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INFLUENCE OF INFORMATION COMMUNICATION TECHNOLOGY ON HEALTH AND BEHAVIOUR OF UNIVERSITY OF IBADAN UNDERGRADUATES

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Abstract

The study examines the influence of Information Communication Technology on health and behaviour of University of Ibadan undergraduates. Descriptive survey research design was adopted to select one thousand and eighty-one students, through stratified and simple random techniques; a self-structured questionnaire with 0.70 reliability coefficient was used for data collection. Six hypotheses were tested and chi-square χ^2 was used for data analysis at 0.05 level of significance. The results showed that the respondents had no knowledge of the negative effect of ICT on health and behaviour ($\chi^2=0.67$, $p<0.05$); that ICT has negative influence on respondents' sexual behaviour ($\chi^2=84.6$, $p>0.05$), sleeping pattern ($\chi^2=68.5$, $p>0.05$), nutrition pattern ($\chi^2=56.3$, $p>0.05$), and academic honesty ($\chi^2=72.4$, $p>0.05$). However, ICT did not influence their engagement in cybercrime ($\chi^2=2.16$, $p<0.05$). Based on the findings it was recommended, among others, that education on the negative influence of ICT use on health and behaviour of students should be included in the general courses for students; and that there should be adequate monitoring of the cyberspace by school authority.

Keywords: Healthy behaviour, ICT, undergraduates, hygiene

Introduction

Yacob (2011), quoting Blurton (1999), defined Information and Communication Technology (ICT) as a diverse set of technological tools and resources used to communicate and create, disseminate, store and manage information. It encompasses a range of rapidly evolving technologies, including telecommunication technologies (telephony, cable satellite, TV and radio, computer-mediated conferencing, video conference) as well as digital technologies (computers, laptops, information networks, the Internet, worldwide web, intranets and extranets) and software application (Chisenga, 2006). In corroborating this, Margaret (2005) defined Information Communication Technology as an umbrella term that comprises any communication device or application encompassing radio, television, cellular phones, computer and network hardware and software satellite systems, as well as the various services and applications associated with them, such as video conferencing and distance learning.

The most useful forms of Information Communication Technology by students in tertiary (ICT) institution of learning are the computers, laptops, mobile telephone. ICT are potentially powerful tool for extending educational opportunities both formal and non formal to previously undeserved constituencies. Trucano and Micheal (2005) opined that ICT is of immense benefits to educational system as it empower learners and teachers transforming teaching and learning processes from being teacher dominated to student centred and that this transformation will result in increased learning gains for students, creating and allowing opportunities for learners to develop their creativity, problem solving abilities, informational reasoning, skills, communication skills and other higher thinking skill.

Massimni and Peterson (2009) Observed that among the people affected by ICT are young adults, specifically university students, who engage in innovative websites, such as Wikipedia, free content encyclopedia, internet search engines such as Google, and social media, such Facebook. Traditionally, a university is viewed as a transition period in which new experiences and meeting new people mark the transformation from the period of adolescence to early adulthood and research has suggested that this stage of life is a crucial period of development marked by difficult challenges.

In spite of the numerous advantages that Information Communication and Technologies brought to the educational development with its immense benefits to teachers and students, it is noted that many students use it negatively, which consequently influences negative effects on their health and behaviour, such as negative sexual behaviour, sleeping pattern, nutrition disorder, cybercrime and academic dishonesty, such as plagiarism and online gambling. Adebayo, Udegbe and Sunmola (2006) agreed that there are potential benefits associated with the use of the internet, but also increased awareness of its potential dangers, especially to young people—for example, the Internet increasingly becomes a monster in the context of sex, as young adults have unlimited access to information on sex through porn on their e-mails or by inadvertently clicking on a link to porn sites.

Massimni and Peterson (2009) also noted that aside from the traditional development challenges in undergraduates' health, a fairly new adaptation has taken place on campuses, as ICT is changing the way people live and socially interact. Thus, ICT becomes an intrusion on normal everyday life and can be quite detrimental to student health and wellbeing, such as coming late for class, losing sleep or experiencing stress. Many other antisocial behaviours are promoted by internet addiction, such as online shopping, gambling and cybercrime.

Guest Blogger (2012) explained that students engage in social networking sites such as Twitter and Facebook and that the negative effect of these social networking sites overweigh the positive ones and have caused some potential harm to society, especially among students in the following way:

1. Reduced learning and research capabilities as they rely more on information accessible easily on these social network sites and the web,

2. Multitasking: Students who get involved in social media sites while studying result in reduction in their focus of attention, this causes reduction in their academic performance and concentration to study well.
3. Reduction in real human contact, the more time students spend on social media sites, the less time they will spend socializing in person with others and this reduces their communication skills as they will not be able to communicate and socialize effectively in person with others.
4. Time wastage: students while searching and studying online get attracted to using social media sites and sometimes they forget why they are using internet. This wastes their time and sometimes students are not able to deliver their work in the specified time frame.
5. Effect on health: The excessive use of these sites affects the mental as well as physical health; students do not take their meals on time and take proper rest, they take excessive amount of coffee or tea to remain active and focused which negatively affects their health. The overuse of these sites on a daily basis has many negatives on the physical and mental health of students, making them lethargic and unmotivated to create contact with the people in person.

Massimini and Peterson (2009) reported that students prefer non-personal communication, and relationships were identified between ICT, being late for class, loss of sleep, and stress. They concluded that ICT is a major intrusion affecting sleep, time management, and perceived stress, as well as students' capacity to communicate.

Aitila and Jean (2004), in a study of science students in a large university in United Kingdom, reported that 50% of the students indicated an acceptance of using the internet for academic dishonest activities. Kalesonwo, Fatona, and Musah (2008) submitted that the unguided use of ICT by adolescents adversely affects their lifestyle and this poses many dangers to the present and future life of the youths, as ICT promotes illicit drug use and premarital/ extramarital sex. Ikulayo (2000) stressed that adolescents are exposed to many internet programmes such as pornographic pictures, films, advertisement as well as books and magazines and majority of programmes being aired on ICT most of the time lead to ignorance about sexual behaviour of adolescents.

Brown and Eisenberg (2003) reported that about 10 percent of teenagers acknowledged that they have learned more about sex from the internet than from parents, school personnel, clergy or friends. Dana and Mark (2011) opined that people engage in a variety of activities on the internet, some of which may lead to addiction as some users may develop an addiction to specific activities they carry out online, such as addiction to gaming, information overload (i.e. web surfing addiction), net compulsion (i.e. online gambling or online shopping addiction), cyber-sexual addiction (i.e. online pornography or online sex), and cyber relationship addiction, among others. Liliara, et al (2005) concluded that ICT influences adolescents' health-related attitudes and behaviour such as violence,

eating disorders, tobacco and alcohol use and harmful sexual activities. The observation of how increasingly students make use of ICT variables, such as computer, laptops and mobile communication networks that prompted the researchers to examine the influence ICT on the health and behaviour of undergraduate of University of Ibadan.

Research Hypotheses

1. There will be no significant knowledge of effect of ICT on health risky behaviour of University of Ibadan undergraduates.
2. Information Communication Technology will not significantly influence the sexual behaviour. of University of Ibadan undergraduates.
3. Information Communication Technology will not significantly affect the sleeping pattern of University of Ibadan undergraduates.
4. Information Communication Technology will not significantly influence the nutrition pattern of University of Ibadan undergraduates.
5. Information Communication Technology will not significantly influence academic malpractice of University of Ibadan undergraduates.
6. Information Communication Technology will not significantly influence University of Ibadan undergraduates' attitudes towards cybercrime.

Methodology

Descriptive survey research design was adopted for this study. The design enables the researcher to describe carefully factual and detailed information about the opinions of the respondents on the issue. Thomas and Nelson (2001) have argued that descriptive research design is good in collecting data in order to describe existing phenomenon, to identify problems and make comparison and systemic evaluation. The population comprised of one thousand and eighty one students selected from undergraduate halls of residents in University of Ibadan. Proportion sample and purposive sample techniques were used to select 15% of respondents from each of the nine undergraduate halls (Table A).

TableA: Summary of research population and sample

<i>Name of Hall</i>	<i>Total No of Students</i>	<i>15% selected</i>
Awolowo	1278	192
Mellanby	503	75
Kuti	616	92
Zik	874	131
Tedder	543	181
Queens	1026	154
Idia	1128	169
Independence	847	127
Sultan Bello	398	60
Total	7213	1081

Source: Student Affairs Unit, University of Ibadan.

The instrument used for the study was a self structured questionnaire tagged. The instrument was divided into 6 sections. Section A was on knowledge of students on negative influence of ICT on health and behaviour, (B) was on the influence of ICT on sexual behaviour, (C) was on ICT's influence on sleeping pattern, (D) was on its influence on nutrition pattern, (E) was on the influence on academic malpractices, while (F) was on cybercrime. The reliability of the instrument was ascertained by administering it using test-retest method on twenty undergraduates of Physical and Health Education Department, Ekiti State University, Ado-Ekiti. The data were subjected to Pearson Product Moment correlation and a reliability coefficient of 0.70 was obtained. Nine research assistants, one for each hall of residence, were employed to administer the questionnaire. All copies of the questionnaire were filled and returned by respondents and the data collected were analysed using inferential statistics of chi-square χ^2 to analyze at 0.05 level of significance.

Results and Discussion

H₀₁: Undergraduates will not significant have the knowledge of effect of Information communication technology on health risky behaviour.

Table 1: Distribution and chi square χ^2 showing knowledge of ICT on health risky behaviour

Response	Observed	Expected	O-E	χ^2	χ^2 cal	χ^2 tab	df	Remarks
Strongly agree	268 (24.79%)	270.3	7	49				
Agree	251 (23.21%)	270.3	19.3	372.49				
Disagree	275 (25.43%)	270.3	4.7	22.09	0.67	7.81	3	Not Significant
Strongly Disagree	287 (26.54%)	270.3	16.7	278.89				
Total	1081	1081		722.47				

The data in Table 1 showed that 268 (24.7%) respondents strongly agreed and 251 (23.21%) agreed that they have knowledge of the negative influence of Information Communication Technology on their health and behaviour, while 275 (25.43%) disagreed and 287 (26.54%) strongly disagreed with the statement. The table also showed a calculated chi-square value of 0.67, which is less than the table value of 7.81. The null hypothesis was therefore accepted. This means that undergraduates of University of Ibadan did not significantly have knowledge of the negative influence of Information Communication Technology on their health and behaviour. Kalsanwo, Fatona, Ol and Musah (2008) had earlier submitted that unguided use of ICT by adolescent adversely affects their lifestyles and poses many dangers to their lives. Ikulayo (2000) also stressed that majority of programmes being aired on ICT most times lead to ignorance about antisocial behaviours, such as harmful sexual behaviour.

H02: Information communication technology will not significantly have negative influence on the sexual behaviour of undergraduates.

Table 2: Distribution and chi square X^2 showing influence of ICT on sexual behaviour

Response	Observed	Expected	O-E	X^2	X^2 cal	X^2 tab	df	Remarks
Strongly agree	471 (43.57%)	270.3	200.7	40289.49				
Agree	362 (33.48%)	270.3	91.7	8408.89	84.6	7.81	3	Significant
Disagree	127 (11.74%)	270.3	143.3	20534.89				
Strongly Disagree	121 (11.19%)	270.3	149.3	2229.49				
Total	1081 100	1081		91514.76 1081				

The data in table 2 showed that 471 (43.57%) respondents strongly agreed and 362 (33.48%) agreed that information communication technology have negative influence on their sexual behaviour, while 127 (11.74%) disagreed and 121 (11.19%) strongly disagreed with the statement. The table also shows a calculated x^2 value of 84.6, which is higher than the table value of 7.81. The null hypothesis was therefore rejected. This means that ICT had influence on the sexual behaviour of undergraduates of University of Ibadan. Adebayo (2006) posited that there is increased awareness of ICT's potential dangers, especially to young people, as it is becoming a monster in the context of sex; young adults have unlimited access to information on sex through online browsing, e-mail and so on. Dana and Mark (2011) also opined that people engage in a variety of activities that are antisocial on the Internet, such as cyber sex and online pornography.

H03: ICT will not significantly influence the sleeping pattern of undergraduates.

Table 3: Distribution and chi square X^2 showing influence of ICT on sleeping pattern

Response	Observed	Expected	O-E	X^2	X^2 cal	X^2 tab	df	Remarks
Strongly agree	500 (46.25%)	270.3	229.7	52762.09				
Agree	239 (22.1%)	270.3	31.3	979.69				
Disagree	188 (17.39%)	270.3	82.3	6773.29	68.5	7.81	3	Significant
Strongly Disagree	154 (14.24%)	270.3	116.3	13525.69				
Total	1081 100	1081		74040.76				

The data in table 3 showed that 500 (46.25%) respondents strongly agreed and 239 (22.1%) agreed that ICT have negative influence on their sleeping pattern,

while 188 (17.39%) disagreed and 154 (14.24%) strongly disagreed with the statement. The table also shows a calculated chi-square value of 68.5, which is higher than the table value of 7.81. The null hypothesis was therefore rejected. This means that information communication technology has negative influence on the sleeping pattern of undergraduates of University of Ibadan. Liliara et al. (2005) concluded that the mass media, including ICT, influence adolescents' health-related attitudes and behaviours, such as violence, sleep and eating disorders, tobacco/ alcohol use and harmful sexual activities.

H04: ICT will not significantly influence the nutrition pattern of undergraduates.

Table 4: Distribution and chi square X^2 showing influence of ICT on nutrition pattern

Response	Observed	Expected	O-E	X^2	X^2 cal	X^2 tab	df	Remarks
Strongly agree	325 (30.06%)	270.3	54.7	2992.09				
Agree	310 (28.67%)	270.3	39.7	1576.09				
Disagree	384 (35.52%)	270.3	113.7	12927.69	56.3	7.81	3	Significant
Strongly Disagree	62 (5.73%)	270.3	208.3	43388.89				
Total	1081	1081		60884.76				

Table 4 shows that 325 (30.06%) respondents strongly agreed and 310 (28.67%) agreed that Information Communication Technology negatively affects their nutrition pattern, while 384 (35.52%) of the respondents disagreed and 62 (5.73%) strongly disagreed with the statement. The table also showed a calculated x^2 value of 56.3, which is higher than the table value of 7.81. The null hypothesis was therefore rejected. This means that Information Communication Technology negatively affects the nutrition pattern of undergraduates of University of Ibadan. This finding supports that of Guest (2012), who stressed that students increasingly engage in social network sites, such as Twitter and Facebook; hence, they do not take their meals on time and take proper rest but instead take excessive amount of coffee or tea to remain active and focused, which affect their health negatively.

H05: ICT will not significantly influence the academic malpractice activities of undergraduates.

Table 5 shows that 458 (42.36%) respondents strongly agreed and 322 (29.78%) agreed that Information Communication Technology significantly influence academic dishonesty, while 227 (20.99%) disagreed and 74 (6.84%) strongly disagreed with the statement. The table also shows a calculated chi square value of 72.4, which is higher than the table value of 7.81. The null hypothesis was therefore rejected. This means that ICT has significant influence on academic dishonesty among undergraduates of University of Ibadan. This corroborates the

findings of Aitila and Jean (2013), who studied 291 science students of a large university in the UK on plagiarism. They found half of them accepting using the Internet for academically dishonest activities.

Table 5: Distribution and chi square X^2 of influence of ICT on academic malpractice activities

Response	Observed	Expected	O-E	X^2	X^2 cal	X^2 tab	df	Remarks
Strongly agree	458 (42.36%)	270.3	187.7	35231.29				
Agree	322 (29.78%)	270.3	51.7	2672.89				
Disagree	227 (20.99%)	270.3	-43.3	1874.89	72.4	7.81	3	Significant
Strongly Disagree	74 (6.84%)	270.3	-	38533.69				
Total	1081	1081	196.3	60884.76				

H₀₆: ICT will not significantly influence undergraduates to engage in cybercrime.

Table 6: Distribution and chi square X^2 showing negative influence of ICT on cybercrime

Response	Observed	Expected	O-E	X^2	X^2 cal	X^2 tab	df	Remarks
Strongly agree	237 (21.92%)	270.3	33.3	1108.89				
Agree	266 (24.60%)	270.3	4.3	1847.9				
Disagree	273 (25.25%)	270.3	2.7	7.29	2.16	7.81	3	Not Significant
Strongly Disagree	305 (28.21%)	270.3	34.7	1204.09				
Total	1081	1081						

Table 6 shows that 327 (21.92%) respondents strongly agreed and 266 (24.60%) agreed that Information Communication Technology significantly influence them to engage in cybercrime, while 273 (25.25%) disagreed and 305 (28.21%) strongly disagreed with the statement. The table also shows a calculated x^2 value of 2.16, which is less than the table value of 7.81. The null hypothesis was thus accepted. This means that Information Communication Technology did not significantly influence undergraduates of University of Ibadan to engage in cybercrime activities. This was not in line with Massimni and Peterson's (2009) assertion that some of the antisocial behaviours being perpetrated by students are influences from their Internet preoccupation, such as in cybercrime and online gambling. Also, it is not in support of the findings of Happiness, Erechogo and Ronke (2013), who reported a joint significant influence of ICT on school, sex, age, aggressive behaviour, truancy and cybercrime among youths.

Conclusion and Recommendations

The findings of this research showed that undergraduates of University of Ibadan did not have the knowledge of the negative effects of Information Communication Technology usage on their health and behaviours. It also showed that ICT has influence on their sexual behaviour, nutrition and sleeping patterns, as well as academic dishonesty, as many of them indicated that they engage in plagiarism for assignments and projects. However, ICT was found not to influence the cybercrime activities of the students. It is therefore recommended that:

1. Education on influence of Information Communication Technology use on health and behaviour of students should be included in a general course for students.
2. Adolescents should be exposed to the influence of ICT use on health and behaviour through documentary programmes on radio, television and other media.
3. There should be adequate monitoring of the cyberspace by the school authority, such as blocking pornographic and gambling sites.
4. Parents should monitor their children's online activities.
5. Students should be educated on the dangers of plagiarism, to curtail academic dishonesty through the use of ICTs.

References

- Adebayo, D.O., Udogbe, I.B. and Sunmola, A.M. (2006). Gender internet use, and sexual behaviour orientation among young Nigerian. *Cyber Psychology and Behaviours* 742-752.
- Atila S. and Jean, U. (2004). Cybercheats: Is ICT fuelling academic dishonesty? *Sage Journal, Active Learning in Higher Education* 5(2): 180-199.
- Blackmore, J. Hardcastle, L. Bamblett E. and Owens J. (2003). Effective use of ICT to enhance learning for disadvantaged students. *ICT Learning and Disadvantage*.
- Blurton, C. (1999). New directions in education. In: *UNESCO'S World Communication and Information 1999-2000*. Paris: UNESCO: 46-61.
- Brown, S.S. and Eisenberg, L. (2003). *The Best Intentions: Unintended pregnancy. The wellbeing of Children and Families*. Washington DC: National Academy Press.
- Chisenga, J. (2006). *The Use of ICTs in African Public Libraries: A survey of ten countries in Anglophone Africa*. Oxford: International Network for the Availability of Scientific Publication (INASP).
- Dana, J.K. and Mark D.G. (2011). Online social networking and addiction: A review of the psychological literature. *Int. Journal of Environmental Research Public Health* 8(9): 3528-3552.
- Guest Blogger (2012). Negative effects of social networking sites for students. Retrieved on file from www.blogger.com/guest on 21/8/2013.
- Happiness, I.I.Erechogo G.C.O and Ronke G.A. (2013). Influence of ICT on behaviour problems of Nigerian youths. *Social and Behavioural Sciences* 84:97-106.
- Kalesanwo, O.O., Fatona P. and Musah, O. (2008). Health implication of ICT on adolescent boys' lifestyle in the Ijebu Division of Ogun State. *Nigerian School Health Journal* 20(2).
- Liliara E.C., Susan R.T, Tortolero C.N, Barbara J.L, Patricia J. and Patricia T. (2005). Impact of media on adolescent sexual attitude and behaviour. *Journal of Pediatrics* 116(1):303-306.
- Massimni, M. and Peterson, M. (2009). Information and Communication Technology effects on US College Students. *Cyberpsychology* 3(1).

- Rushmi, R.M. (2011). Advantages and disadvantages of ICT. Retrieved from www.dutsinahealth.com on 21/8/2013.
- Trucano, Micheal (2005). *Knowledge Maps of ICTs in Education*. Washington DC: World Bank.
- Yacob, J. (2011). Factors affecting information and communication technologies (ICTs) used by academic librarians in south-western Nigeria. *Library Philosophy and Practice*. Retrieved from www.unlib.unl.edu on 17/8/2013.