

Chapter 14

Effects of Digital Technologies on Academic Performance of Nigerian Adolescents

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ABSTRACT

The rapid development of technology has penetrated almost all sectors of the society and makes any form of resistance almost impossible. The incorporation of digital technology into adolescent's daily life, as well as its impact on their cognitive, emotional, and social development, is growing by the day. They can use technology to play, explore, and learn in a variety of ways. This is because their brains are so adaptable, these learning opportunities represent a vital growth stage throughout this time period, which helps and encourages them to improve their communication skills and knowledge. No one will deny the numerous benefits that accrue from digital technology usage such as the internet and social network, which is an instant hit site that launches individuals into the world beyond imagination. A growing number of adolescents believe that happiness is linked to direct and indirect interactions with digital environments and technology that facilitate and mediate communication. This study investigated the effects of digital technology on adolescents in Nigeria.

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INTRODUCTION

Technology has become part of man as it has evolved from the mastery of fire by man to super computers and electronics of this generation. People, regardless of their region, have found technology to be useful. The rapid development of technology has penetrated almost all sectors of the society and makes any resistance almost impossible. No one can deny the various advantages that a social network like Facebook provides, which is an immediate hit site that immerses users in a world beyond their wildest dreams. It assists in resolving lost contacts as long as the name survives in the internet world, telling people about others, and providing updates on significant life events. Technology is also used for the purpose of educational interactions, educating and enlightening one another on academics social and moral issues (Eberendu, 2015).

According to Queen Rania Foundation, studies have consistently revealed that digital technology is associated with moderate learning gains: on average, an additional four months' progress. However, there is considerable variation in impact. Technology approaches are used to supplement other teaching, rather than replace more traditional approaches. It is unlikely that particular technologies bring about changes in learning directly, but some have the potential to enable changes in teaching and learning interactions. For example, they can support teachers to provide more effective feedback or use more helpful representations, or they can motivate students to practise more.

Adolescents today are growing up in an increasingly digital world, with technology and computing becoming an inextricable aspect of their personal life and the society at large. Adolescents with digital access, unlike earlier generations, live both online and offline lives, and utilize digital technology not only to explore the world around them but also to discover their positions in it. Adolescents' key gateways to digital worlds are devices that allows them access to platforms and services powered by data analytics, machine learning, and other forms of artificial intelligence (AI). A growing number of adolescents believe that happiness is linked to direct and indirect interactions with digital environments and technology that facilitate and mediate communication. It is worth noting that digital experiences and habits develop during childhood and adolescence can have a beneficial or bad impact on the trail to maturity (Holly et al., 2022).

Digital technology is widely accepted in Nigeria. Uzuegbunam (2019) asserts that Nigeria is one of the African countries with the highest and consistently growing internet penetration. He further noted that a growing number of Nigerian adolescents have access to digital technologies, particularly mobile phones and the internet. Many of them have access to either a shared smartphone, personal smartphones, or just feature phones bought by their parents, guardians, or older relatives.

It is on record that the electronic digital computer made its first appearance in Nigeria in 1963, The Information and Communication Technology (ICT) in Schools was launched in December, 2004 and revised in 2010 to provide opportunities for secondary school students to mainly build their capacity on ICT skills and make them learn through computer aided learning process in connection with the analysis of the 1962/1963 national census data. Smartphone adoption in Nigeria is predicated upon the advent of mobile telecommunication in Nigeria in 2011 as this development allowed for the exposure to mobile phones and internet penetration in Nigeria.

Digital technology has evoked a seismic shift in the ways children learn, play and communicate in Nigeria. New technologies have permeated and transformed life in the 21st century. Children of this generation have been exposed with digital technologies and are the most regular users of new online and digital services (OECD, 2016). In our society today, almost nine out of ten adolescents use diverse

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digital devices. They utilize it for a variety of things such as business, social networking, research, and assignments. But the question still remains, how many of these adolescents make effective and efficient use of these digital devices? Against this backdrop, the study evaluates the effects of digital technologies on the academic performance of adolescents in Jos South Local Government Area of Plateau State.

OBJECTIVES OF THE STUDY

The broad objective of the study is to assess the effects of digital technologies on the academic performance of adolescents in Jos South Local Government Area of Plateau State. Specifically, however, the study aims to:

1. Evaluate the effects of digital technologies on the academic performance of adolescents
2. Determine the level of adolescent's usage of digital technologies

CONCEPTUAL CLARIFICATIONS

Digital Technology

The concept of digital technology was invented to help man in achieving certain goals and objectives. In line with the Nigerian Communication Commission (NCC), digital technology refers to electronic tools, systems, processes, equipment, and resources that generate, store, or analyse data so as to fulfil the user-defined goals. Computers, television, radio, social media, online gaming, multimedia, mobile phones, are all well-known examples of digital technology.

Olajide, Afolabi and Ajayi (2019) argued that digital technology is a branch of scientific or engineering knowledge that deals with the practical use of digital or computerized devices, methods, systems. Digital technology also refers to electronic tools, systems, devices and resources which generate, store or process data. Well known examples include social media, online games, multimedia and mobile phones (<https://www.education.vic.gov.au/school/teachers/teachingresources/digital/Pages>). Digital technology is also concerned with the use of computer and technology assisted strategies to support learning within schools. Approaches in this area vary widely, but generally involve: technology for students, where learners use programmes or applications designed for problem solving or open-ended learning; or technology for teachers, such as interactive whiteboards or learning platforms.

Adolescents

Adolescent is often connected to puberty and the cycle of physiological changes that advances to reproductive maturity in young adults. Adolescence is a transitional phase of growth and development between childhood and adulthood. It is during this time that knowledge and skills are developed, emotions are learned or controlled, and qualities and abilities are acquired in order to enjoy the adolescent years and adult roles. Quoting Britannica (2019), Olajide, Afolabi and Ajayi (2019) argued that adolescence is a transitional phase of growth and development between childhood and adulthood. The implication is that children between this phase of growth and development are referred to as adolescents. The term "adoles-

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cence” is a sociological construct, like other developmental phases in human growth and development, but unlike others, it breeds a lot of ambiguity.

Adolescence can also be described as the period of life between childhood and adulthood which corresponds roughly to the teenage years (thirteen to eighteen years).

The World Health Organization (WHO) describes adolescence as the stage between childhood and adulthood, from ages 10 to 19. It is said to be a unique stage of human development and an important time for laying the foundations of good health. Adolescents usually experience rapid physical, cognitive and psychosocial growth. This affects how they feel, think, make decisions, and interact with the world around them. During this phase, adolescents establish patterns of behavior – for instance, related to diet, physical activity, substance use, and sexual activity – that can protect their health and the health of others around them, or put their health at risk now and in the future. Adolescents are characterized by rebellion, commencement of search for identity, concern about ‘looking good, increased peer group alliance, increased sex drive, increased aggressive drive and unpredictable attitudes and opinions (Ola-jide, Afolabi and Ajayi, 2019).

THEORETICAL FRAMEWORK

The study is anchored on the Uses and Gratification theory. The theory was propounded by Katz and Blumer (1974) to explain why people use certain types of media, what needs do they have to use them, and what gratifications do they get from using them. The Uses and Gratifications Theory (UGT) proposes that people choose to consume certain kinds of media because they expect to obtain specific gratifications as a result of those selections. Beneficiaries make planned, purposeful choices about the media messages they open themselves which has a positive or negative impact in their lives.

Shraddha (2018) argues that human needs and gratification can be divided into five broad categories such as:

1. **Affective needs:** Affective needs refer to the emotional satisfaction and pleasure people derive from viewing soap operas, television series, and movies. People identify with the characters and empathize with the emotions they display. When they cry, the audience cries with them, and when they laugh, the audience laughs with them.
2. **Cognitive needs:** People turn to the media for knowledge and to meet their mental and intellectual demands. People mostly watch news to satisfy this urge. Quiz shows, educational shows, children’s arts and crafts shows, documentaries, how-to films (DIYs), and so on are all examples. The Internet is also being utilized to obtain information in order to meet this demand.
3. **Needs for social integration:** Each person’s need to socialize with others, such as family and friends, is a social integrative need. People utilize social networking sites such as Facebook, Myspace, and Twitter to mingle and interact. People also use media to improve their social relationships by providing them with subjects to discuss with their friends and family. People can also benefit from the media since it provides them with subjects and ideas to discuss with their friends and family, thereby improving their social interaction skills.
4. **Integrative requirements of a person:** The demands for self-esteem and respect are known as personal integrative needs. People require reassurance in order to build their position, trustworthiness, strength, authority, and other attributes, which is accomplished through the use of media. They use

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the media to watch advertisements and learn about current trends in order to adapt their lifestyle and blend in with others.

5. Tension free needs: When people are stressed or bored, they listen to music or watch television to reduce their stress. People may have numerous tensions in their lives that they do not want to face, so they turn to the media for relief.

The uses and gratification theory is relevant to this study because it explains the academic benefits adolescents seek to gain from the use of digital technology and its impact to their academic and social life. It offers explanations to suggest that students use digital technologies for varying reasons. In other words, users select media based on how well each one helps them meet specific needs or goals.

REVIEW OF RELATED LITERATURE

Impact of Digital Technologies on Education

One of the undeniable advantages of the advent and use of digital devices is that it has tremendously aided learning and made education more interesting. This is obvious in the use of digital learning platform which is defined as a new kind of classroom learning infrastructure enabled by advances in theory, research, and one-to-one computing initiatives. This system is designed to operate in a teacher-led classroom as the major carrier of the curriculum content and to function as the primary instructional environment (Dede and Richards 2012).

Olajide, Afolabi and Ajayi (2019) opined that learning and knowledge acquisition has been enhanced through the societal embracement of digital device. This is more so that self-learning via the use of digital devices has become the order of the day for quick, easy and vast knowledge acquisition. Sofela (2012), in his work titled 'The Effect of social media on Students,' highlighted the impact of digital technology on students, stressing on the positive impact in the student's academic performance, although it comes with some negative effects. As such, there is need for the students to create a balance between social media and their academics in order to prevent setbacks.

Higgins et al. (2012) provide a summary of research findings from studies with experimental and quasi-experimental designs, which have been combined in meta-analyses to assess the impact of digital learning in schools. Their search identified 48 studies which synthesised empirical research of the impact of digital tools and resources on the attainment of school age learners (5–18-year-olds). They found a consistent but small positive association between digital learning and educational outcomes. Harris (2009) identified statistically significant findings, positively associating higher levels of ICT use with school achievement at each Key Stage in England, and in English, maths, science, foreign languages and design technology. Meyer (2005) identified a link between high levels of ICT use and improved school performance. They found that the rate of improvement in tests in English at the end of primary education was faster in ICT Test Bed education authorities in England than in equivalent comparator areas.

Olajide, Afolabi and Ajayi (2020) conducted a survey of opinions of a wide spectrum of the society in what digital technology has brought to the nation on the effects of technology on the nation, especially the attendant effects on the adolescents. The research design adopted for the study was a descriptive survey. The population of this study comprised five (5) secondary schools from Ondo West Local Government. The study targeted adolescents from these schools. These five secondary schools were selected

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to represent the secondary schools in Ondo State. The findings of the study showed that, adolescents' addiction and exposure to digital technology can have a negative effect on their academic performances.

Digital Platforms Used Among Adolescents

The following are common digital platforms used among adolescents:

- **Smart phones and mobile phones:** Smart phones have proven to be extremely valuable to people in recent years; having one smart phone device is seen as a major requirement for adolescents. The first and most vital function of those devices is to enable individuals speak with others. Whether they are close or far away, adolescents can connect with one another through verbal conversations as well as written texts and messages. They use these devices to search for information as well as for entertainment and amusement and they use the phones as cameras to take pictures of individuals. These devices are also used for paying of bills, purchasing groceries and other items. The phones also used to take pictures which individuals are able to transfer easily from one place to another by following the maps on their phones (Capaldo, Flanagan, and Littrell 2008).
- **Digital Camera:** The primary purpose of a camera is for taking pictures of locations, objects, articles, things, and individuals. In educational institutions the main purpose of digital camera is to take pictures of individuals as well as things. It is additionally considered as efficient variety of digital technology. Individuals take pictures of field trips, places, activities, experiments, meetings, presentations, seminars, conferences etc. Pictures enable individuals to get meaningful and important strategies for learning and communicating. (Ten Technologies which would change Our Lives, 2015)
- **Social Media:** In recent years, social networking platforms such as Facebook, WhatsApp Twitter, YouTube and Instagram have gained popularity. They use a wide range of digital technologies to allow users to communicate via text, photographs, and video, as well as form social groups. Facebook, as one of the virtual social networking sites created by Mark Zuckerberg and friends in 2004, has allowed people to stay in touch with one another, share information more easily and increase business marketing opportunities. (Mohd Azul et al. 2019). Facebook is the most popular social media among adolescents and society (Boyd and Ellison, 2008). A study has proven that adolescents nowadays are more comfortable to interact through the Facebook than face to face (Robin, B., 2008). This is because the use of Facebook allows a person to interact with anyone around the world without being limited by time and geographical distance. Through the Facebook social site, all information related to current issues, education and technology can be accessed quickly and easily. Facebook has become a well-known communication channel for sharing information and communicating fast. It is not surprising, then, that the number of Facebook users has risen, particularly among youngsters.
- **WhatsApp** is another popular social media used among adolescent nowadays. It is derived from the English word "what's up" "When compared to other social media platforms for connecting with family and friends, WhatsApp offers simplicity and privacy (Jamiah et al. 2016). This program allows a user to communicate or tell a narrative as if there is a genuine presence among the individuals that interact with one another.
- **Instagram** was established as a social networking program in October 2010. Adolescents love to upload and share personal photographs and videos; Instagram is a picture and video sharing app

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that allows users to save and share their photographs and videos digitally. Instagram is a photo-sharing program that allows users to share photographs, alter them with the 20 filters available, and then publish them to the Instagram website to be shared with other Instagram users.

- **YouTube** is the next most popular social media application among teenagers. YouTube is a video-sharing website where users can publish, download, watch, comment on, and share video clips, including video blogs. YouTube is a video-based social media platform that disseminates information, entertainment, and news.

Students' Exposure/ Addictiveness to Digital Technologies

Monaha and Schumacher (2000) argued that social media addiction is the excessive use of the internet and the failure to control this usage which seriously harms a person's life. In recent years, it has been observed that students have unrestricted access to digital tools. (Peter & Valkenburg, 2009). Students use computers to send and receive information from all over the world. Even when they do not have personal phones, they still use that of their friends, older siblings at home or even that of their parents. Thanks to the development and distribution of similarly advanced cellular phones. Some schools are so well-equipped that internet connections are provided both in the classroom and in the library. Teenagers have become much more accustomed to this lifestyle in recent years than previous generations, as it is all they know (Lewis, 2008). Teenagers increasingly rely on digital technologies for the majority of their daily activities, as compared to previous generations who relied on television and newspapers.

Peer Pressure

Peer influence can be positive or negative. Coping well with peer influence is about getting the right balance between being yourself and fitting in with your group. Hartney (2022) argued that peer pressure is the process by which members of the same social group influence other members to do things that they may be resistant to, or might not otherwise choose to do. Usually, the term 'peer pressure' is used when people are talking about behaviors that are not considered socially acceptable or desirable, such as experimentation with alcohol or drugs.

For example, they may pressure you into doing something you are uncomfortable with, such as shoplifting, doing drugs or drinking, taking dangerous risks when driving a car, or having sex before you feel ready. Peer Pressure Statistics indicates that 75% of adolescents have tried alcohol due to peer pressure. 28% of those who gave in to peer pressure improved their social status. 70% of teen smokers began as a result of peer pressure. 33% of teen boys feel pressured to have sex.

A recent study on digital technology usage among adolescents revealed that students get to use smartphones or create a social media account even if they do not want to as a way of

"Fitting in" with peers. In fact, it promotes a feeling of self-esteem and wellbeing in students, that if you are not part of it, you become dissatisfied. At such they tend to go any length to get involved in what is in vogue that it has become a fundamental role in students. A student stated research study by Dr. Danah Boyd at Berkeley "If you're not on Myspace, you don't exist" (Boyd, 2007)

Furthermore, because of the disconnect between real life and what people post on social media, they are only exposed to a highly edited 'highlight reel' of other people's lives. This effectively creates the impression that others' lives are more intriguing, perfect, or thrilling than our own. Peer pressure is often seen during the adolescence stage of a teenagers because they often seek comfort among their peers and

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intend to do what their peers does without knowing if it is good or bad for them. Adolescence is a period in the life of an individual that is transitory, when a child reaches the point in changing its childhood to adulthood (Adeniyi and Kolawole, 2015). Adolescence social environment could affect teenagers in their adolescence, because mostly in this period teenagers tend to communicate more by their peers. As children grow and reach adolescence, teenagers become more dependent with their peers than their family especially in making choices and enhancing their moral values in life (Uslu, 2013).

Peer pressure could easily affect the self-esteem of students that an important factor adolescence. Individuals adapt attitudes towards a certain aspect that they encountered or they are aware of (Uslu, 2013). In many events students fantasize and visualize what they dream to become through their colleagues' atmosphere. Eventually, they pursue their choices through the influence of peer pressure (Owoyele and Toyobo, 2008).

Influence of Digital Technologies on Adolescents Academic Performance

Digital technologies have a huge influence on the academic performance of students particularly adolescents. Odojin (2014) argued that teachers use technology to improve the effectiveness of instructions in the class, motivates students, school attendance, students' participation, and is used as both a learning and communication tool. Technology forms the bases for life learning and problem solving. Students can use technologies in their academics, works, and other areas of interests.

Adomi, Okiy and Roteyan (2004) averred that digital technology when used for the purpose of learning enhances students' engagement in learning by searching the web for information to complete individual and group assignments, communicating via the e-mail, allowing them to connect with their peers, and for entertainment. The emergence of digital technology has been a thing of joy, interest and entertaining to members of the communities. These technologies such as the internet and the assessment of database would help secondary school students to communicate with one another, to be able to search for educational information that will help them in their school tasks and be able to know what is happening around the world (Idowu, Idowu and Adawgouno, 2004).

Most teenagers in the secondary schools today, are fully aware of the benefits that can be derived from the use of technology, e.g. the internet. Studies have shown that students constitute the highest users of the internet in African countries, and most of them use it for E-mail communication. These teenagers and young adults usually send e-mail to communicate with their friends or partners. The effect of these affects all aspects of their lives. In

Nigeria, digital technology may be an invaluable instrument for learning and teaching (Ojedokon and Owolabi, 2005). The developed countries of Europe and America have less problems meeting the educational resources needed by their students. Educational sources such as books, CD-ROM, projector, and the internet are in abundance. The emergence of digital technology in developing countries has bridged the digital gap. This enables students and adults to access and participate globally in sharing of information resources. Hence, secondary school students are now enjoying the existence of digital technology in enabling them to use and tap the available educational resources open online in making new friends internationally, distance learning also known as the E-Learning, sport and entertainment. Secondary school students are in the age of digital technology of acquitting themselves with information that could either affect their academic engagement or disengagement behavior. (Adeogun, 2005).

Adolescents in Nigeria today are occupied with social media networks and technological social lives. How will this affect their studies? It is estimated that even those students who do graduate high school,

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one out of three does not possess the knowledge and skills that would lead him or her to the next level, such as college or an advanced trade school (Bowen, 2008). The top academic areas that many school professionals are concerned about are mostly lacking in them. This is because instead of studying they do the contrary; they live in a fast-paced technological world with many different types of communication happening all at the same time. For example, he or she may be on the computer playing games, while also talking on the phone, sending instant messages to a friend, and emailing someone else all at the same time (Williams, 2008). Teens and teenagers have taken cognizance of such websites because they allow them to communicate with their classmates, share information, reinvent their personas, and display their social lives. Adolescents' use of English and grammar is influenced by their use of digital technological tools. Students are accustomed to using abbreviated forms of writing words in chat rooms, they forget and use the same in class. They use words like '4' instead of for, 'U' instead of you, 'D' instead of the, and so on, which could affect their grades.

Many arguments can be made about the possible risks of adolescent usage of digital technology, it is important to point out the benefits of these tools as well to the adolescents. The introduction and use of digital gadgets in the twenty-first century has greatly helped learning and made education more entertaining for teens. High school students use these sites as tools to obtain information.

Many schools have started to use these sites to promote education, keep students up to date with assignments, and offer help to those in need (Boyd, 2007). In general, the Internet and social networking sites can be a positive influence on adolescents. It provides an outlet for teens to express themselves in their own unique ways. In addition, they serve both as a meeting place for teens to interact with other like-minded people and as showplaces applying for college visit profiles of that college's students to view pictures and read blogs of past students to determine whether the college would be a good fit (Boyd & Ellison, 2007). It helps them to develop and sustain helpful relationships. They create their own identities through self-expression, learning and talking. The internet helps adolescents in learning how to type faster and the ability to carry out multiple tasks at a time.

Negative Effects of Digital Technologies on Adolescents

Digital technologies, or social media platforms such as Facebook, Twitter, Snapchat, and Instagram are designed to bring people together; yet they may have the opposite effect in some cases because most of the time they are active on social media platforms for posting and sharing messages, photos, videos and gaming. This behaviour may isolate them from the social life. It also does not allow them to spend enough time with their family members, and because of its nature, social media as a digital technology actively encourages social comparisons, as it is rife with records that may easily be exploited as indicators of obvious social achievement (e.g., friends, likes, shares, fans and so forth).

Odojin (2014) rightly observed that digital technology has disconnected children from their parents, peers and academic activities, making it difficult to acquire social skills, communication skills, emotional skills, and basic problem solving skills which may have adverse effect on the child's moral, attitude, psychological well-being, habits and learning behavior, since so much time and attention could be wasted by the child in engaging in the internet. This may include:

1. Digital technology can be a source of distraction to the child: the child may disengage from learning activities or learn less when he or she uses technologies such as tablets, iPhone, iPad, Androids, Phones, Laptops, watching television screen or using other devices during lectures. The uses of

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these devices distract the child from learning thereby reducing his attention span and academic engagement.

2. Digital technology can disengage the child from social interactions: spending too much time and using modern electronics devices may cause social withdrawal or hinder social skill development through decrease in face-to-face interaction with people at home and in school.
3. Technology can increase examination malpractice in the classroom: technology now makes it easier for students to engage in examination malpractices, coping and pasting other peoples work. It can really create an avenue for students to cheat.
4. Sleep deprivation: Excessive use of electronic devices relates to sleep deprivation, which affects growth and development in children and adolescents. Risky sexual behavior: sexual content and increased availability of the internet and electronic devices may increase risky sexual behavior.
5. Risky sexual behavior: Sexual content and increased availability of the internet and electronic devices may increase risky sexual behavior.
6. Aggressive behavior: Violet content of videos and online games may have adverse effects on the behavior of children, adolescents and adults.
7. Other social and psychological problems: Excessive use of the internet and electronic devices can be associated with a range of social and psychological problems such as psychological well-being, poor self-confidence, and reduced academic performance (Nwosu, 2019).
8. All students may not have access to technological tools: Since some of these devices are expensive, some students may not have the means to afford them. For such students, the teachers can recommend the use of library or work in groups with their peers and share resources.
9. The quality of information they get online may not be reliable: students may not be able to identify reliable educational sources from unreliable sources. Hence, they should be properly guided on how to differentiate between reliable and unreliable source of information.

These measurements are troublesome in and of themselves, since if teenagers do not receive enough 'likes' on a comment or a photo they have shared, or if someone has more likes or friends than them, they may feel inferior.

RESEARCH METHOD

The research method adopted for this study is the survey research design. Survey research design involves the use of questionnaire or interview to generate data for a particular study particularly in social sciences (Okoro, 2003). The survey research design was employed with questionnaire as instrument for data collection on a sample size of 120 respondents randomly selected. This was to ensure that every member of the population had an equal chance of being selected for the study.

Data Presentation, Interpretation and Analysis

This section deals with the analysis of data. The data collection tool administered by the researcher is a set of questionnaires. The data was collected from some communities and a total of 120 students were included in the overall data collected.

Effects of Digital Technologies on Academic Performance of Nigerian Adolescents*Table 1. Demographic Characteristics of Respondents*

| Sex | Frequency | Percentage (%) |
|--------|------------|----------------|
| Male | 65 | 54.2 |
| Female | 55 | 45.8 |
| Total | 120 | 100 |
| Age | Frequency | Percentage (%) |
| 10-12 | 5 | 4.2 |
| 12-14 | 50 | 41.7 |
| 14-16 | 65 | 54.2 |
| | 120 | 100 |

Source: Field Survey, 2022

Data in table 1 shows the demographic data of the respondents: 54.2% of the respondents were males and 45.8% were females. 4.2% of the respondents were between 10-11 years, 41.7% of the respondents were between 12-14 years, 54.2% of the respondents were between the ages of 15-17. This implies that most of the respondents aged 14-16 were male.

Table 2. Effects of digital technology on academic performance of adolescents

| S/N Statement | SA | A | SD | D |
|--|----------|------------|------------|------------|
| 1. Addiction to digital technologies is a problematic issue that affects my academic life | 12 (10%) | 30 (25%) | 40 (33.3%) | 38 (31.7%) |
| 2. Digital technologies distract me from my studies | 12 (10%) | 30 (25%) | 40 (33.3%) | 38 (31.7%) |
| 3. Hours spent on Digital Technologies can never be compared to the number of hours I spend reading | 12 (10%) | 30 (25%) | 40 (33.3%) | 38 (31.7%) |
| 4. There is no improvement in my grades since I engaged in the use of Digital Technologies | 60 (50%) | 40 (33.3%) | 10 (8.3%) | 10 (8.3%) |
| 5. I usually have unlimited access to Digital Technologies and this has not affected my academic performance | 60 (50%) | 40 (33.3%) | 10 (8.3%) | 10 (8.3%) |

Source: Field Survey, 2022

Data in table 2: shows the effects of digital technology on academic performance of adolescents, 10% strongly agreed that addiction to digital technology such as Laptops and television is a problematic issue that affects their academic life; 25% agreed while 33.3% strongly disagreed and 31.7% disagreed. 10% strongly agreed digital technology distracts them from their studies; 25% agreed while 33.3% strongly disagreed and 31.7% disagreed. 10% strongly agreed that hours spent on digital technology can never be compared to the number of hours they spent reading; 25% agreed while 33.3% strongly disagreed and 31.7% disagreed. The implication is that digital technologies have no effect on academic performance of adolescents in Jos South Local Government Area.

Effects of Digital Technologies on Academic Performance of Nigerian Adolescents*Table 3. Adolescents usage of digital technologies*

| S/N Statement | SA | A | SD | D |
|--|------------|------------|------------|------------|
| 1. I use digital technologies for my academic activities and these have improved my academic performance | 45 (37.7%) | 38 (31.7%) | 7 (5.8%) | 30 (25%) |
| 2. We make use of digital technologies to disseminate knowledge in with my class mates | 45 (37.7%) | 38 (31.7%) | 7 (5.8%) | 30 (25%) |
| 3. I rely on information gotten from the internet to do my assignment | 50 (41.7%) | 28 (23.3%) | 15 (12.5%) | 27 (22.5%) |
| 4. The usage of digital technologies for my assignment has helped to improve my grades | 37 (30.8%) | 23 (19.2%) | 25 (20.8%) | 35 (29.2%) |
| 5. Engaging in academic forum through digital platforms reduces my rate of understanding | 23 (19.2%) | 37 (30.8%) | 25 (20.8%) | 35 (29.2%) |

Source: Field Survey, 2022

Data in Table 3 shows adolescents' usage of digital technology, 37.5% strongly agreed that they use digital technology for their academic activities and this has improved their academic performance; 31.7% make use of digital technology to disseminate knowledge with their classmates while 5.8% strongly disagreed and 25% disagreed. This shows that the majority of the respondents' performance use digital technology to disseminate knowledge. 41.7% strongly agreed that they rely on information gotten from digital technology to do their assignments; 23.3% agreed while 5.8% strongly disagreed and 22.5% disagreed. This shows that the majority of the respondents rely on digital technology for their assignment. 19.2% strongly agreed that engaging in academic forum through digital technology reduces their rate of understanding; 30.8% agreed while 20.8% strongly disagreed and 29.2% disagreed. This shows that the majority of the respondents' who engage in academic forum through digital technology reduces their rate of understanding. The implication is that adolescents use digital technologies to disseminate knowledge to their classmates as affirmed by 45 respondents of the entire population.

DISCUSSION OF FINDINGS

The study was conducted to evaluate the effects of digital technologies on the academic performance of adolescents. In response to this objective, data evidence revealed that adolescents' use of digital technology has no negative effects on their academic performance of students in Jos South Local government Area. This is in line with the Higgins et al. (2012) submission that a positive relationship exists between digital learning and educational outcomes. The findings also agree with Kelvin (2014) submission that the impact of digital technology on students' performances in schools by transforming the classroom

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into an interactive learning environment, providing a sense of competence and confidence in students' computer skills and helping them to get information in multiple ways.

However, the findings also contradict the findings of Olajide, Afolabi and Ajayi (2020) who conducted a survey of opinions of a wide spectrum of the society in what digital technology has brought to the nation brought to the nation, particularly the consequences for youth. The findings of the study showed that, adolescents' addiction and exposure to digital technology can have a negative effect on them such as distracting them from their academic work, taking most of their productive time, loss of concentration in school activities which sometimes causes them to exhibit strange and bad behaviours within the society.

The study was also conducted to determine the level of adolescent's usage of digital technologies. In response to this objective, data evidence revealed that adolescents use digital technologies especially the use of digital technologies to disseminate knowledge to class mates. This was affirmed by 45 respondents of the entire population. This finding tallies with Katz and Blumer (1974) uses and gratification theory (UGT) which postulates that people choose to consume certain kinds of media because they expect to obtain specific gratifications as a result of those selections.

RECOMMENDATIONS

Technology can create great benefits for adolescents in numerous areas of their needs ranging from education to entertainment, shopping, health and many more. To unlock the best benefits from the digital world adolescents should be

1. Equipped with a comprehensive set of digital skills.
2. Using digital technology for educational purposes rather than for fun and entertainment alone to prevent setback
3. Properly monitored by teachers, parents and guardian on the use of digital technology

CONCLUSION

Digital technology has become an important part of everyday life for many adolescents. It brings both the good and bad experiences to the adolescents. Compared to adults, adolescents use it for several purposes such as education, entertainment, social interaction and it is a place where they turn to for almost everything. Most of these tools are easy to use and adolescent can use them on their own to get the best experiences. So, it is no surprise that majority of adolescents are heavy users of digital technology especially social media sites.

The result from the findings of this study showed that, adolescents' addiction and exposure to digital technology does have negative effects on them.

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