, emailing, SMS, etc to cheat in examinations.

Are students involved in the use of ICT to post or watch sex images or video streams on the internet or on their phones?

With respect to this, a respondent who was a teacher stated that:

“On one occasion, a group of students were caught watching pornography on one of their mobile phone. Unfortunately for them, one teacher eventually sneaked into the place where they gathered together. But immediately, they switched off the mobile phone. The teacher was confused about what made them to gather like that. When he probed them further, he could suspect that something was going on but they showed him that the mobile phone which he suspected was been used for the suspected act was switched off. But he decided to take the phone and came to the staffroom and switched on his laptop and connects the mobile phone to it. He eventually discovered they were watching pornography but switched it off when they saw him. This shows that they were actually watching these pornography but they were very smart to switch off the mobile phone when the teacher came in. How they got these, we do not know but the numbers of pornography on
that mobile phone were so many that we have to ask the student to bring their parents to school and the issue was reported to them.”

Another respondent stated that:

They (students) may also be using it (ICT) to send pictures and movies which in most cases are nude and pornography.

This implies that students use ICTs to watch pornographies either on the internet or downloaded to watch it offline. The findings of this study bolstered the work of Grace-Martin and Gay (2001); Barak et al. (2006); Maxwell (2007); Fried (2008); Mazzie, (2008); and Fried (2008) that students use ICT for negative purposes such as watching pornography.

**Does the use of ICT in classrooms really cause distraction to students and in class?**

Various responses from this study show the distractive effect of ICT to students both in class and outside the classroom. To this end, one respondent who is a student stated that:

“..., like me, whenever I handle my phone, I use it until the battery runs down. I play game, use Whatsapp, FB, etc. I will very much be distracted when reading and I have my mobile phone with me. I may also decide to listen to radio alongside and download games. Nowadays, among teens and adolescents, games are even taking more ground than pornography in the use of ICT. Among my friends, there are games we play on the internet that you cannot download so you need internet data to play such games. Since we are limited in acquiring data bundle from telecommunication except when we have money or are given free data, students seize the opportunity of using the school Wifi because it is always on. The negative aspect of this is that this can happen during class and while the class is going on students would be busy downloading such games or playing them on their phones and I think this goes a long way in affecting these students because in the end, you see them borrowing notes, asking for explanation of certain things from their fellow students in class and so on. They also use the opportunity to download and watch movies and watch even during the class.”

Another respondent who was a counselor in a selected school stated that:

“On most occasions, students can be sending SMSs or messages to one another and use it to communicate in the class during lecture period. The teachers may not know that such communication is going on, while in some instances it may come to the knowledge of the teachers which may
make the teacher seize the mobile phones from students. We still have phones seized this way with us in the school office till date. But in most cases, after being punished, the phones are given back to the student.

Also students may be using it to listen to music and watch movies. They also use it to transfer music and movies to one another even while in the classroom when lecture is going on. They may also be using it to send pictures which in most cases might be nude pictures and pornography.

In some cases, students use school Wifi to download movies, pictures and games even during lectures and they eventually use this avenue to send these files to one another in the classrooms. They have this belief that such opportunity of the school turning its Wifi on may not be long perhaps due to electricity and resource constraint of the school so anytime they notice the school Wifi on, they maximize it to download all sorts of things even if classes are going on."

Another respondent who was a student stated that:

"On many occasions when students use ICTs to download games, pornography, etc. in class, other students may want to see what is going on, how successful is such download process, how many minutes remain for the download to complete, etc. This is a great distraction in the class."

Also, another respondent who was a teacher added:

"Students use these ICTs to chat in class while the class is going on. At many times, the phones they possess are even much more sophisticated than those of their teachers and lecturers. They are so good at handling and using them. They can use some codes to get extra internet data plans from telecommunication companies. I do not know how they do that, but they have codes they dial and immediately they do so, they get free data plan. The worst thing is that they don’t even use it for their academic activities rather they use it for all sorts of useless things even in the class. They are involved in group chat where same sex or mix gender may gathered together, using one of their mobile phones and others in such group would want to see the responses to such chat, etc. It has not been easy to curtail these negative uses of ICTs in our schools.

On most occasions, you see them put ear piece in their ears preventing them from hearing when you call them. It may be that at that point a teacher wants to pass something important across to such students, but it becomes impossible to do that with the ear piece in their ears."
The result showed that students’ use of ICTs in classrooms has been a major problem to classroom management as it causes distraction among students. This could be an impediment to successful class management and the teaching and learning processes. The findings of this study buttressed the work of Srivastava (2005) that the introduction of mobile phones in schools has brought about concerns about discipline in the classroom. Also, this was why Ling (2000) affirmed that ICT usage in schools by students is a great problem and this is against the goals and objectives of schools. This also reinforced the work of Duncan et al. (2012) that ICT devices such as mobile phones, laptops, internets, among others may be more likely to distract students in a classroom setting, thus, hampering the objectives and purposes of education. The findings of this study also shore up the work of Toomey (2013) that digital technology can have a detrimental effect on students’ focus and learning behaviours and hence can make ICT a risk factor in the learning environment. Students can engage in internal thoughts like wondering if anyone commented on their Facebook post, or wondering if their friends responded to the text message they sent few minutes ago.

Are students addicted to ICT use in classroom and out of schools?
The following responses from the study show the level of addiction of students to ICT. To this end, one respondent who was a student stated that:

“Well, for me, I just can’t do without my phone, the only way I will not use my phone to listen to music or watch movies or SNS, is when the battery has run down. I am so addicted to the point that even when I want to read my books, I hold it by my hands and use it to the end. I only have full concentration when the battery is down.”

Another respondent stated that:

“To me, I just like using it to chat. Like there was a day when I chatted on Whatsapp so much that my hands got practically stuck to my mobile phone. You know there are many messages and responses and one cannot just do without attending to them. It’s a global thing and I believe it is a normal phenomenon. Because even in such group such as on Whatsapp, members are many and every one would be chatting at the same time. One may log out now when his attention is needed maybe by his parents or
This reveals that students are most often addicted to the use of ICT. The findings of this study supported the work of Brian (2013) that use of ICT can lead to addiction that may affect users psychological and social habits as they fidget and are unable to be still, in addition to feeling anxious, worried and lonely without their phones. Thus, another major problem is ICT addiction among students, which in the long run may affect their academic performance and achievements.

**What other negative use of ICT could be found among students?**

With respect to this question, one respondent stated that:

“..., for example, I was communicating with a group of students, they emphasized that they cannot read and concentrate unless they put on their ear piece and listen to music. I was surprised. How on earth will you concentrate in such a reading environment? Are they really reading, scanning or cramming? It is hard for me to handle. In those days, we used to read in silent places but nowadays, there seems to be noise everywhere: in the class, at home, in the street, on the road, everywhere! And according to science, noise obstructs communication. So how on earth this position is justified by the students is a riddle to me and to the world.”

From the response above, other negative uses of ICT include playing music or watching movies while in the class or while reading (this time personal reading) or listening to music while walking on the road which can lead to accidents or other problems. The findings of this study added to the work of Shimbun (2008) that in every year, about 1,000 children get involved in rape and other crimes which are a product of online social networking or dating sites. Also, violence and obscene images are only a couple of clicks away and these can affect students negatively.

**What are the consequences of the negative use of ICT to students, education system and the nation at large?**

One respondent tried to conceptualize the consequences of the negative use of ICT to students and stated that:
“... if one actually considers the negative impacts of ICT on the students in recent times, you will cry for them.”

Also, another respondent who was a teacher added:

“..., as a teacher, there are so many things happening among these children (students) that makes one think about the future generation because in our time, things were not like this. Sometimes, you see nude pictures and videos on their phones and you marvel. They know all sorts of sites, all sorts of music but they are dullards when it comes to their academics. Many of them find it difficult to remember what they were taught in the last class but they have in their head the latest music, pin codes to activate some activities on their phones, etc. If they can just deploy those abilities in their books, it would be better- but the ICTs nowadays would not allow them. Some even have and use costlier phones with high level of apps and sophisticated operational ability, than the ones their teacher can afford.”

Another respondent stated that:

“..., the consequences of the negative uses of ICT are many. It affects students’ academic performance in the long run; it affects and changes their behavior because they want to do what they watched and saw on the internet, or rather they want to perform the pornography they have watched. They may also end up becoming Yahoo-boyz. They may contribute to juvenile delinquency and become nuisance in the society. With respect to the nation, they may become a bad ambassador to the nation, and other countries may eventually see the nation as bad people, etc. ....”

The findings of this study showed that consequential effect of the negative use of ICT among students is alarming. These consequences of the negative uses of ICT could be a major reason why Olson et al. (2011) stated that secondary schools in Africa such as in Nigeria are underperforming. This supported the work of Alaba (2011) that there is issue of poor ICT such as mobile phone use with respect to phone etiquette which has constituted a social menace in developing countries such as Nigeria. Also, the findings of this study supported the work of Ishii (2011) that ICT does more harm to children or rather school students than it does in enhancing educational goals and objectives with respect to students owning them. Also the findings of this study sustained the work of Ishii (2011) that individuals including students who use mobile
phones are more involved in juvenile delinquency than those who do not use. This implies that ICT use among students and youths can lead to serious multiple problems in the community, society and the nation. Also, the result of this study buttressed the work of Pappas (2013) who found that watching "sexually explicit media" especially on the Internet has increased people's exposure to sexual contents by 0.3 to 4.0 percent of behavior changes. When related to the negative use and effect of ICT on students, one can affirm that students who watch sexually explicit contents on internet would have an approximately 4% academic drop, 4% reduction in concentration, 4% career setback or retardation, and would thus have 4% drop in development which include personal development and his contribution to the national development would drop by 4%. This could hold a very strong base when one removes 4% from the national GDP. Also, the cumulative effect of the negative effect of ICT on students would have a grave consequence on the nation’s GDP. This would be pathetic in the long run as it could lead to underdevelopment or unsustainable development of the nation.

In summary, the end result of the phenomenographical study presents a hierarchical relationships of the effect and link between the negative effects of ICT by students and how these affect the society at large as follows:
In a hierarchical order, the negative uses and effects of ICT by students can affect and reduce:

- Their concentration on academic work
- Students learning, cognitive and assimilation,
- Students academic performance and achievement,
- The nation’s education system in achieving its goals and objectives, and
- National development through high rate of poverty and unemployment.

Figure II: A Paradoxical Model of the Negative uses and effects of ICT by students and its Implications
Source: The Author
The negative uses of ICT can affect students’ academic performance; affects and changes their behavior because they want to act what they watch and see on the internet, or rather they want to perform the pornography they have watched; may end up becoming Yahoo-boyz (a term used for people who are involved in various internet crime in Nigeria); may contribute to increase juvenile delinquency and become nuisance to the society; may become a bad ambassador to the nation, and other countries may eventually see the nation as bad one, among others. The link of the negative uses of ICTs to national development is hinged on the fact that when students performance and achievement are affected negatively, it hinders their career development and thus such students may eventually drop out of school, or graduate without becoming useful to the society, or are unable to have access to vital resources that could enhance their career development due to the fact that they have limited academic background or qualification for good jobs. This may lead to high rate of poverty and unemployment which are two great monsters of national development, especially in developing countries such as Nigeria.

Conclusion and Recommendation

It is important that the stakeholders of the Nigeria education system such as teachers, parents, governments and policy makers monitor and provide policies that would help the mitigation of the negative uses of ICT among students in Nigeria. This would help them to enjoy the benefit that ICT brings such as personal, society and national development.

The need for stakeholders involvement in monitoring and providing policies to reduce the negative uses of ICT among students is justified by the results of this study: students have mixed attitudes in the use of ICT as they believe that it can enhance their academic performance and at the same time, ICT is being deployed and used negatively. The negative uses of ICT as presented by this study include: examination malpractices, watching pornography on the internet, downloading games and music while in class thus causing distraction during classes, among others. This has made many students to miss out of class lectures and has led them to asking their colleagues to explain past lectures to them and also borrowing notes to write from their colleagues. This could have grave consequences on students academic achievement and cognitive pattern, and it could make it impossible for the educational sector to achieve its
objectives thus affecting personal and national development in the long run. This would also lead to a high level of poverty in the long run.

To this end, the study recommends that:

- It is important that policy to address the negative use of ICT among users such as student is established in Nigeria ensuring a high level of compliance to the policy by educational bodies, policy makers, government at all levels in the nation. This could also include stipulating the non use of ICT in school or classrooms, except an important occasions eg communication between students and parents on urgent matters.

- Also, teachers should be involved in the monitoring of the use of ICT among students in schools. This could involve the restriction of ICT use in classrooms, examination halls, among others, with a great penalty attached to the breaking or such law and orders.

- School Wifi in secondary schools should not be turned on and if they are turned on, teachers should be given pass words that would restrict students access to such school internet services.

- Parents should endeavour to/and should be advised to monitor the ICT usage style and pattern of their wards and children, to make sure that wrong and negative uses of ICT are mitigated.

- Also, various trainings and workshopS should be conducted for teachers to train them on how they can use ICT to make class interesting and give students class works and assignments which would make students busy. This would at least curtail the negative uses of ICT among students, enhancing the benefits that ICT could bring to development-this time personal, educational and national development. This could be done by the school or government, or even any non government organization with interest towards enhancing the positive use of ICT in schools, especially in developing countries.

- Also, it is expedient to train teachers on how they can control and manage students in classroom in this ICT generation to ensure effective performance.
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