UNIVERSITY OF EDUCATION, WINNEBA

TRIGGERS OF INTERNET ADDICTION AND CONTROL MECHANISMS: PERSPECTIVES OF SELECTED UNDERGRADUATE STUDENTS OF UNIVERSITY OF EDUCATION, WINNEBA

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DECLARATION

STUDENT'S DECLARATION

I, SAMUEL DANSO, declare that this dissertation, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE: …………………………...

DATE: ……………………………….……

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of dissertation as laid down by the University of Education, Winneba.

NAME OF SUPERVISOR: MR. KWESI AGGREY

SIGNATURE: ……………………….

DATE: ………………………….……

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DEDICATION

This research work is dedicated to my wife and children who made my dream a reality.

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ABSTRACT

The Internet's penetration into daily life is of great concern to an increasing number of people, rising to the level of pathological Internet use with problems similar to those of other behavioural addictions. University students are especially susceptible to developing a dependence on the Internet. This study through the lens of uses and gratification theory, general strain theory, and a qualitative case study design critically examined Internet addiction among undergraduate students of University of Education, Winneba. The study also examined the perspectives of undergraduate students' specific online activities. It also examined triggers of Internet addiction and control mechanisms. The study found themes such as academic research and entertainment as online activities that students engage in; anxiety, depression and academic research as triggers of Internet addiction; self-restraint, awareness creation and administrative restrictions as control mechanisms to evade Internet addiction. It was discovered that in spite of the fact that the Internet helps students positively in many ways, it also impacts them negatively. The study revealed that, it is important to investigate the intensity of Internet addiction among university students. The study concluded that Internet addiction is a vital issue to be attended to immediately. The study recommended to health care professionals and educational counsellors to interact with students on the positive use of the Internet. Also, university counselling centres should create platform where students will be educated on the control mechanisms of Internet addiction such as exercising self-restraint and being purposeful while online.
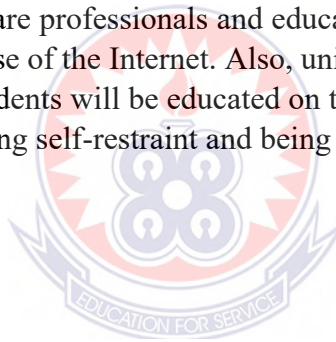
CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographical location (Leiner et al., 2009). Leiner et al. (2009) further indicate that history of the Internet is complex and involves many aspects including technological, organizational, and community. The influence of the Internet does not reach to the technical fields alone but also throughout the entire society as the use of online tools have become common. The Internet has actually revolutionalised communications by allowing various computer networks around the world to interconnect.

The Internet is the most widespread and rapidly adopted technology in the history of humanity (Firth et al., 2019). With the advent of smartphones and computers, Internet access has become ubiquitous (Anderson, 2018). As of June 30, 2020, more than half (62.0%) of the world's population used the Internet (Zhang et al., 2021). The use of the Internet has increased rapidly in recent years to more than four billion users worldwide (Al-shawi et al., 2021). Previously, the availability and usability of the Internet were considered to be very high in the developed nations as compared to developing nations (Omoyemiju & Popoola, 2020). However, the Internet, as a facility has become a common good for all, irrespective of a country's level of technological advancement.

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1.1.1 Use of Internet among students

The availability and accessibility of the Internet could be said to have positively influenced the lives of many people, especially university students all over the world (Apuke & Iyendo, 2018). Students are considered as heavier users of the Internet as compared to other members of the public such as workers (Judd & Kennedy, 2010). This has become a reality because the Internet is very useful for students' academic work and online social interactions. Due to technological advances and the growing available access of the Internet, students are logging on to the net for every possible reason (Masud et al., 2016). Some of the possible reasons could be meeting new friends, socialising with others and solving basic problems in life. The Internet is becoming a widely accepted channel for information exchange and networking among students (Akhter, 2013).

The Internet has also influenced communication and culture through increased interpersonal communication, assisting students to reach friends regardless of time. Students now connect directly to other people and are involved in specialised relationships. The use of the Internet help students in their educational research such as learning languages, academic research, solving problems, and browsing libraries online. Updated and current information are well organised on the Internet for easy search, and has contributed significantly to students' academic achievements (Kumah, 2015). Updated information has also created awareness of the importance of the world around students (Ogedebe, 2012). However, there are concerns that student's heavier use of the Internet will make them addicted.

1.1.2 Addiction

Addiction is a concept that has existed from the past until now and it expresses several attitudes and behaviours that human beings cannot give up on even though it is

harmful (Salici, 2020). Some explanations as to why addiction is common among students are examined under phases such as first use, continuing usage, quitting, thinking about using again and starting to use again (Ogel et al., 1998). It is believed that the concept 'addiction' was first used in the historical process to describe the indispensability shown for fermented fruits (McKim & Hancock, 2012).

As computer and Internet use become a staple of everyday life, the potential for overuse becomes likely, and thus the possible emergence of addiction. The term addiction has traditionally been associated with substance intake (Gómez-Galán et al., 2020). Addiction is a state of compulsive drug use despite treatment and other attempts to control it (Hyman et al., 2006). In other words, it is the repeated involvement with a substance or activity, despite the substantial harm caused. In relation to the conceptualisation of addiction, both the *Diagnostic and Statistical Manual of Mental Disorders* and the World Health Organisation's *International Classification of Diseases* recognised the similarities between the different types of addiction rather than focusing on the differences (World Health Organisation [WHO], 2018).

Addiction also represents an emerging problem that may be common but manifests itself in different ways and through different forms of substance use (Kim et al., 2020) or addictions without substances such as addiction to shopping, mobile phones, gambling, food, video games, the Internet, gender, among many others (Carbonell, 2020; Kuss & Griffiths, 2011; Rose & Dhandayudham, 2014). Among the types of addiction listed above, Internet is the most common. Studies agree that any behaviour that produces pleasure can become addictive (Echeburúa & Corral, 2010).

Griffiths (1997) asserts that people with technological addiction often display loss of self-control, intense desire to connect to social networks and withdrawal symptoms such as anxiety, agitation, depression and irritability. Others also show

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tolerance, severe interference in daily life with reduced physical activity, and gradual abandonment of other previous pleasures (Cheng, Burke & Davis, 2019). Different authors have therefore established an equivalence between addiction to substances such as alcohol and drugs and dependence on the Internet (Chóliz & Marco, 2012; Echeburúa, 2010; Kern & Rickard, 2016; Seabrook, Kern).

Sometimes, students affected by Internet addiction (IA) do not readily see that their involvement in the activity has resulted in substantial harm. Abuse of the Internet can result in negative consequences. For example, a student who obsessively chats with friends at school takes away from valuable study time which results in poor academic performance (Young, 2004).

1.1.3 Internet addiction among students

Internet addiction refers to the excessive, and uncontrollable use of the Internet, which can lead to functional impairment in daily life (Young, 1999, as cited in Lan et al., 2020). Kathryn (2020) also defines IA as a term for compulsive Internet use that causes some kind of hindrance to life but the person continues the behaviour in spite of the negative consequences. In other words, a person who is addicted to the Internet feels compelled to frequent and increasingly use the technology despite the fact that it causes problems in their lives. Other names given to IA are: IA disorder, problematic Internet use, compulsive Internet use, Internet overuse, problematic computer use, and pathological computer use.

The idea that problematic computer use meets criteria for an addiction, and therefore should be included in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* was first proposed by Kimberly Young in 1996 (Rachubińska et al., 2021). Since then, IA has been accepted as a clinical entity with profound negative effect on social, educational and economical functioning among students (Pejović et

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al., 2009). Pejović-Milovančević et al. (2009) assert that basic symptoms are the increased number of hours spent in front of the computer along with Internet use, development of abstinent syndrome if the Internet access is prohibited, sleep inversion, neglect of basic social requirements and personal hygiene.

Internet addiction is one of the fast-growing addictive behaviours and is a significant public health problem, affecting a large number of people worldwide (World Health Organization [WHO], 2015). However, the global burden of IA among university students has not been established. IA is a behavioural problem that has gained increasing scientific recognition in the last decade, with some researchers claiming it is a 21st Century epidemic (Kuss & Griffiths, 2014). There is increasing interest and concern about the addictive power of the Internet and its effect particularly on students, adolescents and other young people in society (Chung et al., 2019).

Even though the Internet is very useful in student's academic life, it also has a dark side. The rapid increase of Internet accessibility is associated with a rise in IA, especially among adolescents and young adults with underlying psychological disorders (Al-Shawi et al., 2021). The Internet's penetration into daily life is a serious problem for an increasing number of people, rising to the level of pathological Internet use with problems similar to those of other behavioural addictions (Spada, 2014).

University students are especially susceptible to developing a dependence on the Internet, more than most other segments of society (Zenebe et al., 2021). This can be qualified to numerous factors including availability of time, ease of use, psychological characteristics of young adults and limited or no parental supervision. With the development of society and information technology, the Internet has brought convenience and also some problems, especially for undergraduate students (Liang et al., 2021).

University students may be prone to IA which can affect their physical (Alaca, 2020), mental health (Lam, 2020), academic performance (Fossion et al., 2018) and even generate suicidal ideation (Lu et al., 2020). Even though the availability and use of the Internet among university students is crucial in their academic endeavours, excessive gaming, Internet-based gambling, Internet-based sex, viewing pornography, developing and sustaining intimate online relationships, entertainment and socialising or social networking through different social media platforms increase the odds of IA among university students (Islam et al., 2018).

The Internet is also bringing more disappointment between student's interpersonal relationship, face to face interaction and abandonment of family (Gnanaraj & Sebastine, 2017). However, students can use the Internet in an appropriate manner and have balance in their responsibilities for progressive purposes.

1.1.4 Online activities, triggers of IA and control mechanisms

As the addiction increases, students become consumed with their Internet activities, preferring online games, chatting with online friends, or gambling over the Internet, gradually ignoring family and friends in exchange for solitary time in front of the computer (Sanghvi & Rai, 2015). Among the online activities that university students engage in are academic research, shopping, playing games and chatting with friends (Li et al., 2015). Furthermore, social media (sharing) sites like Facebook, Twitter, online games and online gambling causes an increase in the number of IA cases and it is indicated that IA will become a serious problem in the near future (Andreassen et al., 2012).

Other studies indicate that university students who are addicted to the Internet show characteristics such as shyness, depression, boredom and low self-esteem (Cardak, 2013). On a psychological level, some people use the Internet as a reward or

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coping strategy to overcome emotional crises or dissatisfaction, and such use is not necessarily primarily dysfunctional (Festl et al., 2013).

Olawade et al. (2020) are of the view that awareness creation, interventional measures and professional support are key areas for controlling IA among undergraduate students. When these control mechanisms are fully implemented, it would help prevent students from becoming addicted to the Internet.

1.1.5 Internet accessibility at University of Education Winneba (UEW)

The opportunities created by the Internet in terms of access to data and information has among others shortened the time that students take to submit assignments, undertake research, communicate and share ideas. With the advent of the Internet on university campuses, students have additional tool for access to information, and data that could broaden their horizons and improve their academic performance. The Internet has given a new approach to education where students are no longer dependent on their teachers and school libraries as their only source of information (Ajanaku, 2019). Globally, different studies have been carried out on students' use of the Internet on campus (Fasae & Aladeniyi, 2012).

UEW has introduced 2:1 and 1:2 hybrid mode of teaching and learning where lectures are held online and face-to-face respectively. This means that first-year undergraduate students, as well as graduate students receive two credit hours of face-to-face instruction and one credit hour of virtual learning per week. On the other hand, second, third and final year undergraduate students receive one credit hour face-to-face instruction and two credit hours online per week (University of Education Winneba, 2021).

As a way of helping students in this innovation, the university introduced Online Learning Management System (LMS) during the 2020/2021 academic year. The LMS

is a software application or web-based technology used to plan, implement and assess a specific learning process. It is used for eLearning practices and, in its most common form, consists of two elements. These elements are server that performs the base functionality and a user interface that is operated by instructors, students and administrators. The LMS is a platform that ensures continuous contact between students and their lecturers (University of Education Winneba, 2021).

In order to access the LMS, UEW has provided free and uninterrupted Internet service in the form of WIFI to all students and Lecturers. Students are supposed to log into the WIFI with their student identification number and a password. The Internet services are provided within the halls of residence and lecture theatre where students are expected to use this facility for academic work in terms of research, submission of assignments, writing of quizzes and undertaking end of semester examinations. Once confined to a computer, laptop or mobile phone with Internet accessibility, students are able to explore over a wider range.

There are concerns that the ubiquitous nature of the Internet on campus will make students addicted to the Internet. Researchers are however of the view that university students are at high risk for developing IA because many universities offer high speed, free, and all-time Internet access to their students (Sachitra, 2015). Excessive use of the Internet among students may lead to IA causing significant injurious effect.

1.2 Statement of the Problem

Internet addiction is an emerging problem among contemporary university students. IA has become a widespread issue with significant concern on its negative outcomes such as decline in academic performance, reduced interpersonal relationships, anxiety and depression. University students spend significant amount of

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time engaging in online activities such as chatting, gaming and watching videos. However, students may be at risk for developing IA problems given the explosive growth of Internet use. The accessibility of the Internet on university campuses, personal freedom, significant amount of unstructured time, and the academic/social challenges that many students experience all contribute to increased rate of IA (Li et al., 2015).

The phenomenon of IA among students has long been studied (Cao & Su, 2007; Kubey, Lavin & Barrows, 2001; Young, 2004). For example, Kubey et al. (2001) studied IA and indicated that students have become obsessed with Internet usage and as a result exhibited negative outcomes such as decline in academic performance. Students' heavier use of the Internet may also lead to subjective stress, poor sleep quality, social isolation and suicidal ideation (Akhter, 2013; Iyitoglu & Celikoz, 2017; Karacic & Oreskovic, 2017; Sanghvi & Rai, 2015). Excessive Internet use has emerged as a case to be considered in many countries, causing increasing problems such as loneliness (Biolcati & Cani, 2015), shyness (Chak & Leung, 2004; Pontes et al., 2014), anxiety and depression (Ayas & Horzum, 2013).

Some studies have been conducted which indicates that IA is prevalent among undergraduate students (Iyitoglu & Celikoz, 2017; Kakaraki et al., 2017; Zenebe et al., 2021). Other studies have also shown that the free and unlimited access to the Internet provided by universities, absence of much parental control during university life, companionship seeking, and desire to escape stress at school are the reasons why students develop dependence on the Internet (Masud et al., 2016). IA is therefore an increasing problem among university students all over the world and this problem could escalate due to the easy access to the Internet and flexible schedules (Abdel-Salam et al., 2019).

Inasmuch as there have been studies on IA among students, recent studies have identified high rates of Internet use among university students (Amoah, 2020; Arslan & Coşkun, 2021; Liang et al., 2021; Zenebe et al., 2021; Zhang et al., 2021).

Li et al. (2015) conducted an exploratory qualitative study to investigate a range of issues relating to the characteristics of IA among university students in the US. Their research recommended that future studies may be necessary to examine specific activities that students engage in on the Internet. In a similar study, Yusuf et al. (2020) conducted quantitative research on IA and its effect on the academic performance of computer science students at Bayero University. As part of their recommendations for future research, they indicated the need to investigate what drives students to become Internet addicts. Adorjan et al. (2020) on the other hand did a cross-sectional survey of Internet use among university students. Their studies recommended that future research should take a more differentiated look at the various types of Internet use in order to contribute more in terms of accurate diagnoses and prevention. Amoah (2020) also did a preliminary study on IA among university students in Ghana. His study recommended that future research may be necessary to examine the control mechanisms to evade IA.

Although Li et al. (2015), Yusuf et al. (2020), Adorjan et al. (2020) and Amoah (2020) acknowledged that IA is prevalent among university students, they based their assertions primarily on the consequences and level of addiction. Thus, they did not examine the specific online activities that university students engage in, what triggers these online activities among the students and how these online activities could be controlled.

It therefore looks like minimal focus has been paid to the specific online activities that students engage in, triggers of IA and control mechanisms in spite of significant studies that have been done on IA. My study therefore focused on the

perspectives of undergraduate students of UEW on specific online activities that students engage in, triggers of IA and control mechanisms employed by students to evade IA. In order to address these gaps, I conducted an exploratory qualitative case study to investigate IA among undergraduate students of the University of Education, Winneba.

1.3 Objectives of the Study

Internet addiction has become a widespread problem among undergraduate students. Students excessive Internet use is worthy of attention because of its consequences on their academic, mental and physical health. Based on this background, this research study sought to:

1. Examine specific online activities that undergraduate students of UEW engage in.
2. Investigate triggers of IA among undergraduate students of UEW.
3. Investigate the control mechanisms that undergraduate students of UEW employ to avoid/evade IA.

1.4 Research Questions

This research study aimed to answer the following questions:

1. What are the specific online activities that undergraduate students of UEW engage in?
2. What are the triggers of IA among undergraduate students of UEW?
3. Which control mechanisms do undergraduate students of UEW employ to avoid/evade IA?

1.5 Significance of the Study

Conducting research on triggers of IA and control mechanisms is of enormous importance to academia and other important stakeholders in a number of ways. First, this study will add up to existing literature on triggers of IA among university students and the control mechanisms.

The study will also pave way for further studies to be conducted in the area of research specifically on the triggers and control mechanisms of IA.

With the development of society and information technology, the Internet has brought about convenience to university students. From the uses and gratification theory, individuals seek out media to fulfill a specific need which leads to ultimate gratification. Students engage in online activities to satisfy specific purposes such as academic research, entertainment, socialisation, marketing, among others. With the quest of exploring these online activities, students encounter a lot of problems which is a threat to their social well-being. The findings and recommendations of this study will be useful to society especially parents and other stakeholders to detect early symptoms of IA and intervene appropriately.

The inability of students to escape from negative (noxious) stimuli or to achieve socially defined expectations using conventional methods can result in deviant behaviours according to the general strain theory (Jaggers et al., 2014). When students are caught in a strange situation of experiencing the problems with no formal therapeutic interventions, it may create a long-term "negative affect state" (Agnew, 1992, p. 47) and possibly result in deviant behaviors (Mubarak & Quinn, 2019). This implies that university students who have become obsessed with Internet usage might be undergoing enormous strain and challenges which could result in negative outcomes

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such as decline in academic performance, subjective stress, poor sleep quality, social isolation and suicidal ideation. The current study is, therefore crucial in creating awareness among university students on IA and also for informed policy decisions in designing interventions to address problems associated with excessive use of the Internet, especially among high-risk groups. Through this research, Ministry of Health would be equipped with the necessary information in order to adopt adequate treatment measures for IA.

1.6 Delimitation

This study is limited to only Undergraduate students of UEW on specific online activities that students engage in, triggers of IA and control mechanisms.

1.7 Organisation of the Study

The study is organized into five chapters. Chapter one discusses background of the study, statement of the problem, objectives of the study, research questions, significance of the study, delimitations, and organization of the study. Chapter two reviewed related literature and discusses theories necessary for the research. The third chapter discusses methods and procedure for data collection and analysis, specifically the research approach, research design, sampling technique, sampling size, data collection procedure, method of data analysis, ethical considerations and trustworthiness. The findings and discussions of the data collected were discussed under the fourth chapter of the study. Chapter five summarizes the findings, draws conclusions and makes recommendations for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In recent years, the use of the Internet has considerably impacted the way in which undergraduate students use new media. Masud et al. (2016) aver that when students are confined to a computer, laptop or mobile phone with Internet accessibility, they are able to explore over a wider area due to technological advancement. It is evident that the accessibility of the Internet has positively influenced the lives of many people, especially university students all over the world (Apuke & Iyendo, 2018).

Considering the enormous importance of the Internet and its ability to assist students in diverse ways, this study seeks to examine specific online activities that undergraduate students engage in. It also investigates the perspective of undergraduate students of UEW on triggers of IA and control mechanisms. This chapter reviews related literature on the following concepts: students and utilisation of new media; students use of the Internet; students' online activities; IA among students; triggers of IA; consequences of IA and control mechanisms. The chapter further discusses the theories that underpin the study and their relevance to the research work.

2.1 Students and Utilisation of New Media

Information and communication technologies are having profound impact on society. Valor and Sieber (2003) acknowledge that regardless of one's ideological position, technology is changing ways in which the youth coordinate everyday life activities including interactions. Cotton et al. (2013) support this view that young people tend to be early adopters of technology. However, despite the potential benefits,

Friemel (2016) avers that young people consistently adopt technology at high-risk rates. According to Kennedy and Funk (2016), younger adults who are mostly students are more inclined to trying new technological products compared with other groups. Students live in a world of unlimited potential where mass connectivity, enhanced mobility and technological advancement are occurring at an unprecedented pace. Emerging approaches that emanate due to new media have enormous potential to positively impact the lives of students. In the search for the new, young people who are undergraduate students are stimulated by the demand for innovation in new media.

Auwal (2015) defines new media as the digital and computerized communication technologies such as blogs, podcasts, social networks, wikis, micro-blogs and message boards that can be used by the general public for interaction across distances. Thus, new media are products of globalization and scientific innovations which stem from the expansion of information and communication technologies. Auwal (2015) support the above view that new media can be described as a group of Internet-based applications that build on the ideological and technological foundations of the World Wide Web (WWW) which allows the creation and exchange of user-generated contents. Asemah (2011) indicates that new media are disparate set of communication technologies that share certain features through digitalization.

The concept of "New Media" was first proposed in 1967 by Goldmark, director of the Technology Research Institute of the CBS Television Network (Guo, 2021). Guo (2021) indicates that new media relates to the Internet and the interplay between technology, images and sound. Today's new media mainly rely on digital media technology, Internet technology, mobile communication technology and other emerging technologies to provide information services to the audience. Examples of new media are websites, blogs, chat rooms, emails and social media.

New media technology relies on powerful information processing technology and data storage technology to develop and grow continuously. Compared with traditional media, new media technology has more powerful information storage capacity and dissemination capacity. The Internet is a major tool that students use to access these new media platforms.

2.2 Students Use of the Internet

The expansion of universities is one marked feature of the social life of students in this present age. In its broad sense, the fundamental contribution of universities to society lies in creating and passing on useful knowledge to its students (Boulton & Lucas, 2011). The Internet has been instrumental in the achievement of this goal. Internet use is spreading rapidly into daily life, and directly affecting people's ideas and behaviour. Swanson (2016) observes that the Internet has an impact in many areas including the higher education system, it has heralded development and implementation of new and innovative learning strategies. Bashir et al. (2016) also add that educators who advocate technology integration in the learning process believe the Internet will improve learning and prepare students to effectively participate in the 21st century workplace.

The Internet has become a way of life for the majority of university students all around the world. For most university students, the Internet is a functional tool, one that has greatly changed the way in which they interact with others and sharing of information. They use computers to accomplish a wide range of academic tasks. Many students prepare course assignments, make study notes, tutor themselves with specialised multimedia, and process data for research projects (Bashir et al., 2016). Students exchange emails with faculty, peers, and remote experts. Students also keep

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up to-date in their fields on the Internet, accessing newsgroups, bulletin boards, listservs, and web sites posted by professional organisations.

Most students access library catalogs, bibliographic databases, and other academic resources in text, graphics, and imagery on the World Wide Web (Asan & Koca, 2006 as cited in Bashir et al., 2016). Usun (2003) mentions that Internet is appealing to higher education for a number of reasons: it reduces the time lag between the production and utilisation of knowledge; it promotes international co-operation and exchange of opinions; it furthers the sharing of information; and promotes multidisciplinary research. Students explore the Internet through the use of desktop computers, laptops, palmtops, smartphones, and other computer-related devices.

2.3 Student's Online Activities

Along with the development of Internet technology, the adoption of online activities among university students is increasing as an alternative to face-to-face interactions. Students engage in online activities for several reasons such as academic research, interacting with friends, sharing news, entertainment and marketing.

2.3.1 Academic Research

It is impossible for students to think of academic or research activities without the Internet. Akhter (2013) affirms that the Internet has created positive impact on education by increasing communication with classmates and lecturers, reviewing e-books, increasing access to libraries and educational databases, and improving study hours and study habits. Sahin et al. (2010) support this assertion because the use of credible Internet resources is of greater importance for academic study, especially in high class courses which require academic review of literature.

Through its ability to act as a support medium in different functions for which people use the Internet, Ngoumandjoka (2012) states that the Internet was introduced into academic institutions as a tool to enhance student's academic experience in the mid-1990s. On a more comprehensive basis, it can be pointed out that the Internet has some functions, especially in education, and these can be listed as storehouse of information, communication without boundaries, online interactive learning, electronic/online research, innovation in the new world, improve interest in learning, global education, and information catalogues (Park & Biddix, 2008).

As the Internet has many different functions, it is important to consider the extent to which it is used by students in higher education for academic performance. Academic performance can be described in broader terms to include students' overall marks attained in examinations, quizzes, class assignments, participation in extracurricular activities and class attendance.

Internet use for educational purpose is found by Kim (2011) to be the heart of adolescent academic achievement. Siraj et al. (2015) agree that the Internet helps students to broaden their academic knowledge, research and assignments by accessing information worldwide and enhancing easy communication to the academic community.

Kumah (2015) asserts that in Ghana, undergraduate students see the library as a favourable environment for studies, and a source of relevant and realistic information for research. However, students prefer using the Internet to the library because of the fact that the latter provides information readily at all times, faster access to information and large amount of information.

2.3.2 Communication

The advent of the Internet and the World Wide Web has changed the face of technology especially in the way students communicate and interact with each other (Chukwunonso et al., 2013). This means that students have greater autonomy overtime where communication is no longer limited to certain times. Widespread Internet availability can substantially benefit people by enhancing their access to a broader range of information, creating an avenue for social communication.

Akkoyunlu (2002) avers that the Internet has become the most efficient source of information as well as the most efficient and valid method to share information among students in a rapid, easy, cheap, and reliable manner by sharpening their ability to search and disseminate information. The Internet is regarded as a powerful medium due to its unique characteristics in communication.

2.3.3 Interactivity

According to Severin and Tankard (2001), the features of the Internet include interactivity, hyper textuality and multimediarity (as cited in Waithaka, 2013). Interactivity has been pinpointed as the key feature of Internet technology that makes it a compelling communication tool (Lustria, 2007). Interactivity is related to control when students can control what information they see, for how long, how many times and in what order (Roehm & Haugtvedt, 1999). Interactivity has two dimensions namely control and message. The control dimension refers to the entity that controls the nature of the interactivity. The message which refers to the width of interactivity has two elements, namely form-oriented interactivity and content-oriented interactivity (Roehm & Haugtvedt, 1999). Form-oriented interactivity focus on regulating development to achieve specific form and desired physical outcome. In content-oriented interactivity, students interact not only with their peers and instructor, but also

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with the content provided. Kuo et al. (2013) found that student-content interaction and Internet self-efficacy were good predictors of student satisfaction.

Hyper textuality is an important feature of the Internet. Severin and Tankard (2001) note that the World Wide Web (WWW) uses hyperlinks, which are points on the Web that a user can click on to be moved to some point in the same web document, the same website or other Websites. Multimediarity is another important feature of the Internet. Severin and Tankard (2001: pp.54) say that multimedia is a "communication system that offers a mixture of texts, graphics, sound, video and animation." This feature is further enhanced by hyperlinks or hypertext, on which users can click to bring up a sound or video.

As a multimedia, the Internet integrates the characteristics of the television, print and radio into a single medium. Chou (2001) remarks that university and college students appreciate the interactivity, ease of use, availability and breadth of information accessed on the Internet. This is acknowledged by Greenfield (1999) who asserts that the Internet's accessibility, intensity of information that can be accessed online and the potency of its contents are unique characteristics which contribute to its popularity.

People use social media networks, and in particular, university students represent a large proportion of users on social media networks to communicate with friends (Almarabeh et al., 2016).

2.3.4 News sharing

The Internet can be used as a tool to be abreast with the latest news all around the world as well as getting any kind of information that serve different purposes such as learning more information about a hobby or health (Dogruer et al., 2011). Therefore, it can be said that the Internet is the source of spreading news or information quickly to a large audience, reaching beyond the limitation of time and space.

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Head et al. (2018) affirm that news play critical role in helping students navigate and understand the world, engage with social and learning communities, and participate in democracy. For many university students, news is an overwhelming hodgepodge of headlines, posts, alerts, tweets, visuals, and conversations that stream at them throughout the day. While some stories come from news sites that students choose to follow, other content arrives uninvited, tracking the digital footprints that many searchers inevitably leave behind.

However, news consumption for most students is not entirely random or passive. In the course of any given day, some may take a deep dive into a story of their interest. They may spend hours googling around a topic to learn more. Others will explore a current controversy and may get different sides of an argument from a YouTube clip and then validate information with a search of a mainstream and reliable news site, trying to figure out what is credible and true.

In recent years, there has been a considerable increase in the number of people accessing the news via online platforms, especially among younger audiences (Flaxman et al., 2016). The Internet has become an immensely significant source of news for students. Obijiofor and Hanusch (2013) agree to this view because there has been a surge in scholarly attention to how news is delivered online, as well as who is producing it and who is reading it. Kümpel et al. (2015) define news sharing as the practice of giving a defined set of people access to news content via social media platforms, as by posting or recommending it.

It cannot be ignored that social media recently have become a constitutive part of online news distribution and consumption among students (Mitchell & Page, 2014). Social media also simplify and facilitate news sharing and this can be done by using the share buttons provided on news sites or by reposting or retweeting links to news found

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on a Facebook fan page or a friend's Twitter feed. Online news sites increasingly rely on these referrals from social media to improve their website traffic, article views, and ultimately their economic success.

Given today's rapid dissemination of social media platforms such as Twitter and Facebook, news sharing among students have increased tremendously (Kümpel et al., 2015). Almarabeh et al. (2016) confirm this view that university students use the Internet for sending or receiving e-mails, chatting, gathering information, downloading music or images.

2.3.5 Entertainment

Regarding students who are obviously accepted as passionate users of the Internet, the use of the Internet is mainly for social and entertainment purposes since the Internet revolution is not just limited to finding information but also bringing people together (Dogruer et al., 2011). Some of the activities that undergraduate students engage in for entertainment are: online dating which allows them to make contact and communicate with each other, downloading music and videos, and playing online games (Ndawula, 2011). Huxhold et al. (2020) state that the Internet has expanded our idea of entertainment far beyond past norms of going to the movie theatre or reading magazines. Students use the Internet for many reasons. The benefit of entertainment on the Internet has transformed most of the world.

Widespread Internet availability can substantially benefit students by enhancing their access to a broader range of information and creates an avenue for social communication and entertainment (Zainudin et al., 2013). It is true that in an age of rapidly emerging and advancing technologies, the Internet has become an essential part of human life. The Internet provides a platform for social interaction as well as facilitates access to information and entertainment.

2.3.6 Marketing

Due to advances in technology, students are now living in a world without boundaries. The Internet is the most creative innovation that we have today. Use of the Internet has exploded, creating a powerful mechanism that has helped students transform their lifestyle through marketing.

Internet marketing involves the use of digital media to inform the market of available business and to entice people to purchase the products and services. Cheung and Huang (2005) note that since its widespread adoption, the Internet has impacted the lives of people from all walks of life, including impacts on business, shopping and social activities. The Internet is a vehicle to provide greater reach for advertising in terms of marketing. Through the Internet, students are able to buy and sell products online.

Hussain at al. (2012) state that initially, the Internet seemed to be used primarily to obtain information, but it is now used to network socially with our friends and colleagues, shop online, and build new relationships. It has been accepted that the Internet will represent the new revolution and frontier of marketing (Hussain et al., 2012).

Samiee (1998) argues that the Internet can be used for marketing in four ways: communication and advertising, direct sales of existing products, sales of Internet based products, and the online distribution of digital information or data.

Ko et al. (2005) agree that among many important features provided by the Internet such as interactivity, irrelevance of distance and time, low set up costs and global coverage, interactivity has been considered one of the main reasons that the Internet is a unique marketing tool in comparison to other media. In other words, the Internet is considered a virtual marketplace where students interact with a wide array

of product choices in a nonlinear fashion. Accordingly, emergence of the Internet brings about better interactive tools to strengthen relationships with customers regardless of their physical locations.

Notwithstanding, specialists such as professional counsellors, psychiatrists and psychologists are highly concerned about the adverse effect of Internet use on the life of university students (Manaf et al., 2018; Wallace, 2014). Ceyhan (2011) affirms that despite contributions of the Internet to student life, it also brings problems and these problems rise daily. Much concern has been raised of late regarding students' heavier use of the Internet which may lead to IA (Berte et al., 2021).

2.4 Internet Addiction among Students

In this era of information age, there seems to be a thin line between the use of technology and its abuse. The ability to compute, communicate, and store information is at the heart of the information revolution. Student's use of the Internet may seem quite excessive, which includes sleeping with a smartphone under the pillow, engaging in instant messaging while having a conversation with another person and engaging in tweeting. Existing literature shows that young adults, especially college students, are the most vulnerable to Internet-related addiction as they have free and unlimited access to Internet (Tang et al., 2017). Students are expected to use this technology for research and learning purposes.

Zenebe et al. (2021) support the assertion that college students are susceptible to developing dependence on the Internet more than most other segments of society. Patel (2019) avers that student who rely on many functions of the Internet and students who have used the Internet for more than 5 years are more likely to be addicted.

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Students who are addicted to the Internet spend much more time on the Internet than on studying.

Recent studies (Iyitoglu & Celikoz, 2017; Kakaraki et al., 2017) have shown that IA is more prevalent among university students as compared to other groups. Masud et al. (2016) identify possible reasons for this as free and unlimited access to the Internet provided by universities, absence of much parental control during university life, companionship seeking, and desire to escape stress at school.

The use of Internet among students of UEW is on the increase (University of Education Winneba, 2021). This is due to the availability of wireless network in lecture rooms and halls of residence. The availability of free WIFI have made it possible for students to use the Internet in a manner that interferes with their academic life. Once connected with their student ID and password, they are able to browse for several hours. The computer laboratory is also opened for their convenience around the clock. Away from home and parental control, university students exercise their freedom through excessive use of the Internet. They hang out in chat rooms and engage in instant messaging with friends.

2.5 Forms of IA among Students

According to the American Centre for Online Addiction, five specific types of IA have been identified in general terms as cybersex, cyber relationship, net compulsions, information overload and computer addictions (Salicetia, 2015).

2.5.1 Cybersex

The ubiquity of Internet access among university students have been bedeviled with several challenges such as exposure to sexually explicit materials. Key among them is cybersexual addiction which occur through different mediums such as chat

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rooms, social network sites, messaging, e-mails, advertising and spams. Cybersexual addiction is a compulsive Internet used to access pornographic materials. Cybersexual addiction is a sexual addiction characterized by virtual Internet sexual activity that causes serious negative consequences to one's physical, mental, social, and/or financial well-being (Skryabin et al., 2020).

For those seeking sexual information, images, or services, the Internet offers quick and affordable access. Indeed, with few clicks, individuals can view pornography and sexual material, participate in sexual chatrooms, livestreams, newsgroups, attain sexual services and products, and acquire information regarding sex, sexuality, contraception, and dysfunction.

In a global sample of university students from four countries, Doring et al. (2015) found that 76.5% of the sample utilised the Internet for online sexual activities and 30.8% of American students reported engaging in cybersex. In addition, O'Reilly et al. (2007) found that 43.1% of university students viewed pornography 1-2 times per week. Cybersex provides an opportunity for people to explore and express their most private sexual fantasies. Because of the anonymity, cybersex participants live out their fantasies by doing whatever they want and taking any identity they wish with no inhibitions.

Sexual users of the Internet are very common. The main reason for students to resort to cybersex is the search for sexual pleasure. There are certain features of the Internet that make cybersex a particularly compelling type of sex addiction, namely, its accessibility, the anonymity it offers the user, and its affordability also called the Triple-A Engine (Delmonico & Carnes, 2002 as cited in Thomas, 2016).

There are six types of cybersex users: recreational, sexual harassers, discovery users, predisposed users, lifelong sexually compulsive users and sex offenders (Thomas, 2016).

Recreational users use cybersex as an enhancement to their real-life sexual lives and are seldom users.

Sexual harassers are those that find it amusing to show sexual images to others and may sometimes unintentionally embarrass someone with their antics. This group of users do not keep their activities a secret. They still manage a healthy sexual life.

Discovery users has no background of online or sexual behaviours. They use the Internet as a breeding ground for finding a mate or sex partner. They use adult sites to find partners or other sites to engage in sexual activities with minors despite not having a background in those type of behaviours.

Predisposed users use the Internet as a way to fulfil their sexual fantasies that they would not normally do due to fear of being recognised in public. At this stage of severity, the personal and work relationships start suffering from the addiction.

Life-long sexually compulsive users find ways to explore sexual behaviours with or without the Internet. If they are not using the Internet, they watch pornographic videos. This type of addict will spend so much time engaged in fantasied sexual behaviour that sex with a partner will no longer be of interest.

Sex offenders use computers to view, store, produce, send, receive and/or distribute child and other forms of pornography; to communicate, groom, and entice children and others for victimization; and to validate and communicate with other sex offenders. Sex offenders can view child pornography and communicate with potential victims and other offenders in minutes through the Internet.

Cybersex addiction can have devastating consequences on students as they can freely explore sexual fantasies. Once hooked online, it becomes difficult for these students to withdraw.

Cybersex can provide an avenue for extreme sexual behaviours which are likely to lead to addictive sexual disorder. Researchers identified that a number of Internet users have preexisting sexual compulsions or addictions, as the Internet becomes a new outlet for the preexisting behaviour (Cooper et al., 2004). Conversely, use of the Internet may also trigger a compulsion for some who would not have a problem with pornography (Freeman-Longo, 2000). Schneider (2000) explained that abuse starts out small and seemingly innocent. This then leads to worsening of behaviours.

Unfortunately, online sexual harassment cannot be tracked easily since the harasser, in many cases, is anonymous (Arafa, 2018). Exposure to cybersex addiction leaves many psychological imprints ranging from emotional distress, anger, sorrow and loneliness up to depressive symptoms.
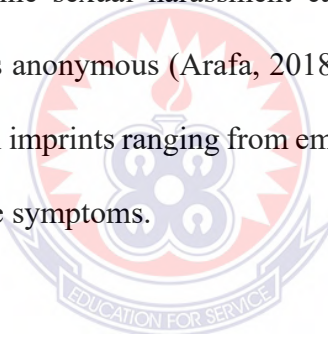
2.5.2 Cyber relationship

Addiction to virtual relationships is sometimes referred to as a cyber-relationship addiction. Cyber relationship focuses on addiction to social networking, chat rooms, and messaging to the point where virtual or online friends become more important than real-life relationships with family and friends. Cyber relational addiction encompasses addiction to all forms of social networking including Facebook and online dating services. The culture of online relationships has grown into a sub culture where people feel that interpersonal relationship is an online norm.

Saisan et al. (2014) state that virtually, online friends start to attract more communication and prominence over time so the person becomes more significant than real-life family and companions causing addiction to the relationship. An addicted

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person in cyber relationship makes contact only through the net, and has unsettled relationships of man-to-man contact while being off the net. Such people can "talk" for hours with other Internet users, but at the same time they have problems with personal contacts.

Addicts who are married usually end up committing adultery and it is often seen that families break up because of the very fact that someone cannot let go of the virtual life they have online and deal with the real-life issues and people at hand. Symptoms of cyber relationship include anxiety, depression, euphoric feelings around devices, lost sense of time, weight gain and the avoidance of work. It also has serious ramifications for those in romantic relationships.

The reason behind cyber relationships has to do with issues like self-disclosure, self-esteem, fear of physical relations, body image, and social interaction. The proliferation of the Internet has brought new light to individuals that find face to face interaction to be difficult when dealing with personal issues that affect the building of a relationship.

2.5.3 Net compulsions

Net compulsions refer to a variety of activities that addicts engage in repeatedly and obsessively. Compulsion, often but not always associated with obsessive compulsive disorder, is defined by a fear-based need to engage in specific behaviours (Kathryn, 2020). The addict feels a compulsive need to keep checking on something or engaging in a behaviour. They may also feel the need to keep going back to a site, such as an online gambling site.

In addition to all of the common consequences of any IA, people with net compulsions are those most likely to experience financial consequences (Kathryn, 2020). Many of the net compulsions involve spending money on gambling. As a result,

students with this form of addiction often end up in extreme debt. Net compulsion is very similar to computer compulsion but it is connected with being on the Internet. Such people are logged in all the time and they keep watching what is happening on the Internet. It is their obsession to play on the Internet. This addiction combines all forms of IA disorder.

2.5.4 Information overload

Information overload is also known as information overload addiction. The abundance of information on the Internet creates a new compulsive behaviour which is related to the web surfing or searching of databases (Salicetia, 2015). Addicted students use more time to search and organize data. An obsessive-compulsive tendency and a reduction of academic performance are connected with this type of addiction. Search engines deliver massive, sometimes overwhelming, amounts of information but only at the user's desire (Benselin & Ragsdell, 2016).

However, an abundance of information does not automatically lead to quality of information. Szóstek (2011) says that it is difficult to judge the veracity of information on the Internet. Emails are commonly cited as a cause of overload. The abundance of information available has begun changing the way people interact with it, and deep reading that came naturally has become a struggle (Carr, 2010).

2.5.5 Computer addictions

Computer addictions involve using the computer to play games compulsively. Computer addicted person does not have to be on the net. It is not really important for them what they are doing. The only thing that matters is the fact that the computer is on and they are right in front of it. Computer addiction, sometimes referred to as computer gaming addiction, involves on- and offline activities that can be done with a computer.

As computers became more widely available, games such as solitaire, tetris, and minesweeper were programmed into their software and researchers found that obsessive computer game playing became problematic (Guerreschi, 2011).

Researchers quickly found that obsessive computer game playing has become a problem in certain settings. Students would spend excessive amounts of time playing these games causing a notable decrease in their academic performance. Today, not only are these classic games still available, but so are thousands of new ones. Computer addiction is the oldest type of Internet/computer addiction, and it is still prevalent and harmful among students.

2.6 Triggers of IA

On a psychological level, some people use the Internet as a reward or coping strategy to overcome emotional crises or dissatisfaction, and such use is not necessarily primarily dysfunctional (Festl et al., 2013). Li et al. (2015) note that boredom, stress, anxiety and depression are common triggers of intensive Internet use. Tenzin et al. (2019) add that peer pressure is one of the factors that triggers intensive Internet use among university students. While usage of the Internet may help users to deal with depression, anxiety, stress or loneliness, they might then become addicted due to relief provided by the Internet in overcoming their initial problems.

2.6.1 Boredom

Boredom is one of the possible etiologies responsible for the high risk of IA among students (Ko et al., 2012). Mikulas and Vodanovich (1993) defined boredom as a state of relatively low arousal and dissatisfaction, which is attributed to an inadequately stimulating environment (as cited in Chou, Chang & Yen, 2018). Vodanovich (2003) acknowledges that boredom has been found to be significantly

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associated with problems of negative effect, behaviour, interpersonal relationships, and occupations among students. Boredom is one of the common triggers of intensive Internet use and it is significantly associated with IA and Internet-related functional impairment among university students (Li et al., 2015).

On a psychological level, boredom is experienced by most students over their lifetime. It is a particularly common experience in adolescence and may be functional for psychological growth. Other research has reported that boredom is an unpleasant experience of an absence of interest (Martin et al., 2006) and arises in a situation where none of the things that a person can realistically or potentially do are appealing (Mann & Cadman, 2014).

2.6.2 Stress

The rapid growth of the Internet has had a significant impact on psychological studies in understanding the level of stress and increasing interest on IA. Studies have shown that the potential for a student to experience stress is high as a result of Internet abuse that interferes with one's normal life (Mustafa et al., 2020). Internet addiction among students indirectly decreases their social relationships and increases the likelihood of being alone and becoming stressful. Stress is the physical, emotional and mental response of a person to any change or demand. Stress is part of an individual's life.

The Internet is a primary resource to help students in completing their assignments, conducting research and even as a media to release their stress (Zainudin et al., 2013). One of the variables that could predict IA is stress. Stress is a state or psychological process in which the individual finds his/her physical and psychological well-being as a threatening situation which depends on how the individual perceives the situation and events.

Technology and Internet usage has become a common practice in almost every context, sometimes become a source of stress for the individuals, on the other hand, it also acts as a means of coping with stress. Agnew (1992) argues that stress, and negative social relationships, can cause negative emotions and then lead to deviant behaviour or addiction to escape negative emotions.

2.6.3 Anxiety

It is observed that students who are addicted to the Internet experience anxiety and other emotional problems when they use the Internet to meet their psychological needs. Students who suffer from anxiety often have a great deal of trouble communicating and interacting with others.

Nastizaei (2009) asserts that students addicted to the Internet have considerable anxiety and apprehension. These students may therefore use the Internet as a way of escape. Thus, when they do not have access to the Internet, they become anxious in order to reduce their anxiety. Anxiety is a significant indwelling emotional factor in individuals which can be regarded as a mediating variable of IA (Baojuan & Qing, 2016).

Students who suffer from anxiety and stress often have a great deal of trouble communicating and interacting with others in a healthy, positive, and meaningful way. These human characteristics are viewed as important determinants of IA.

2.6.4 Loneliness

Excessive Internet use can displace valuable time that people spend with family and friends, which leads to smaller social circles and higher levels of loneliness (Akin & Iskender, 2011). Kim et al. (2009) demonstrated that people who were lonely and did not develop good social skills can develop compulsive Internet usage behaviours which

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prevents them from the building of healthy social relationships and interactions in their daily life, and therefore feel an increased sense of loneliness. Kim et al. (2009) found that loneliness could both be the cause and effect of problematic use of Internet among American college students.

Similarly, Yen et al. (2009) conducted research with 8,941 Taiwanese adolescents and indicated that lack of familial contact and depression were discriminating factors for IA. Similarly, Tokunaga and Rains (2010) examined 94 studies conducted in 22 countries and their meta-analysis proved a correlation between depression, loneliness, and IA.

According to the researchers, using online interaction with family and friends is less effective compared to offline interactions in reducing feelings of loneliness. Ozdemir et al. (2014) investigated the effects of loneliness and depression on IA with 648 Turkish undergraduate students. They found that loneliness had a significantly stronger relationship with IA than depression. They concluded that loneliness was a more important factor in IA as compared to depression and claimed that lonely people were more likely to use the Internet for social interaction than people with depression.

It has been shown that lonely people are likely to spend most of their time on the Internet (Amichai-Hamburger., 2003) since it creates a social environment in which they can interact with other people. Caplan (2002) investigated the effects of loneliness, self-esteem, shyness, and depression on IA and found that only loneliness had a significant relationship with problematic Internet use. Loneliness generally is viewed not as a feeling in individuals; it is seen as a phenomenon different from being alone and as an unexplained fear, problem, or hopelessness that can be seen sometimes for a short while and sometimes for longer. Similarly, the feeling of loneliness is expressed as an unwanted and unpleasant experience accompanied by anxiety, anger, and sadness.

Spending time on the Internet is one of the defensive mechanisms developed to constantly face loneliness.

Loneliness is a subjective psychological feeling or experience that occurs when an individual senses a lack of satisfactory interpersonal relationships and a gap between his or her desired and actual levels of communication. Excessive Internet use occurs because the Internet provides a wider social network and a variety of online forms of communication. Lonely people are attracted to interactive social activities facilitated by the Internet that provide a sense of belonging, friendship, and communication. They have claimed that the associations between loneliness and IA are bi-directional: IA and loneliness positively predict each other across time.

2.6.5 Depression

Depressed individuals have characteristics such as anxiety, loss of focus, irritability, insomnia, and loss of appetite. Others include deep sorrow, hopelessness, dislike and suicidal tendencies (Caplan, 2002). With greater Internet availability, the pathological use of the Internet has become an emerging mental health issue among undergraduate students in Ghana.

Low self-esteem, low motivation, fear of rejection and the need for confirmation from others, all of which are commonly observed in depressive people, may result in frequent use of the Internet, and the interactive functions of the Internet may lead to IA in individuals with these characteristics (Yang et al., 2005).

Research on IA and depression demonstrates that the overuse of the Internet, which results in a disruption of the normal lives of an individual was associated with an increase in the frequency of depression (McKenna & Bargh, 2000). Excessive Internet use can displace valuable time that people spend with family and friends, which

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leads to smaller social circles and higher levels of loneliness and stress (Bhat & Kawa, 2015).

2.6.6 Curiosity

Students often feel curious to use the Internet. This is evident in their quest to seek for information about popular artists or friends on social media in terms of up-to-date post including photographs. One of the reasons why students are curious to use the Internet is due to the availability of social networks such as Twitter and Facebook. The number of social networks has increased tremendously. Students spend more time and cannot keep the time spent under control (Kaya, 2011). It can be concluded that uncontrolled use of these social networks may directly or indirectly increase IA exposing several risks.

2.7 Consequences of IA

In recent years, technological advancements have taken place in the modern world. In the complexity of today's world, Internet use is playing a vital role in educational institutions to attain different learning skills. However, scholars have shown concerns about the excessive use of this technology and the hidden risk factors (Bisen & Deshpande., 2020).

The Internet is an easy and quick medium of interaction to gain the required information for communication with others around the world. However, lack of control over excessive Internet use can disturb individuals' living standards and relationships between family members, and it can bring instability of feelings. Some of the consequences of IA are given below.

2.7.1 Decline in academic performance

It is impossible for students to think of the academic or research activities without the Internet. Internet usage creates positive impact on education in a way of increasing communication with classmates and lecturers, reviewing e-books, increasing access to libraries and educational databases, and improving study hours and study habits (Akhter, 2013).

Empirical studies by Akende and Bamise (2017) report that access to information can influence the academic performance of students. However, students who fanatically chat with friends at school take away from valuable study time resulting in academic decline or poor academic performance. According to Akhter (2013), academic problems affected by IA among students include missing classes, decline in study habits, significant drop in grades, increased risk of being placed on academic probation and deprived integration in additional activities.

2.7.2 Mental health

Tripathi (2017) is of the view that students' excessive Internet use is worthy of attention because of the consequences on their mental health. A lot of psychiatric disorders have been correlated with IA. Another mental consequence has been reported to be associated with low self-esteem and impulsivity (Naseri et al., 2015). Others include aggression, depression, subjective stress, and low sense of happiness.

Depression is the most frequently reported psychiatric symptom associated with IA (Liang et al., 2021; Zenebe et al., 2021). Mental health professionals identify IA as one of the major causes of mental health problems among students in tertiary institutions (Adorjan et al., 2020).

2.7.3 Physical health

Increasing amount of time spent online has direct impact on student's physical health. Saisan et al. (2012) acknowledge that the most common physical symptoms of IA are back pain, stiffness in arms and joints, dry and strained eyes (as cited in Karacic & Oreskovic, 2017).

Adopting the correct sitting position is essential for maintaining good posture. Prolonged sitting on the computer can cause range of adverse health effects, including bad posture and back health. Students are also likely to suffer from carpal tunnel syndrome, which cause pain, numbness, tingling and weakness in the hand and wrist.

2.7.4 Emotional instability

Over the years, there have been several attempts to define IA. Young (1996) characterised IA as a wide term identifying problems arising from impulse-control and behaviour that results from high psychological dependency towards the Internet or inability to control ones urge to use the Internet. Yusuf et al. (2020) identify that IA has negative effect on students' mood modification, level of tolerance and patience. This idea is true because students who spend most of their time on the Internet rather than studying often have emotional disturbances especially when they are anxious and agitated. Similarly, individuals with emotional instability are prone to have less interpersonal skills that lead to the inexistence of social activities in their daily life (Captain, 2003).

2.7.5 Social isolation

IA can be considered as a significant threat to one's social well-being in that it enforces anti-social behaviour. IA is considered as one of the major causes of damaged relationship among students. Students who are addicted to the Internet neglect social

interaction with their family and friends. Students now use text messages, WhatsApp and emails in communicating with each other instead of face-to-face interaction. The more students are addicted to the Internet, the lesser time they spend on their social interaction with family and friends.

There is high level of loneliness among students who become addicted to the Internet (Zenebe et al., 2021). As the addiction grows, they become consumed with their Internet activities, preferring online games, chatting with online friends, or gambling over the Internet, and gradually ignoring family and friends in exchange for solitary time in front of the computer (Sanghvi & Rai, 2015).

2.8 Control Mechanisms to Evade IA

Most students use the Internet as a functional tool in enhancing their academic research, communication, interactions and entertainment. However, these students suffer from a loss of control over their Internet use resulting in personal distress, symptoms of psychological dependence, and diverse negative consequences.

With the growth of the Internet over the last two decades, the number of subjects experiencing massive negative consequences in their lives has also grown extensively (Brand et al., 2014). Consequently, Young (1998) affirms that students who experience loss of control over their Internet use suffer from social problems as well as school and/or work difficulties.

University administrators provide Internet access to students for their academic research. However, students use the Internet for purposes other than academic activities. In an empirical study, Çelen et al. (2011) found that students used the Internet for entertainment such as watching video clips (59%), playing games (49%), posting or reading on the social networks (40%), and downloading music and/or movies (40%).

Durak-Batigün and Hasta (2010) support this view that students spent long hours on the Internet for a variety of purposes. Because no strict precautions are taken to manage the use of the Internet, the Internet gradually becomes a problem for students who do not have sufficient awareness of the harmful aspects. The need for proper control mechanisms to evade IA is very important.

2.8.1 Creating awareness

University counselors have argued that students are the most at-risk population to develop an addiction to the Internet (Young, 2004). When freshmen register at level 100, they get a student ID card and most important, a free personal login account to the university's WIFI generally without online service fees to pay and no limits to their time logged on. The computer laboratory is also opened for their convenience around the clock. Among university settings, it would be prudent to recognise that students can become addicted to a tool provided directly by the institution (Young, 2004).
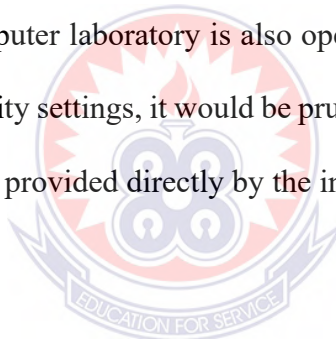
2.8.2 Self control

Self-control is an intended process that involves behaviours and mood change, resisting temptation, and working to achieve aims (Ismail, & Zawahreh, 2017). It comprises regulating behaviours, concepts and emotions and modifying socially unacceptable desires (Baumeister & Vohs, 2004).

Young (2004) avers that student must exercise self-control when engaging in online activities. This is evident from the fact that students can tumble into major depression when their online steady blips off the screen forever or they experience withdrawal when they try to quit their online habit.

Arisoy (2009) summarized the cognitive-behavioral techniques that are used for the control of IA as using the Internet at different times rather than usual times, using

external stoppers, setting targets about Internet use, trying to avoid the use of Internet-specific activities, using reminders, keeping a notebook to write other things that one wishes to do instead of using the Internet and family therapy.

2.9 Theoretical Framework

The study adopted the Uses and Gratification, and General Strain theories as the theoretical framework.

2.9.1 Uses and gratification theory

Katz et al. (1973) pioneered the Uses and Gratification (U&G) theory. But according to McQuail (2010), the theory could be traced from the early 1940's when researchers started investigating why people listen to popular radio programmes and why they read newspapers daily. The theory seems old but the emergence of IA breathes a new life into it.

The theory emerged in response to the needs of explanation to why people use certain media and the benefit they get from them. U&G is a theory that explains what people do with the media. Thus, it describes the relationships formed between the media and its active audience. Audience select and use the media to fulfill their own needs and desires (Smith & Watkins, 2020). These individuals may use the media for a variety of reasons including, but not limited to entertainment, academic research and the desire to learn about world events.

Musa et al. (2015) predicted that the emergence and widespread usage of the Internet would come with new changes in roles, personal, and social habits of media users. This diversification of the use of media promoted the U&G theory.

The central premise of U&G theory understands what people do with media, which rests on the assumption that audiences are active, rather than passive, consumers

of media (Katz et al., 1973, as cited in Stephanie & Watkins, 2020). This means that people do not only receive information, but also consciously attempt to make sense of the message in their own context. Instead of focusing on media content, Katz and Blumber (1973) sought to shift their attention to the media audience.

The basic premise of U&G theory is that individuals seek out media to fulfill their needs and this leads to ultimate gratification. Early U&G research argued that there were three primary reasons for using mass media for gratifications (Blumler, 1979, as cited in Stephanie & Watkins, 2020). They are surveillance, diversion, and personal identity.

The Internet has actually rejuvenated the utility of U&G theory because of its interactive nature. Students are described as the major users of Internet who derive gratification from its use. Gratification is pleasure, especially when gained from the satisfaction of a desire. There are three types of gratification (Gaurav, 2019). Gaurav (2019) identifies them as content, process and social gratifications. Content gratification involves entertainment, information, news, research, among others with the message carried by the medium. Process gratification is the actual use of the medium itself like Internet surfing, and new technology. Social gratification involves social networking, and interpersonal development.

Although U&G theory holds a significant status in communication research, the theory has received criticisms. McQuail (1994) comments that the theory has not provided much successful prediction or casual explanation of media choice and use. Since it is indeed that much media use is circumstantial and weakly motivated, the theory seems to work best in examining specific types of media (McQuail, 1994). Some critics argue that traditional U&G methodologies, particularly those dependent on self-reported typologies and those that relies on interpretation of lifestyle and attitude

variables rather than observable audience behaviour, are difficult to assess (Rosenstein & Grant, 1997). Thus, self-reports may not measure the individual's actual behaviour.

By focusing on audience consumption, U&G theory is often too individualistic (Elliott, 1974). It makes it difficult to explain or predict beyond the people studied or to consider societal implications of media use. Lastly, there exist lack of clarity among central concepts such as social and psychological backgrounds, needs, motives, behavior, and consequences when using U&G theory.

2.9.2 General strain theory

The General Strain theory was initially propounded by Merton (1957) and later expanded by researchers such as Agnew (1992). Merton (1957) argued that strain is a social phenomenon that is caused by the differences between an individual's expectations from self and the opportunities available to fulfil these expectations.

Agnew (1992) also postulates that strain results from three types of sources (as cited in Peck, Childs, Jennings & Brady, 2018). The first source of strain is the failure to achieve positively valued goals. This type of strain occurs due to the disjunction between expectations and actual achievements or rewards, or the actual or predicted failure to achieve positively valued goals. Research has suggested that strain is produced when barriers to success are clearly visible (Peck et al., 2018).

The second source of strain involves the real or anticipated removal of positively valued stimuli, including the death or illness of a family member, parental divorce, suspension from school, or loss of a boyfriend or girlfriend (Akers, Sellers, & Jennings, 2016). This source of strain in particular can lead to delinquent and criminal coping by managing negative emotions through illicit drug use (Agnew, 1992).

The third source of strain results from the presentation and inability of youths to legally escape from negative (noxious) stimuli. Strain theorists believe that an

individual's inability to escape from negative situations or stimuli or to achieve socially defined expectations using conventional methods can result in deviant behaviours (Jaggers et al., 2014).

Deviant behaviours on the Internet are rising as technology use increases (Power, 2000). Deviant behaviours that occur as a result of Internet use, include the same type of deviant activities performed before the inception of the Internet. These activities include: using the Internet for illegal activities that violate statutory laws, inappropriate use defined as a violation of the intended use of the Internet, obscene activities defined as entering a pornographic website or selling pornographic goods on the Internet, and using the Internet to violate copyrights laws (Daniel, 2005).

With the use of the Internet, students have advanced to exhibiting other deviant behaviours such as cyberaggression, cyberbullying, trolling, sending unwanted images and online gambling (Tanrikulu & Erdur-Baker, 2021). These students use e-mail, websites, instant messaging, chat-rooms and text messaging to antagonize and intimidate others.

The general strain theory is important to the unique challenges faced by people with IA. The theory helps in identifying students who are addicted to the Internet. Caught in a strange situation of experiencing the problems with no formal therapeutic interventions might create a long-term "negative affect state", as proposed by Agnew (1992, p. 47) and possibly result in deviant behaviours online (Mubarak & Quinn, 2019).

However, earlier versions of strain theory have been criticised for focusing on a narrow range of possible strains and also, their inability to explain why only strained individuals' resort to crime or delinquency. The theory has also been criticised for providing limited empirical support.

2.10 Relevance of the Theories to the Study

The literature reviewed on IA indicate that university students engage in several online activities. The U&G theory is an ideal theory for my study because it helped me to identify and analyse the various reasons why students use the Internet or engage in online activities to satisfy a particular need. Some of these gratifications include using the Internet for academic research, entertainment, news sharing, social interactions, and marketing purposes.

With the quest for engaging in these online activities, students develop deviant behaviours. The general strain theory is also important for the study because it helped me to identify that individual who engage in online activities and as a result become addicted to the Internet might be undergoing enormous strain and challenges which could result in deviant behaviours.

2.11 Summary

In reviewing the literature, it was evident that university students are susceptible to developing a dependence on the Internet, more than most other segments of society. This can be qualified to numerous factors including the availability of time, ease of use, the psychological and developmental characteristics of students and limited or no parental supervision. This dependence on the Internet has numerous effects on students. There is the need to adopt pragmatic control mechanisms to evade this menace.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The study seeks to examine IA among undergraduate students of UEW. This chapter discusses the methods that were used in collecting and analysing data for the research. It comprises the research approach, research design, sample size and sampling strategy, data collection method, data collection procedure, data analysis methods, ethical issues and trustworthiness.

3.1 Research Approach

Among the approaches available to research that includes Quantitative, Qualitative and Mixed methods, this study employed the qualitative approach. Creswell (2014) notes that if a concept or phenomenon needs to be explored and understood because little research has been done on it, then it merits a qualitative approach. Perspectives of undergraduate students on triggers of IA and control mechanisms is an area where little research has been done through the qualitative approach (Li et al., 2015). Qualitative research is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem (Creswell, 2014). The qualitative research approach helped to explore the perspectives of undergraduate students on triggers of IA and control mechanisms.

Qualitative research preserves and analyses the situated form, content and experience of social action, rather than subject it to mathematical or other formal transformations (Lindlorf & Taylor, 2011). The current study examines the perspectives of undergraduate students on triggers of IA and control mechanisms by way of descriptive analysis. This was done by collecting data from the participants' settings,

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data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meanings of the data (Creswell, 2014).

The current study employs the qualitative research approach because according to Shannon (2012) a choice of research method depends on the research problem being examined. The choice of qualitative research method was based on the nature of the phenomenon under study.

3.2 Research Design

The selection of a particular research design is dependent on the nature of the research problem being examined and the researchers' personal experiences for the study. Research design can be described as a strategy, plan, and a structure of conducting a research project (Creswell, 2014). Yin (2014) states that the design is the logical sequence that connects the empirical data to a study's initial research questions and, ultimately, to its conclusions. Research design is a blueprint of research, dealing with at least four problems: what questions to study, what data are relevant, what data to collect and how to analyse results (Yin, 2014).

The various qualitative research designs are ethnography, case study, grounded theory, narrative research and phenomenology. The design adopted for this study was a case study. Yin (2018) defines case study research method as an empirical method that investigates a contemporary phenomenon in-depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident. Case study was chosen because it is a study in which a phenomenon is studied in-depth and also affords the researcher an appropriate scientific justification to thoroughly investigate the perspectives of undergraduate students of UEW on triggers of IA and control mechanisms.

Yin (2018) categorises case studies as explanatory, exploratory or descriptive. According to Yin (2018) explanatory case study presents data bearing on cause-effect relationships by explaining how events happened. Exploratory case studies aim at defining the questions and hypothesis of a subsequent study or determining the feasibility of the desired research procedures when there is no pre-determined outcome. Descriptive case study presents a complete description of a phenomenon within its context. An exploratory case study was adopted for the study because it gives better understanding of the existing problem. This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood.

Yin (2018) describes two types of case studies: single case study and multiple case study. Yin (2018) explains that single case study is appropriate when the case is special in relation to established theory or where the case is extreme, unique, or has something special to reveal about the phenomenon while multiple case studies can be used to either augur contrasting results for expected reasons or either augur similar results in the studies. Studying the perspectives of undergraduate students of UEW on triggers of IA and control mechanisms lends my research to a single case study.

In order to get a deeper understanding on the perspectives of undergraduate students of UEW on triggers of IA and control mechanisms, case study is a good choice.

3.3 Sampling Technique

Sampling is an important technique that promotes the quality of inferences made by a researcher and is the process of picking a subgroup for a study. Patton (2002) explains that in qualitative research, the typical approach to sampling is purposive, with the aim of generating insight and in-depth understanding of a phenomenon (as cited in Braun & Clarke, 2013). Creswell (2014) defines purposive sampling as the selection of

sites or participants that will aid the researcher in understanding the problem and the research question. Purposive sampling was selected as the sampling technique because it generates insight and in-depth understanding of a phenomenon. Qualitative samples are selected by virtue of their ability to provide rich and thick description of information relevant to the phenomenon under investigation.

The researcher envisaged that as undergraduate students, accessing the Internet for different purposes by virtue of their programme of study is an indication that they have knowledge on online activities, triggers of IA and control mechanisms. As a result, their experiences could contribute to the study. The participants were selected after an initial exploratory study on IA. Prior to the study, recruitment forms were given to the participants. Based on their feedback, I selected the participants who had the knowledge and could provide the needed information to achieve the objectives of the research. This was done using expert sampling. Expert sampling is used when investigating new areas of research to identify whether or not further study would be carried out (Etikan, 2016).

3.4 Sample Size

Sample size is an important consideration in evaluations of the quality and trustworthiness of qualitative research. Adam (2020) explains that sample size is a representative of the population under study. Sample size used in qualitative research are often smaller than those used in quantitative research because qualitative research methods are often concerned with garnering an in-depth understanding of a phenomenon or are focused on meaning which are often centred on how and why of a particular issue, process, situation, subculture, scene or set of social interactions (Dworkin, 2012).

Daymon and Holloway (2001) refer to qualitative research as small-scale studies. In their view, qualitative researchers are interested in deep exploration in order to provide rich, detailed, and holistic description of a phenomenon. Small samples are therefore most preferred. The selected sample size for this study was 12 undergraduate students of UEW. The sample size selected had prior knowledge on student's online activities, triggers of IA and the appropriate control mechanisms. They were selected after an exploratory study on IA. The selected sample size helped the researcher to conduct focus group discussion of six participants in groups of two.

Heidari, Babor, De-Castro, Tort, and Curno (2016) explain that sex and gender differences are often overlooked in research design, study implementation, scientific reporting and general science communication. This oversight limits the applicability of research findings to clinical practice. In terms of demographics, five out of the 12 participants were females. The ages of the participants ranged from 19 to 25 years. The participants were selected from four Faculties of UEW; three from the School of Communication and Media Studies, four from the Faculty of Science Education, three from the School of Business and two from the Faculty of Social Sciences Education. These participants were selected after the exploratory studies because of their in-depth knowledge on IA.

3.5 Data Collection Method

The goal for all data collection is to capture quality evidence that allows analysis to aid the formulation of convincing and credible answers to the questions that have been posed (Creswell, 2014). To collect rich and real-life evidence, the study used interview and focus group discussion as the data collection methods.

3.5.1 Interview

Braun and Clarke (2013) define interviewing as a professional conversation, with the goal of getting a participant to talk about their experiences, and to capture their language and concepts in relation to a topic. Interviews are conversations that are held face-to-face or sometimes telephone mediated between the researcher and participants (Creswell, 2014). The current study employed in-depth interviews to enable me access firsthand information on the experiences of the participants.

Another justification for the use of interview was to achieve objectives of the study in relation to examining specific online activities that undergraduate students of UEW engage in, investigating the triggers of IA among undergraduate students of UEW and investigating the control mechanisms that undergraduate students of UEW employ to evade IA. Open ended questions were carefully designed to answer the research questions as well as address the research objectives.

3.5.2 Focus group discussion

In addition to the interviews, I employed focus group discussion as a data collection method. Focus groups are guided group discussions on one or more topics with participants who share similar experiences and/or who possess information and knowledge about the topics of discussion (Krueger & Casey, 2000). I employed focus group discussion in this study because the sample size of 12 undergraduate students of UEW could directly provide their perspectives on triggers of IA and control mechanisms. Also, group dialogue tends to generate rich information as group discussions inspire participants to share personal experiences and perspectives in a way that teases out the nuances and tensions of complex topics (Li et al., 2015).

Focus group discussion is a qualitative technique for data collection where by small group of people, usually between six and nine in number are brought together by

a researcher to explore ideas about a topic (Dilshad & Latif, 2013). The selection of focus group discussion as a data collection method helped the researcher to group the participants in two groups of six based on the sample size.

Focus group discussion is particularly used when the objective is to understand better how people consider an experience, idea, or event and can be used to explore new areas of research or to examine subjects well-known to the participants (Willis, Green, Daly, Williamson, & Bandyopadhyay, 2009). Focus group discussion was selected for the purpose of triangulation.

3.6 Data Collection Procedure

This section outlines steps that the researcher followed in gathering data for the study.

3.6.1 Interviews

Relative to the study, 12 participants were selected for in-depth interviews. Open-ended questions were carefully designed to answer the research questions as well as address the research objectives. The open-ended interview guide thus, generated qualitative and opinion-related information to answer research questions one, two and three. The interview guide was developed on the basis of concepts from extant literature on triggers of IA and control mechanisms. The rationale for conducting interviews was to avoid delays in filling and returning questionnaires by participants and also to have access to highly opinionated perspectives as data for the study.

The 12 participants were interviewed in a conversational manner within a period of 40 to 45 minutes (Croix et al., 2018). The interviews were conducted at a place of convenience of the participants. Data collected were then recorded and transcribed for patterns of themes to emerge. The researcher also took notes so that in the event the recording failed he could rely on it.

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Basically, the interviews focused on specific online activities that undergraduate students of UEW engage in, triggers of IA among undergraduate students of UEW and control mechanisms that undergraduate students of UEW employ to evade IA.

3.6.2 Focus group discussion

I employed two focus group discussions to obtain detailed descriptions on triggers of IA and control mechanisms among the 12 undergraduate students of UEW. Participant recruitment for the focus groups was conducted between June and July, 2021. Participants were allocated to one of two focus groups based on their availability. Ultimately each focus group consisted of 6 participants. The discussions lasted approximately one-hour for each focus group.

The focus group discussion guide consisted of 16 open-ended questions. The group discussion guide was developed and refined by the researcher on the basis of the research objectives, and relevant substantive theories. The group discussion was held in a congenial atmosphere, with the facilitator asking series of open-ended questions. This approach helped the participants to answer the questions asked vividly.

Major issues explored in the focus group discussions centred on participants' perspectives on online activities, triggers of IA and control mechanisms.

3.7 Data Analysis Procedure

Audiotapes of the interviews and focus group discussions were transcribed verbatim and checked for accuracy by the researcher. No software was used to assist in the coding or transcription of data. The findings of this research were coded and analysed using the thematic analysis approach with close reference to the research objectives, research questions and theoretical framework.

3.7.1 Thematic analysis

Thematic analysis is a method of identifying themes and patterns of meaning across data set in relation to a research question (Bryman & Bell, 2011). The process includes coding, categorisation and noting patterns in order to provide a relationship between the variables and factors in order to create a reasonable and logical chain of evidence.

In relation to the current study, I categorised the data into themes. I coded the various interviews and focus group discussions conducted with undergraduate students of UEW. I noted the issues that run through the interviews and focus group discussion and categorised them under various themes.

I used the inductive type of thematic analysis by Braun and Clark (2013) where the researcher does not fit the data into any form of preconceived analysis or pre-existing coding frame. I further interpreted the findings using theories to draw meaning of responses from informants. Direct quotes were also used to support the discussions and interpretations. Pseudonyms were given to participants so that quotes given by the same individual were identifiable. This helped the researcher in concealing the identity of the participants.

Three overarching themes emerged from the interviews. For each theme, subthemes were also derived. During the process, I organised the codes into main themes and sub-themes. First, codes were generated from the research objectives on specific online activities that undergraduate students of UEW engage in, triggers of IA and control mechanisms to evade IA. Then, I reviewed the codes in context, providing labels and definitions reflective of the raw data. Further, in accordance with DeCuir-Gunby et al. (2011) recommendations, the second round of coding was conducted on the level of meaning via a data-driven method, which enables codes to be developed on

the sentence and paragraph level. In this round of coding, I checked whether any new theme or sub-theme could be identified.

3.8 Ethical Issues

Creswell (2014) explains that there is the need for researchers to anticipate ethical issues that may arise during their studies. In terms of safeguarding these ethical issues, Creswell (2013) affirms that the researcher must be mindful of study participants privacy and confidentiality when conducting a qualitative study. Thus, researchers need to protect their research participants, develop trust with them, promote the integrity of research, guard against misconduct and impropriety that might reflect on their organisation or institution and cope with new challenging problems (Israel & Hay, 2006).

Generally, participation in a study should be seen as voluntary. During the process, the researcher should explain the instructions on the consent form to participants so that they can decide whether to participate in the study or not (Creswell, 2014).

Also, the use of Internet responses gained through electronic interviews or focus group discussions need permission from participants (Creswell, 2014). Before the interviews, participants were made to sign a consent form to indicate their willingness in the data collection. However, participants were not coerced into signing the consent form.

Before the inception of the interview, the researcher sought the consent of participants to record the conversation in order not to violate ethical issues. Participants were assured of confidentiality since this work is solely for academic purpose. Additionally, actual names of participants were replaced with pseudonyms in order to

conceal their identity. The names of people who were mentioned during the interview were also concealed.

3.9 Trustworthiness

Trustworthiness of a study refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study (Pilot & Beck, 2014, as cited in Connelly, 2016). Connelly (2016) proposed four criteria to be considered by qualitative researchers in pursuit of trustworthiness. They are: credibility in preference to internal validity, transferability in preference to external validity, dependability in preference to reliability and confirmability in preference to objectivity. One of the key criteria addressed by positivist researchers is that of internal validity, in which they seek to ensure that their study measures or tests what is actually intended (Shenton, 2004).

Creswell (2014) defines qualitative validity as the extent to which the researcher checks for accuracy of findings from the research by employing certain procedures, while qualitative reliability indicates that the researcher's approach is consistent across different researchers and different projects. The reliability techniques are triangulation or using multiple data sources; the use of member checking; the use of rich, thick descriptions to convey findings; clarification of the biases that the researcher brings to the study; presentation of negative evidence; spending prolonged time in the field and the use of peer briefing to enhance accuracy (Creswell, 2014).

Findings of the study are reliable on the basis of triangulation. I used interviews and focus group discussions which formed the main data collection methods.

I also used some strategies to help ensure honesty in respondents. In particular, each person who was approached to be interviewed was given the opportunity to refuse to participate in the research. This ensured that data collection sessions involved only

those who were willing to participate. I also requested the consents of the respondents of this current study and had their respective responses recorded on tape.

Creswell (2014) asserts that validity include checking of transcripts for accuracy; avoiding redefinition of codes; coordination among coders in the case of team research or when the researcher is assisted by another person during the coding process. From the above, the researcher played back recorded interviews and showed transcribed sheets to respondents to determine their validity, maintaining rich and thick transcriptions of the interviews.

In terms of confirmability, I ensured that the findings of the research were the results of the experiences and ideas of the respondents thus avoiding the intrusion of the researcher's biases.

CHAPTER FOUR

FINDINGS AND ANALYSIS

4. 0 Introduction

This chapter is a comprehensive presentation of the findings from the data collected on IA. The research questions posed at the beginning of the study are answered in this section. Data obtained have been reduced into themes and analysed by way of the theories namely uses and gratification and general strain, and earlier works discussed. These earlier works include specific online activities that students engage in, triggers of IA and control mechanisms employed by students to evade IA. Specific codes were used to label respondents so as to ensure their anonymity. This helped the researcher to protect the research participants, developed trust with them, promote the integrity of research and guard against misconduct and impropriety.

The following are the codes used for the respective participants: Interview Participant (IP) and Focus Group Participant (FGP).

The research questions that guided data collection and analysis are:

1. What are the specific online activities that undergraduate students of UEW engage in?

2. What are the triggers of IA among undergraduate students of UEW?

3. Which control mechanisms do undergraduate students of UEW employ to avoid/evade IA?

4.1 RQ1. What are the specific online activities that undergraduate students of UEW engage in?

Six overarching themes emerged from the coding. They are: academic research, source of information, entertainment, news, socialisation and marketing. These themes are presented in the table below:

Table 1: Themes on Students' Online Activities

THEME	NUMBER OF PARTICIPANTS
Academic Research	10
Source of Information	8
Entertainment	11
News	9
Socialisation	8
Marketing	3

Source: Field data (2021)

With the Internet considered as the main channel by which students explore over a wider area, research question one therefore sought to examine the specific online activities that undergraduate students of UEW engage in. A thorough coding of the data collected revealed that undergraduate students of UEW use the Internet for various reasons to satisfy certain gratifications.

With the aid of the uses and gratification theory, the themes were critically analysed to explain why students use the Internet to satisfy a particular need. Stephanie and Watkins (2020) note that the central premise of uses and gratifications theory emphasise what people do with media; and this rests on the assumptions that people are active rather than passive consumers of the media. Uses and gratifications theory is an

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audience-centered theory used to understand how and why people select and use a variety of mediums, including the Internet (Smith & Watkins, 2020).

4.1.1 Academic research

Findings from the study showed that undergraduate students use the Internet for their academic research. Out of the 12 participants, 10 indicated that they use the Internet for academic research. The Internet is a very powerful worldwide instrument, which serves as a good source for research work and learning. It generates current information, facts-finding, and is the most outstanding invention in the area of academic research.

The theme of academic research points to the fact that the use of Internet for educational purpose is the heart of student's academic achievement (Kim, 2011). The study revealed that it is impossible for students to engage in their academic or research activities without the Internet. One of the reasons is that the Internet creates positive impact in education by increasing communication with classmates and lecturers, reviewing e-books, increasing access to libraries and educational databases, and improving study hours and study habits (Akhter, 2013). Sahin et al. (2010) support this view because they note that the use of credible Internet resources is of greater importance for academic study, especially in higher level courses which require academic review of literature. Students have access to global ideas in their pursuit of academic excellence. One respondent commented as follows:

> I use the Internet for academic research. When I'm studying and come across unfamiliar words, I google for the root meaning of that word in order to understand the concept better. I also watch videos from You Tube on concepts which seem so difficult when learning. Sometimes, I do my personal studies on the Internet on concepts which I'm not taught in class (FGP).

The above excerpts by the respondent confirm the view of Siraj et al. (2015) that the Internet help students to broaden their knowledge by accessing information worldwide and enhancing easy communication in the academic community. The Internet is a very powerful worldwide instrument which serves as a good source for research work and learning among students.

Findings from the study indicate that students use the Internet when conducting research for their assignments, semester papers and project work. The findings of the study are in line with Kumah's (2015) study which found that in Ghana, undergraduate students see the library as a favourable environment for studies, and a source of relevant and realistic information for their research work. This also confirms the views of Gaurav (2019) which avers that the uses and gratification theory provide content gratification that serves as the basis for students' academic research.

4.1.2 Source of information

Findings from the study revealed that university students use the Internet as a tool in searching for information. Out of the 12 participants, eight acknowledged that they use the Internet to access information on issues related to their course of study and their personal interactions. It is evident from the study that the Internet opens doorway to wealth of information on educational issues by increasing opportunities for students to increase their knowledge. The Internet is one of the most important sources through which students quickly get access to information, remain in touch with their friends, and perform other activities. It is a vital source of information, a social platform, and a business network. Many university students have described the Internet as a functional tool that helps them to communicate and interact with their lecturers. Chou (2001)

supports the above view that university and college students appreciate the interactivity, ease of use, availability and breadth of information accessed on the Internet.

The study revealed that the Internet is the most useful technology of modern times which help students gather information on educational materials. Popular search engines such as google and chrome are the topmost choice of students as they offer instant and easy reach to vast amount of information. This affirms the view of Akhter (2013) that the Internet is becoming a widely accepted channel for information exchange and networking among students. Almarabeh (2016) agrees that people use social media networks, and in particular, university students represent a large proportion of users on social media networks who communicate, search for information and interact with friends.

Through the Internet, students search for information related to their course of study. A respondent indicated how the Internet help him in accessing information.

> As a student, I visit the Internet to get information which is important to my studies (IP 1).

This statement from the respondent confirms the view of Park and Biddix (2008) that on a more comprehensive basis, it can be pointed out that the Internet has some functions, especially in education, and these can be listed as storehouse of information, communication without boundaries, online interactive learning, innovation in the new world, improve interest in learning, global education, and information catalogues. Interactivity has been pinpointed as the key feature of Internet technology that makes it a compelling communication tool (Lustria, 2007). This view is supported by Greenfield (1999) who asserts that the Internet's accessibility, intensity of information that can be accessed online and the potency of its contents are unique characteristics which contribute to its popularity among students.

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4.1.3 Entertainment

Findings from the study revealed that students use the Internet as a medium of entertainment. Out of the 12 participants, 11 of them said that one of their online activities is entertainment.

The theme of entertainment portrays that student use the Internet for pleasure (Dogruer et al., 2011). The Internet plays an important role in helping students relax their minds while exploring more about the world. The Internet has changed the way entertainment is viewed, consumed and received. The Internet offers more convenience and ease to students when it comes to entertainment.

Previously, students were entertained through televisions and movie theatre. Currently, with just a click of the mouse, students can get access to information on entertainment. The Internet has therefore taken entertainment to another level. Huxhold et al. (2020) state that the Internet has expanded our idea of entertainment far beyond past norms of going to the movie theatre or reading magazines.

The data revealed that students engage in playing online games, chatting with friends, watching online videos and listening to online music. This affirms earlier submission of Ndawula (2011) that students engage in downloading music and videos and playing online games as a source of entertainment. Students use the Internet for many reasons. The benefit of entertainment on the Internet has actually transformed the world of students. Zainudin et al. (2013) support the above view that widespread Internet availability can substantially benefit students by enhancing their access to a broader range of information, thereby creating an avenue for social communication and entertainment.

A respondent commented as follows:

> I actually use the Internet as my source of entertainment. Everyone
> needs entertainment in one way or the other. If I want to entertain
> myself, I just use the google or opera mini to search on the latest
> movies. I download them and watch. I also play online games just
> to entertain myself (IP 2).

The comment from the respondent indicates that the role of entertainment among students cannot be overemphasied. Entertainment brings happiness, which is the most powerful medicine that helps in keeping student's mental health and well-being.

The study also revealed that students use the Internet as a source of entertainment through social media. It is interesting to acknowledge that social media has grown with a great rhythm and has become extremely popular. Most students use social networking sites such as WhatsApp, Twitter and Facebook as a new form of entertainment. One respondent said this:

> Facebook is where I usually have my fun. I am the type who use
> Facebook basically to connect with friends. WhatsApp entertains
> me when I watch friends' status. Some of the messages are funny
> (IP 4).

These social media handles enable students to acquire multitask experience by connecting with others and sharing their opinions. This corroborates the argument of Dogruer et al. (2011) that the use of the Internet is mainly for social and entertainment purposes since the Internet revolution is not just limited to finding information but also bringing people together. Social media are extensively used and are efficient in reaching many audiences with great speed and a lot of content offering the capability of interactions. Students watch funny videos on WhatsApp and Facebook. This enables students to have fun. Ndawula (2011) agrees that some of the activities that undergraduate students engage in for entertainment are: online dating which allows them to make contact and communicate with each other, downloading music and videos, and playing online games. This also confirm the views of Gaurav (2019) who

indicates that the uses and gratification theory provide content gratification which serves as the basis for students' source of entertainment.

4.1.4 News

Findings from the study revealed that students use the Internet as a medium of listening to news. Out of the 12 participants, nine indicated that they use the Internet as a medium for listening to news around the world.

The study revealed that the Internet serves as a medium through which students access news stories and also share them. This affirms the view of Dogruer et al. (2011) that the Internet can be used as a tool by which one gets himself/herself abreast with the latest news around the world. It also helps in getting any kind of information that serve different purposes such as learning more information about a hobby or health.

University students' consumption of news has taken on a newer, and more pervasive form. With the advent of the Internet, news has become readily accessible to students. Online news sharing provides the common informational background for further interactions, allowing students to exchange opinions naturally, and strengthening feelings of connection with one another. One respondent commented as follows:

> I read news from the Internet. This time round you wouldn't get time to go and read graphic and other newspapers. Graphic is now online. You can read news pertaining to politics, education and health. If there are any occurrences, they put it on these online platforms. You just glance through and actually see what is happening (IP 6).

With the prevalence of Internet, students access news stories through social media platforms. According to Mitchell and Page (2014), it cannot be ignored that social media have become a constitutive part of online news distribution and consumption among students. On social media platforms, a piece of news can be distributed and discussed by people around the world within minutes. Sharing news on

social media platforms such as WhatsApp, Facebook and Twitter have become a phenomenon of growing social and economic importance among students. This confirms earlier submission by Kümpel et. (2015) that given today's rapid dissemination of social media platforms such as Twitter and Facebook, news sharing among students have increased tremendously. One of the respondents said this:

> I use search engines and other social media handles to access news on the Internet. When you subscribe to their channels, they give you updates on the latest trending news (IP 4).

The Internet has become an integral part of most students' life because of its potential of exposing them to news updates.

4.1.5 Socialisation

Findings from the study revealed that students engage in socialisation as part of their online activities. Out of the 12 participants, eight acknowledged that they engage in socialisation while online.

The Internet has revolutionised the way students socialise among themselves. Socialisation is about people being able to mingle and establish connections at one or more levels. They speak with one another, share ideas and information and confirm the connections made through an agreed upon means. The initial phase of socialisation is achieved through interacting with one another and sharing ideas and information. As a result of this shared experience, students are able to familiarise and relate to one another and also establish connections.

The Internet provides the platform for social interactions among students. Students engage in online dating as part of their socialisation. This confirms the view of Ndawula (2011) that some undergraduate students engage in online dating which allows them to make contact and communicate with each other.

The study revealed that the Internet offers many different ways for students to socialize. One of the avenues for socialisation is the email. Email is a simple form of one-to-one communication. It is used in the exchange of informational messages between at least two people over a computer network. Email is now a ubiquitous channel of communication, to the point that in current use, an e-mail address is often treated as a basic and necessary part of many processes especially on university campuses. It is frequently used by university students in their interactions with lecturers on submission of assignments and getting in touch with the administration.

Instant messaging programmes shared on Facebook and WhatsApp also offer more immediate forms of chatting, while video call software allows students to socialise visually, not just through text chat. Instant messaging has become a common way for students to socialise with peers, friends, and communicate with family members. Evolving technology means that new ways to communicate online are constantly developing. For example, Facebook, the world's largest social network (Eghtesadi & Florea, 2020) includes elements of text-based, photo sharing, private message and instant messenger forms of communication. As a way of socialising, students send and accept friend request while on Facebook and WhatsApp. Widespread Internet availability can substantially benefit students by enhancing their access and avenue for social communication (Zainudin et., 2013).

One of the participants said this:

> I socialise a lot on the Internet through my social media handles. For example, on Facebook, a lot of people sends me friend request and I also send them friend request. I accept their friend request and they also accept mine. Some of them are those that I know but have lost their contact for a longer period so the Internet helps in socialising a lot
> (IP 7).

The above comment from the participant indicates that the Internet affects the socialisation of students positively by alleviating their loneliness. The social-network sites such as Facebook and Twitter provide a structure through which students formalize their friendships and connections as well as sharing wealth of information. Through socialisation on the Internet, relationships can be created as well as maintained. In this way, the Internet can be seen as a catalyst to help create new real-life friendship.

4.1.6 Marketing

Findings from the study revealed that students engage in online marketing. Out of the 12 participants, three indicated that they use the Internet for marketing. The study revealed that the Internet enable students to buy and sell products online. Initially, the Internet seemed to be used primarily to obtain information. Currently, the Internet is also used for online marketing. The Internet represents the new revolution and frontier of marketing which has created a paradigm shift in business and at the same time changed the ways of engaging in business among students.

Early Internet marketing tools, such as banners and pop-up advertisements have given way to a new model of Internet marketing that offers more value to the students. This involves the use of search engines and social networking sites, such as Facebook and Twitter. This new type of Internet marketing strategies help students to interact and connect with advertisers. One of the participants said this:

> WhatsApp status has been so much helpful. I post items that I want to sell over there. My friends watch them and we do the bargaining and finally they come to buy the stuff from the house. And then sometimes when it is necessary, I post some of the things on my Facebook page which people go there to watch. I do marketing from there also (IP 9).

The above excerpts by the respondent confirms the view of Cheung and Huang (2005) who argue that the Internet has impacted the lives of people from all walks of life, including impacts on business, shopping and social activities. Hussain et al. (2012) agree that initially, the Internet seemed to be used primarily for obtaining information, but it is now used to network socially with friends and colleagues, shop online, and build new relationships. It has been accepted that the Internet will represent the new revolution and frontier of marketing (Hussain et al., 2012).

4.2 RQ2. What are the triggers of IA among undergraduate students of UEW?

The study revealed that several factors trigger students' use of the Internet. The qualitative findings which include anxiety, depression, curiosity, boredom, loneliness and academic research demonstrated negative emotions and situational triggers for many students to engage in intensive use of the Internet. Unfortunately, use of the Internet as a coping strategy for negative psychological states may also perpetuate these states in the long-term. This affirms Festl et al. (2013) view that on a psychological level, some people use the Internet as a reward or coping strategy to overcome emotional crises or dissatisfaction. Research suggests that use of the Internet may be similar to self-medication with alcohol and other psychoactive drugs (Gómez-Galán et al., 2020; Kim et al., 2020).

Theorists have suggested that problematic Internet use is a palliative coping mechanism for negative affective states and mental distress (Jaggers et al., 2014). For students in this study, the negative emotional states resulted from palliative Internet use. Students intensive use of the Internet both contributed to and exacerbated negative emotional states.

The General Strain Theory by Merton (1957) is used to explain this negative emotional state caused by IA. According to Agnew (1992), strain result from three

sources. The first source of strain is the failure to achieve positively valued goals. The second source of strain involves the real or anticipated removal of positively valued stimuli, including the death or illness of a family member, parental divorce, suspension from school, or loss of a boyfriend or girlfriend. The third source of strain results from the presentation and inability of youths to legally escape from noxious stimuli.

The study revealed that students who were affected by this intensive Internet use also exhibited deviant behaviours. This confirms the view of strain theorists that individual's inability to escape from negative situations or stimuli or to achieve socially defined expectations using conventional methods result in deviant behaviours (Jaggers et al., 2014). Tanrikulu and Erdur-Baker (2021) support the above view that through the use of the Internet, students have advanced to exhibiting other deviant behaviours such as cyberaggression, cyberbullying, trolling, sending unwanted images and online gambling.

The study revealed themes that trigger excessive use of the Internet among students. These themes were characterised by the academic, and emotional or psychological factors that heighten university students' desire to engage in online activities. Many participants noted that more than one of these factors contributed to their Internet overuse at different times. The study revealed that factors that triggered IA among students are anxiety, depression, curiosity, boredom, loneliness and academic research. The study also showed that students use the Internet to seek solace from these triggers and escape. Table 2 below summarises the themes derived on triggers of IA.

Table 2: Themes on Triggers of IA

THEME	NUMBER OF PARTICIPANTS
Anxiety	8
Depression	6
Curiosity	7
Boredom	8
Loneliness	5
Academic Research	9

Source: Field Data (2021)

4.2.1 Anxiety

Findings from the data collected as indicated in Table 2 revealed that anxiety is one of the triggers of IA among students. Out of the 12 participants who took part in the study, eight said that anxiety is a major factor that triggers their online immersion. Results of the study showed that prolonged use of the Internet create situations which causes anxiety and distress among students. This is evident from the table as majority of the participants indicated that anxiety triggers their online immersion. This affects their physical, psychological, economic, social, family, and personal relationships.

Anxiety is the total response of a human being to threat or danger (Moss, 2002). When anxiety sets in, students find it difficult to study, manage their daily tasks and also relate well with others. The six main categories of anxiety disorders are phobias, panic, generalized anxiety, obsessive-compulsive disorder, acute stress disorder and posttraumatic stress disorder (American Psychiatric Association [APA], 2000). Rector et al. (2016) argue that even though each of these anxiety disorders is distinct in some ways, they all share the same features such as irrational, excessive fear, apprehensive, tense feelings, and difficulty managing daily tasks.

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Results of the study reinforces the study of Nastizaei (2009) which asserts that students addicted to the Internet have considerable anxiety and apprehension. These students may therefore use the Internet as a way to escape.

The study showed that students who suffer from anxiety often have a great deal of trouble communicating and interacting with others in a healthy, positive, and meaningful way. This confirms the view of Baojuan and Qing (2016) who aver that anxiety is a significant indwelling emotional factor in individuals which can be regarded as a mediating variable of IA. One participant remarked as follows:

> On a psychological level, anxiety drives me to be on the Internet. Anxiety is a natural response to stress. It is a feeling of fear or apprehension about what is to come. So, when I am anxious, about anything, I visit the Internet as a way of releasing the stress (FGP).

The above excerpts by the respondent confirm studies by Zainudin et al. (2020) that the Internet is a primary resource to help students in completing their assignments, conducting research and even as a medium to release their stress.

In recent times, disorders resulting from anxiety have become one of the most important issues for psychologists, psychiatrists, and behavioural science experts. According to the World Health Organization (2018) mood disorders such as anxiety constitute 35% of all mental disorders, most of them originating from childhood and adolescence.

Other participants indicated that they frequently use social media as a way of managing their anxiety on issues. While some participants reported updating their status constantly, others reported checking others status.

One participant said this:

> I visit WhatsApp platforms to check on some WhatsApp messages and also update my status. I engage in things that will make me have fun. Sometimes I visit WhatsApp platforms when anxiety sets in. So, I just visit to release stress. Yea, that's what I do on WhatsApp (IP 12).

The above excerpts from the participant shows that the use of WhatsApp enable students to release stress. Some of the WhatsApp messages are funny. When students watch them, they become happy and have fun. WhatsApp also stimulates collaboration and exchange of ideas between students and their peers.

However, Agnew (1992) argues from the general strain theory that stress, and negative social relationships, can cause negative emotions leading to deviant behaviour or negative emotions such as frustration and anger. Frustration leads to negative self-talk that induces a negative spiral of thinking, leading to more aggressive behaviour. The long-term physical effects of uncontrolled anger include increased anxiety, high blood pressure and headache. These negative emotions affect student's psychological well-being and creates pressure for corrective action.

4.2.2 Depression

Findings from the study revealed that students often visit the Internet when they are depressed. Six out of the 12 participants indicated that depression is a major contributing factor for students to be online. Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration (World Health Organisation [WHO], 2012). These problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities.

Depression is one of the most widespread diseases across the world and a major factor in mental health problems among students (Sarokhani et al., 2013). During their academic life, students face many contradictions and obligations to succeed, especially at university (Arslan, Ayranci, Unsal & Arslants, 2009). Therefore, it is important to understand concerns regarding students' mental health.

Depression is a common and serious medical illness that negatively affects how a person feel, think and act. Zenebe et al. (2021) assert that depression is the most frequently reported psychiatric symptom associated with IA. Findings of the study are consistent with prior research that showed an association between intensive Internet use and depression. According to McKenna and Bargh (2000), depression results in a disruption of the normal lives of students associated with increase in IA. Yang et al. (2005) also aver that low self-esteem, low motivation, fear of rejection and the need for confirmation from others are commonly observed among people who are depressed as a result of intensive Internet use.

Depression causes feeling of sadness and/or loss of interest in activities that a person once enjoyed. It can lead to a variety of emotional and physical problems and decrease the ability to function both at school and home. However, Tripathi (2017) is of the view that students' excessive Internet use is worthy of attention because of the consequences on their mental health. Mental health professionals identify IA as one of the major causes of mental health problems among students in tertiary institutions (Adorjan et al., 2020).

The results of the study showed that students who were depressed usually engaged in online activities as a way of getting rid of these psychological characteristics. Some of the participants indicated that when they feel anxious, lose focus, irritable and in deep sorrow, they visit the Internet. The study revealed that

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pathological use of the Internet has become an emerging mental health issue among undergraduate students in Ghana. Some of the indicators of these pathological Internet use are failure to eat for long period, little sleep, and limited physical activity.

One participant said this:

> When a student is depressed, you easily realise it through conversation. Such a person does not communicate anything meaningful. Anytime he/she speaks, you will see that his language is all about the Internet. This will have negative effect on the person (FGP).

Strong dependence on the Internet is associated with the elimination of the individual from the real world which in turn reduces happiness and social interaction. Bhat and Kawa (2015) support this view that excessive Internet use can displace valuable time that people spend with family and friends. This excessive Internet use leads to smaller social circles and higher levels of loneliness and stress. The user's mind engages in ineffective imaginations which would have no outcome but depression.

4.2.3 Curiosity

The study revealed that widespread use of the Internet among university students have contributed to increased curiosity about what type of online activities students engage in. Out of the 12 participants, seven said that curiosity is a major factor that triggers their online immersion.

Curiosity is a powerful motivator of behaviour initiated at exploring actions to resolve uncertainty. It has been considered the basic instinct, an innate mechanism that enable students to explore the Internet. The results of the study revealed that curiosity triggers students desire to be on the Internet. Kaya (2011) supports this view that students spend more time and cannot keep the time spent under control when they are online.

The study revealed that students are curious to visit social media sites for fun and engage in other social interactions. This is evident in their quest to seek for information about popular artistes or friends on social media in terms of up-to-date post including photographs. One of the reasons why students are curious to use the Internet is due to the availability of social networks such as Twitter and Facebook. One of the participants said this:

> Sometimes I am curious to visit the Internet. I remember one time when I was in Senior High School. We were taught reproduction. So, I tried to actually know what it entails. So, curiosity also sometimes make me go there to look at certain things. And sometimes too, I feel like I want to have fun. Like I want to talk to people. People that I've seen for long. I go there to check up on them, we talk, we share a lot of ideas and stuffs (IP 11).

However, when students are curious online, they waste precious time which leads to IA. Spending too much time online has negative effect on mental and physical well-being of students. These negative effects can lead to anxiety, sleeping disorders, depression, isolation, and feelings of guilt. It can also cause headaches, weight gain, carpal tunnel, and blurred or strained vision. Being curious online has both short-term and long-term effects on student's health (Ho, Yeh, Wang, Hu & Lee, 2021).

4.2.4 Boredom

Findings from the study revealed that boredom is a common trigger of IA among students. Out of the 12 participants, eight indicated that when they are bored, they visit the Internet. According to Ko et al. (2012), boredom is one of the possible etiologies responsible for the high risk of IA among students. Li et al. (2015) also confirms the above statement that boredom is one of the common triggers of intensive Internet use among students. Boredom is significantly associated with IA and Internet-related functional impairment among university students. Vodanovich (2003) collaborates the above view that boredom has been found to be significantly associated with problems

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of negative effect, behaviour, interpersonal relationships, and occupations among students.

Boredom is an aversive experience that signifies failure to engage with one's environment in a desired manner despite one's motivation to do so (Danckert & Merrifield, 2016; Eastwood et al., 2012). On a psychological level, Boredom is such a common affective experience that most students have difficulty recognizing and distinguishing from other related emotions and affective states (Goldberg et al., 2011; Van et al., 2012). Boredom is a very common experience among students and has been accompanied by numerous negative psychological, social, academic, occupational and interpersonal problems (Goldberg et al., 2011).

Regardless of the level of the emotion, most participants noted that particular feelings and moods triggered desires to engage in specific Internet activities. Participants discussed the Internet as their primary strategy for coping with boredom. Others seemed to link the Internet to specific type of boredom relief such as laughing, connecting with others, and information retrieval. Some of the participants noted that whenever they were bored, and stressed, they just got online to relax. One participant said this:

> Sometimes when I am bored, I just switch on my data and start
> viewing some friend's status (FGP).

However, spending much time online puts financial constraints on students considering the amount of money used in buying data bundles. This inadvertently affect their studies.
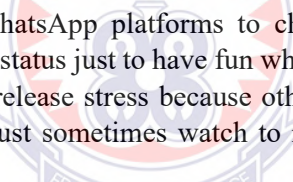
For other participants, the Internet is a means of relief any time boredom arose due to easy access on mobile devices with data bundles. One participant said this:

> When I am bored, I always want to log on to the Internet using my
> mobile phone. Some of my friends always post comic status. I
> watch them to release stress (IP 1).

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Boredom is a state of being weary and restless through lack of interest. When a student feels bored in an environment which cannot provide enough emotional stimuli, that individual tend to look for something new and exciting to alleviate the boredom.

Some participants had the immediate desire to engage in different activities on the Internet such as browsing social media sites when feeling bored. Participants who had boredom susceptibility, impulsivity, and novelty/sensation seeking temperaments were at elevated risk for addictive behaviours. Thus, it is intriguing that many students in this study reported Internet use as a primary means of coping with boredom.

Several quotes from this study indicate that access to the Internet has lowered students' thresholds for boredom. Such students become bored more quickly and have increased difficulty concentrating on other school/work-related tasks. One participant said this:

> I visit my WhatsApp platforms to check on some WhatsApp messages and status just to have fun when I am bored. Sometimes I go there to release stress because others have their status very funny. So, I just sometimes watch to release stress when bored (FGP).

The above excerpt from the participant indicates that students often visit the Internet when they are bored. This corroborates the view of Li et al. (2015) that boredom is one of the common triggers of intensive Internet use and it is significantly associated with Internet addiction and Internet-related functional impairment among university students.

4.2.5 Loneliness

Findings from the study revealed that loneliness is one of the triggers of IA among students. Out of the 12 participants interviewed, five said that loneliness was a major factor that triggered students to be online. LaRose and Peng (2009) demonstrated that students who were lonely develop compulsive Internet usage behaviours, and this

prevents them from the building healthy social relationships and interactions in their daily life. Gierveld et al. (2006) corroborates this view that loneliness is a subjective psychological discomfort that people experience when their network of social relationship is significantly deficient in either quality or quantity. Loneliness is a universal human emotion that is both complex and unique to each individual. Because it has no single common cause, the prevention and treatment of this potentially damaging state of mind can vary dramatically. People who are lonely often crave human contact, but their state of mind makes it more difficult to form connections with other people.

Loneliness is a frequently reported mental illness exhibited among those addicted to the Internet (Karapetsas et al., 2015). Lonely individuals may be drawn online because of the increased potential for companionship, the changed social interaction patterns online, and as a way to modulate negative moods. Ozdemir et al. (2014) support the above view that loneliness is an important factor in IA because lonely people were more likely to use the Internet for social interaction. Loneliness is a subjective psychological feeling or experience that occur when an individual senses lack of satisfactory interpersonal relationships and a gap between his or her desired and actual levels of communication (Zhang et al., 2018).

The results of the study showed that loneliness was one of the main antecedents of IA alongside feelings of anxiety, depression and boredom among students. One participant said this:

> I think what triggers IA is loneliness because when you are alone and bored, you feel like visiting other social media platforms to see what is going on. So immediately you log on to these platforms and start chatting, you become glue to the Internet. So, I think that has also caused the addiction (IP 6).

The results show that excessive use of Internet is associated with loneliness among university students. Possible reasons could be from the fact that people who spend more time on the Internet have the opportunity to create personal relationships with other Internet users. This corroborates the view of Akin and Iskender (2011) that excessive Internet use can displace valuable time that people spend with family and friends. This increases their level of loneliness.

Some researchers have demonstrated that social skills and coping methods for negative emotional events as well as social support, especially from core family members, rather than demographic variables such as sex, age, marriage, occupation, educational level, family, economic conditions, and socioeconomic statuses, substantively influence loneliness (Kim et al., 2009; Tokunaga & Rains, 2010; Yen et al., 2009). Lonely people are attracted to interactive social activities facilitated by the Internet that provide a sense of belonging, friendship, and communication. It has been shown that lonely people are likely to spend most of their time on the Internet since it creates social environment in which they can interact with other people (Amichai-Hamburger & Ben-Artzi, 2003).

4.2.6 Academic research

Findings from the study revealed that academic research is one of the triggers of IA. Out of the 12 participants who took part in the study, nine said that academic research triggered their online immersion. The nature of students' studies requires that they visit the Internet frequently for their academic work.

A respondent commented as follows:

> I visit the Internet often for my academic research. With the introduction of the learning management system, I visit the Internet to access quizzes and other tutorials related to my academic study. I also use the Internet to submit my assignments (IP 4).

Akhter (2013) corroborates this view by the respondent by noting that the use of the Internet helps students positively in their academic research by increasing communication with classmates and professors, increasing access to libraries and educational databases, and improving study hours and study habits.

Findings of the study revealed that with the advent of the Internet on university campuses, students have additional tools to access information that could broaden their horizons and improve their academic performance. This view is supported by Asan and Koca (2006) that undergraduate students explore the Internet for purposes of their academic research. Students visit the Internet to access library catalogs, bibliographic databases and other academic resources in text and graphics.

A participant said this:

> I visit the electronic library through the Internet to search for information concerning my programme of study (FGP).

The study revealed that the Internet has given a new approach to education where students do not only depend on their lecturers for tutorials but also engage in online academic research.

4.3 RQ 3. Which control mechanisms do undergraduate students of UEW employ to avoid/evade IA?

The study revealed themes on the control mechanisms employed by students in evading IA. The themes identified are: self-restrain, awareness creation, administrative restrictions and purposefulness. Table 3 below highlights the various themes and their frequency.

Table 3: Themes on Control Mechanisms to Evade IA

THEME	NUMBER OF PARTICIPANTS
Self-Restraint	9
Awareness Creation	5
Administrative Restrictions	7
Purposefulness	10

Source: Field Data (2021)

With rapid advancement in technology over the past decade, the Internet has become an integral part of the lives of many students. The use of the Internet is in line with what Apuke and Ayendo (2018) said. They note that the availability and accessibility of the Internet could be said to have positively influenced the lives of many people, especially university students all over the world. The widespread nature of the Internet helps university students by improving access to online information and providing new opportunities for social communication and entertainment. Masud et al. (2016) also indicate that due to technological advancement and the growing available access of the Internet, students are logging on to the net for every possible reason.

In spite of the fact that the Internet helps students positively in many ways, IA is an important issue that needs to be addressed. Pejović-Milovančević et al. (2009) assert that IA has been accepted as a clinical entity with profound negative effect on social, educational and economic functioning among students. With the growth of the Internet over the last two decades, the number of students experiencing massive negative consequences in their lives has also grown extensively (Brand, Young & Laier, 2014).

Consequently, Young (1998) affirms that students who experience loss of control over their Internet use suffer from social problems as well as school and/or work difficulties. One of the consequences of IA among students is the exhibition of deviant behaviours. This is in line with what Jaggers et al. (2014) identified from the general

strain theory that student's inability to escape from negative situations or stimuli or to achieve socially defined expectations using conventional methods can result in deviant behaviours.

Investigating the intensity of IA among university students help parents and university administrators to intervene appropriately, considering the threats of impaired academic performance, physical, psychological and social wellbeing. There is ardent need to analyse the control mechanisms of IA among students in order to reduce their impact. Early intervention and identification of those showing signs of problematic Internet use may prevent the development of maladaptive coping responses and addictive behaviour, thus preventing future negative psychosocial consequences.

4.3.1 Self-Restraint

Findings of the study revealed that self-restraint is a control mechanism that could be used to evade IA among university students. Out of the 12 participants, nine indicated that students do evade IA when they exercise self-restraint. Self-restraint is the ability to delay immediate gratification of a smaller reward for a larger reward later in time (Gillebaart, 2018). It is the ability to restraint oneself, in particular one's emotions and desires, especially in difficult situations. Galla and Duckworth (2015) support this view that students with higher levels of self-restraint have habits that align with their long-term goals and increases their habit for studying.

In spite of the technological services of the Internet to students, scientists and researchers have reported the negative effects that result from its abuse (Tang et al., 2017; Patel, 2009; Zenebe et al., 2021). The need for self-restraint while on the Internet is important. Young (2004) avers that student must exercise self-restraint when engaging in online activities. One participant said this:

> I will say that students are the master planners of their own lives. I will entreat my fellow students to exercise self-restraint when engaging in online activities. Those who are into betting, for me emotionally and psychosocially it affects them and I feel students should actually eschew them. And I know sometimes it is habitual so it's difficult. I will advise my fellow students that if it has become a habit and doing away with it becomes a problem, then anytime the feelings or emotions arise, they should eschew them and actually look for those stuffs which could be educationally beneficial (FGP 2).

Ismail and Zawahreh (2017) support this view from the participant and aver that self-restraint is an intended process that involves behaviours and mood change, resisting temptation, and working to achieve aims. It comprises regulating behaviours, concepts and emotions and modifying socially unacceptable desires (Baumeister & Vohs, 2004).

Findings of the study revealed that self-restraint involves the regulation of behaviours, thoughts, and emotions, as well as modifying or inhibiting socially undesirable tendencies. Arisoy (2009) supports this view and summarises the cognitive-behavioural techniques that are used for the control of IA. These techniques she notes are: using the Internet at different times rather than usual times, using external stoppers, setting targets about Internet use, trying to avoid the use of Internet-specific activities, using reminders, keeping a notebook to write other things that one wishes to do instead of using the Internet and family therapy.

In today's society where the use of the Internet is present on university campuses, students are exposed to potentials for developing IA (Zenebe et al., 2021). It is therefore urgent and important to pay more attention to IA among university students (Chung et al., 2019). Findings of the study revealed that students should exercise self-restraint while on the Internet. This is exhibited through limiting Internet use to include minimal social interaction, focus on the need to use the Internet for school assignments and research, and limiting Internet gaming.

4.3. 2 Awareness Creation

Findings of the study revealed that awareness creation is a control mechanism that can be used to evade IA. The amount of time that a student spends on the Internet is a crucial factor which increases risk of IA. Anand et al. (2018) support the above view that awareness creation about IA and its risk factors among students is important towards healthy use of the Internet. Five out of the 12 participants responded that exposing students to the dangers associated with IA would help in controlling Internet usage.

Students who are addicted to the Internet struggle to control their behaviours and often experience great despair over their consistent failure to escape their addictive behaviours because of their continuous exposure to the Internet on campus. This view is in line with what Young (2004) advocated when he noted that university students are the most at-risk population to develop an addiction to the Internet.

Loss of self-esteem and a burning desire to escape can lead the addict further into their addiction thereby sending them into a whirlwind of social anguish, relationship failure and emotional pain. In the end, IA will lead to a sense of powerlessness for the addict. Awareness about this addictive behaviour and timely intervention can protect this productive group of society from the harmful effect of IA. It is necessary to develop strategies to control IA as well as therapeutic interventions to enhance the safe and healthy use of the Internet.

Awareness should be created among the undergraduate students by the university administration about the disadvantages of the excessive use of the Internet and encouraging students to use the Internet for academic research and gathering scientific information. Also, awareness should be created among the students to improve reduction in the occurrence of IA behaviour.

One participant said this:

> The University has a role to play. They can create awareness by organizing seminars on the consequences of using the Internet. This will actually help students to be abreast with the possible ways of using the Internet for academic purposes (IP 9).

Prevention and intervention measures should be implemented at universities to raise awareness of students about IA as well as its associated factors and to improve mental health for Internet addicted students. The possibility of becoming addicted to the Internet should be emphasized to students through awareness campaigns so that interventions and restrictions can be implemented.

4.3.3 Administrative Restrictions

The study revealed that administrative restrictions is a control mechanism that when adopted, could help in evading IA. Seven out of the 12 participants responded in the affirmative. In spite of the significance of the Internet to students (Akhter, 2013; Ngoumandjoka, 2012; Sahin et al., 2010), the study revealed that students also engage in non- academic activities such as playing games, chatting with friends, downloading videos and online shopping or marketing (Ndawula, 2011). Other students also use the Internet for leisure rather than educational purposes. The results of the study corroborate with the view of Çelen et al. (2011) who opine that students use the Internet for purposes other than academic activities. Students use the Internet for entertainment such as watching video clips, playing games, posting on the social networks and downloading music and/or movies (Çelen et al., 2011). Dowler (2016) indicates that university administrators, faculty, parents, students and others support the advantage of using technology in higher education. However, the reality is that this technology is often used for non-academic purposes.

Results of the study revealed that students have the opportunity to visit several sites while they are online. The Internet can be a bad tool for higher academic achievement if its use is not restricted. Durak-Batigün and Hasta (2010) affirm that if no strict precautions are taken to manage the use of the Internet, the Internet will gradually become a problem for students who do not have sufficient awareness of the harmful aspects.

Controlling the use of Internet in the university helps in decreasing the prevalence of IA among students. Findings of the study revealed that administrative restrictions of the Internet on university campus is crucial considering the negative effects on students. A participant commented as follows:

> The university administration has a role to play. They should actually make some restrictions to some sites which does not provide information on education. They should make restrictions on them (FGP 12).

Considering the negative impacts of IA such as social isolation, emotional instability, mental health and decline in academic performance, there is the ardent need for university administration to regularise the use of the Internet on campus.
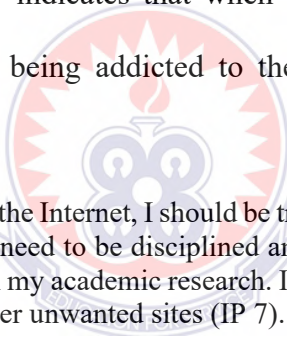
4.3.4 Purposefulness

Results of the study revealed that purposefulness is a control mechanism to evade IA. Ten out of the 12 students revealed that being purposeful whilst on the Internet helps in evading IA. The Internet is a tool that is evolving into an essential part of everyday life all over the world, and its use has increased exponentially, especially among university students (Omoyemiju & Popoola, 2021). Students have been using the Internet to enhance their academic studies, social interactions and entertainment.

In spite of the obvious advantages of the Internet to students, the amount of time spent by university students online might be a cause for concern (Tang et al., 2017;

Zenebe et al., 2021). Students who have difficulty controlling their time spent online may suffer from IA, resulting in academic decline (Young, 1998). Other students also suffer from psychiatric disorders (Adorjan et al., 2020; Naseri et al., 2015), emotional instability (Captain, 2003; Yusuf et al., 2020) and social isolation (Sanghvi & Rai, 2015; Zenebe et al., 2015). Some students also develop IA, and this have negative impact on their interpersonal, social, and academic functioning with associated psychiatric problems such as depression, anxiety disorders, and sleep disorders. This affirms the view of Brand et al. (2014) who assert that with the growth of the Internet over the last two decades, the number of students experiencing massive negative consequences has also grown extensively.

Results of the study indicates that when students become purposeful whilst online, it helps them from being addicted to the Internet. One of the participants indicated as follows:

> When I am on the Internet, I should be true to the purpose of which I logged on. I need to be disciplined and have a positive mindset specifically on my academic research. If not purposeful, I will end up visiting other unwanted sites (IP 7).

Purpose is a forward-looking directionality and an intention to do something. Having a sense of purpose while online is fundamental to student's academic achievements. There is the need for students to make good use of the Internet by being selective to contents which relates to their academic research. One of the participants commented as follows:

> As a student, I should be the chief controller of the Internet. The Internet should not control me. This means that when I am online, I will only search for contents which relates to my studies. I will cancel all updates and pop-ups which has nothing to do with my academic research. If I am not purposeful, I will end up watching pornographic films and other videos which will distract my attention (IP 10).

The above excerpts by the participant confirms studies by Ismail and Zawahreh (2017) that being purposeful on the Internet is an intended process that involves working to achieve desired aims. This means that students should focus on their aims while online. Young (2004) supports the above view that students must be purposeful when engaging in online activities. This is evident from the fact that students can tumble into major depression when their online study blips off the screen forever or they experience withdrawal when they try to quit their online habit.

4.4 Summary

This chapter discussed the findings and analysis of the research questions for the study. The data collected on the three research questions were critically described, explained and analysed with the uses and gratification and general strain theories.

The first research question (RQ1) which sought to examine the specific online activities that undergraduate students of UEW engage in revealed six main themes: academic research, source of information, entertainment, news, socialisation and marketing. The study revealed that undergraduate students use the Internet for several reasons. This finding is in line with the uses and gratification theory by Katz et al. (1974) which thrive on the assumptions that individuals seek out media to fulfill a particular need or gratification.

A total of ten themes were discussed and analysed for research questions two (RQ2) and three (RQ3). Research question two (RQ2) had six themes. The study revealed that undergraduate students exhibit some deviant behaviours such as anxiety, depression, curiosity, boredom and loneliness as a result of their intensive Internet use. Others include cyberaggression, cyberbullying, trolling, sending unwanted images and online gambling. Findings of the study agrees with the general strain theory by Merton (1957). The third source of strain focus on the presentation and inability of students to

legally escape from negative (noxious) stimuli which leads to the exhibition of these deviant behaviours.

Research question three (RQ3) on the other hand had four themes: self-restraint, awareness creation, administrative restrictions and purposefulness.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter summarises the study. It draws conclusions from the key findings and makes recommendations on Internet addiction (IA) among undergraduate students. Additionally, limitations of the study as well as areas for further research are outlined in this chapter.

5.1 Summary

This study set out to examine the perspectives of undergraduate students of UEW on triggers of IA and control mechanisms. It also probed into the specific online activities that undergraduate students engage in. The importance of the study was also delineated. For example, the current study is crucial in creating awareness among university students on IA and also for informed policy decisions in designing interventions to address problems associated with excessive use of the Internet, especially among high-risk groups. Through this research, Ministry of Health would be equipped with the necessary information in order to adopt adequate treatment measures for IA.

The extensive review of literature served as a foundation for exploring the following concepts: students and utilisation of new media; students use of the Internet; students' online activities; IA among students; triggers of IA; consequences of IA; and, control mechanisms to evade IA. Expounding briefly on the above key concepts, the Internet, as part of new media has become a way of life for the majority of university students all around the world. Student's use of the Internet has increased tremendously.

For most university students, the Internet is a functional tool, one that has greatly changed the way in which they interact with others and share information. Swanson (2016) observes that the Internet has impact in many areas including the higher education system because it has heralded development and implementation of new and innovative learning strategies. However, others consider that university students are at risk of developing IA because they have free and unlimited access to the Internet.

The uses and gratification theory and the general strain theory were used to explicate the data. The uses and gratification and general strain theories were also reviewed and situated in the study. The theories, especially the general strain theory, brought to the fore the view that individuals who engage in online activities and as a result become addicted to the Internet might be undergoing enormous strain and challenges which could result in deviant behaviours.

The qualitative research approach and case study design for this study aided in the identification of some specific online activities that undergraduate students engage in, the triggers of IA as well as some of the control mechanisms students adopt to evade IA.

The methods of data collection for the study were interview and focus group discussion. These data collection methods enable me access firsthand information on the experiences of the participants. Finally, to minimally organise and describe my data in rich detail, I thematically analysed the data (Braun & Clark, 2006). The thematic analysis enabled me to identify themes and patterns of meaning across data set in relation to the research questions (Bryman & Bell, 2011).

5.2 Main Findings

After analysing the data, the key findings that were discovered led to several conclusions. The first research question which sought to examine specific online activities that undergraduate students of UEW engage in revealed six overarching themes as follows: academic research, source of information, entertainment, news, socialisation and marketing. It was identified from the above themes that the Internet opens doorways to wealth of information, knowledge and educational resources, increasing opportunities for learning in and beyond the classroom (Akhter, 2013). For example, the theme of academic research points to the fact that the use of Internet for educational purpose is the heart of student's academic achievement (Kim, 2011).

Drawing from the U&G theory, it was established that undergraduate students use the Internet for several reasons to satisfy certain gratifications. For example, using the Internet to play video games and watching of movies. It came to light that the availability and accessibility of the Internet has positively influenced the lives of undergraduate students. For example, the Internet has helped students in their academic research and social interactions. The study revealed that access to the Internet is fundamental to improving the quality of education among undergraduate students. This means that use of credible Internet resources is of greater importance for academic study.

The second objective of the study sought to investigate triggers of IA among undergraduate students of UEW. The study revealed some themes that trigger excessive use of the Internet among students. These themes were characterised by the emotional or psychological factors that heighten university students' desire to engage in online activities. The study also found some of the factors that trigger IA among students as anxiety, depression, curiosity, boredom, loneliness and academic research. For

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example, depression was found to be one of the triggers of IA and a major factor in mental health problems among students (Sarokhani et al., 2013). Many students of the study had the immediate desire to engage in different activities on the Internet when feeling bored. It is intriguing to note that many of the sampled students reported Internet use as a primary means of coping with boredom.

The study also revealed that students use the Internet as an escape mechanism, and also to seek solace from these triggers. In accordance with the general strain theory, Agnew (1992) indicates that some of these strains result from inability of students to legally escape from noxious stimuli. The study revealed that students who were affected by this intensive Internet use also exhibited deviant behaviours such as cyberaggressionism, cyberbullying, online gambling and trolling. This confirms the view of strain theorists that individual's inability to escape from negative situations or stimuli or to achieve socially defined expectations using conventional methods result in deviant behaviours (Jaggers et al., 2014).

Themes of self-restraint, awareness creation, administrative restrictions, and purposefulness, were identified as some of the control mechanisms that undergraduates of UEW employ to evade IA. For example, it was discovered that students with higher levels of self-restraint had habits that aligned with their long-term goals and as such increased their habit for studying (Galla & Duckworth, 2015).

The study revealed that in spite of the fact that the Internet help students positively in many ways it also impacts them negatively. The study revealed that it is important for parents and university management to intervene appropriately in order to protect students from the threats of impaired academic performance.

5.3 Conclusions

This study examined the perspectives of undergraduate students of UEW on triggers of IA and its control mechanisms. From the study, it is evident that the Internet has become an integral part of student's life. The numerous potential benefits of Internet usage notwithstanding, undergraduate students of UEW are at high risk of developing IA. The Internet has been found to have a very strong impact on university students, especially in the areas of anxiety, stress and depression. This affects students' academic, psychological, social and family life. Internet addiction is associated with obsessive-compulsive symptoms and interpersonal sensitivity. The study highlights the need for more clinical studies focusing on psychiatric or psychological symptoms. It concludes that IA is a vital issue that requires attention and immediate remediation because of its possible consequences on university students.

5.4 Limitations

The study set out to examine the perspectives of undergraduate students of UEW on triggers of IA and control mechanisms. To carry out this study, I encountered some limitations. First, the study relied on the perspectives of undergraduate students on IA. Inasmuch as the students have been known to be heavy users of the Internet, not all of them were actually addicted. For that reason, the students were not able to tell their addictive behaviours.

Secondly, like any other clinical disorder, IA requires both quantitative and qualitative assessment to determine if a person is addicted to the Internet. Given the rapid proliferation of the Internet, the study attempted to examine the perspectives of undergraduate students of UEW on triggers of IA and control mechanisms using only qualitative research approach. Quantitative research test and appreciate the degree of

disorder as well as the causal relationship between the disorder and its effect on an individual. On the other hand, Qualitative research appreciates people's opinion about the disorder and determine whether an individual is actually addicted or not. Thus, qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. Using only qualitative research approach for the study does not pave way to ascertain the degree of disorder and the causal relationship with the heavy users of the Internet. Also, using only qualitative research approach will not pave way for generalisation of the results.

Thirdly, using 12 participants to represent the entire UEW student population of over 20,000 did not provide fair representation for the study. However, since qualitative studies are not about large numbers but concerned with garnering an in-depth understanding of a phenomenon, the sample size gave a fair representation on how IA fare on UEW campus, though not enough.

Nevertheless, these limitations did not take away the credibility of the study, as it has implications for further studies.

5.5 Suggestions for Further Research

The current study relied on the perspectives of undergraduate students of UEW on triggers of IA and control mechanisms. As a result, the students were not able to tell their addictive behaviours. Future studies should focus on students who are actually addicted to the Internet using mixed method research approach.

Taking into consideration the ubiquitous nature of the Internet in recent years, future research should focus on the negative consequences of IA that interfere with personal life, family problems, work and social relationships.

5.6 Recommendations

In the last decade, the use of the Internet has increased considerably, with IA becoming a severe public health concern around the world (Facts, 2015). IA ruins lives by causing neurological complications, psychological disturbances, and social problems.

Students' activities on campus warrant that they use the Internet frequently. The study found that university students engage in a number of online activities such as academic research, entertainment, socialisation and marketing. These findings reinforce earlier arguments by scholars such as Masud et al. (2016) who assert that due to technological advances and the growing available accessibility of the Internet, students are logging on to the net for their academic research, meeting new friends, socialisation with others and solving basic problems in life. Given that university students are susceptible to IA due to their heavy usage or using the Internet for the above reasons, the study therefore recommends that there should be frequent seminars and other educational fora that sensitises students on the need to adopt safe practices while online. Some of these safe online practices are: keeping sensitive information private, avoiding interacting with strangers, zero tolerance of cyberbullying and avoiding clicking on suspicious links.

With regard to students' online activities, the study found that themes such as anxiety, depression, boredom, loneliness and academic research act as key triggers for online addiction among students. Health care professionals as well as university management should probe for maladaptive patterns of Internet use. Additionally, there may be useful ways of leveraging Internet to decrease stigma of stress, depression and loneliness and identify individuals at risk. Owing to the fact that the Internet has become an integrated component of human interaction, it is important for health care

professionals and educational counsellors interacting with students to recognize the important balance on the positive use of the Internet.

Considering the seriousness of IA and its increasing incidence, university counselling centres should create the platform where students will be educated on the control mechanisms of IA such as exercising self-restraint and being purposeful while online. Others could include administrative restrictions that university may apply in order to control excessive use of the Internet among students. This could be done through the development of seminars designed to increase awareness among students on the ramifications of Internet abuse on campus.

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APPENDICES

APPENDIX A

INTERVIEW CONSENT FORM

UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF FOREIGN LANGUAGES EDUCATION
DEPARTMENT OF COMMUNICATION AND MEDIA STUDIES

INTERVIEW CONSENT FORM

RESEARCH PROJECT TITLE: Triggers of Internet addiction and control mechanisms: Perspectives of selected undergraduate students of University of Education, Winneba

I volunteer to participate in a research project conducted by Mr. Samuel Danso from the Department of Communication and Media Studies, University of Education Winneba. I understand that the research is designed to gather information about Internet addiction among students. I will be one among 16 people being interviewed for this research.

1. I understand that my participation in this research project is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline.
2. I understand that my responses will be kept strictly confidential.
3. I understand that the interview will last approximately 30-45 minutes. Notes will be written during the interview. An audio tape of the interview and subsequent dialogue will also be made.
4. I understand that no other use will be made of the recording without my written permission, and that no one outside the research team will be allowed access to the original recording.
5. I understand that the researcher will not identify me by name in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
6. Subsequent use of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.
7. I have read and understood the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

_____   _____   _____
Name of Participant   Date   Signature

_____   _____   _____
Principal Investigator   Date   Signature

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APPENDIX B

INTERVIEW GUIDE

Topic: Triggers of Internet addiction and control mechanisms: Perspectives of selected undergraduate students of University of Education, Winneba

Research Approach: Qualitative
Research Design: Case Study
Sampling Technique: Purposive
Sample Size: 12 Participants
Data Collection Method: Interview and Qualitative Survey

Objectives of the Study

The research is guided by the following objectives:

1. Examine specific online activities that undergraduate students of UEW engage in.

2. Investigate triggers of IA among undergraduate students of UEW.

3. Investigate the control mechanisms that undergraduate students of UEW employ to avoid/evade IA.

Research Questions

1. What are the specific online activities that undergraduate students of UEW engage in?

2. How do undergraduate students of UEW describe triggers of IA?

3. Which control mechanisms do undergraduate students of UEW employ to avoid/evade IA?

Time of Interview:

Date:

Place:

Interviewer:

Interviewee:

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Interview Questions

1. How will you define Internet?

2. How will you define addiction?

3. How will you define Internet addiction?

4. What are some of the characteristics which shows that a student is addicted to the Internet?

5. When was the last time that you visited the Internet?

6. Averagely, how much time in hours do you visit the Internet in a month?

7. Averagely, how much time in hours do you visit the Internet in a week?

8. Averagely, how much time in hours do you visit the Internet in a day?

9. Which social media handles do you visit?

10. Why do you visit each of the social media sites stated above?

11. How much time do you spend on the social media handles?

12. What are some of the activities that you normally use the Internet for?

13. What do you consider to be the triggers of Internet addiction?

14. What are some of the control mechanisms to evade Internet addiction?

15. What will be your advice to UEW administration on how to control the use of the Internet?

16. What will be your advice to parents on Internet addiction?

Thank you for availing yourself for this interview. I assure you of confidentiality of responses and will gladly call on you again in future projects. Have a great day.