

Unethical Use of Information Technology in Higher Educational Institutions: A Case Study of a Faith-Based University in Ghana

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ABSTRACT

Background: This study examined the unethical use of information technology among students in a Faith-based higher educational institution in Ghana. The choice of a Faith-based higher-level institution was based on the moral values and strict religious code of conduct inscribed in the culture of the university.

Methods: A cross-sectional primary data used for analysis was gathered from June to July 2021. The choice of a cross-sectional was to compare the perspectives of the gender, age groups, and economic levels among various students in the university. A structured questionnaire was provided online for students willing to participate in the study to complete and submit online. A sample size of 574 students answered the closed ended online questionnaire for data analysis. Gender and education level were used to assess the primary reasons for the unethical use of information technology by students. SPSS software version 21 was used for data analysis.

Results: Students who participated in the study were 239 males (42.5) and 324 females (57.5). Among some of the reasons for unethical behavior was easier access to information technology which enabled the students to engage in wrong activities (mean score 3.11, standard deviation 1.154). Students with financial support were less likely not to be involved in IT to perform well (mean score 3.00, standard deviation 1.169). The students working and studying at the same time had less time to study and resorted to unethical use of IT (mean score 3.26, standard deviation 1.050).

Conclusion: This study recommends that universities should teach ethics of information technology as a stand-alone course, and that higher-level institutions should periodically present academic seminars on unethical use of information technology.

Keywords: Education, Distance, Technology, Unethical, Plagiarism, Higher educational institutions

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Please cite this paper as:

Onyina PA, Afedzie R.
Unethical Use of Information
Technology in Higher
Educational Institutions:
A Case Study of a Faith-
Based University in Ghana.
Interdiscip J Virtual Learn
Med Sci. 2023;14(3):181-
192. doi: 10.30476/
IJVLM.S.2023.98574.1222.

Received: 03-06-2023

Revised: 03-27-2023

Accepted: 04-15-2023

Introduction

Higher educational institutions exist to promote the growth and development of students to be accountable and socio-economically productive to the society (Dutton, Cheong & Park, 2004). Plagiarism is an unacceptable academic behavior and is significantly eschewed in all academic institutions (1). The quest to achieve academic success by using dubious means has become rife in several universities in sub-Saharan Africa (2). Unethical use of information technology is defined as the authorized use of online resources. In essence, it is the use of an author's work without appropriate citation. Plagiarism is defined as an unethical means of presenting another person's work as one's own (3).

There are several explanations for unethical use of online resources by students in higher educational institutions. The desire to achieve higher grades motivates the students to resort to purchasing online resources and answers to satisfy their assignment requirements. The pursuit of a degree for career opportunities has resulted in a wave of unethical behavior by millions of students seeking employment after school. Similarly, students who work either as self-employed and in corporate institutions pursue degree programs with the intention of meeting self-fulfilling life goals and for promotion.

Specifically, the tendency to accomplish academic work and succeed with little effort has gained much credence in higher educational institutions in sub-Saharan Africa (4). The ease of accessing online academic resources with limited restrictions and institutional sanctions on its use has created a culture of plagiarism. Students are constantly searching for easier ways to cheat by plagiarizing in their assignments and thesis work. However, in the pursuit of achieving their life-long academic dreams, they resort to the use of unethical resources to achieve their academic goals.

Unethical use of information technology has gained widespread attention because of the negative connotation often associated

with it. Often the graduate who acquired a certificate using an unethical means have not acquired the requisite skills and knowledge suitable for any sustainable development of the society. The problems related to the students' plagiarism result in graduates who are unprepared to contribute productively to the 21st century world of work in sub-Saharan Africa. Several higher learning institutions in sub-Saharan African countries have developed stringent measures such as dismissal of students to significantly reduce the spate of unethical use of online resources. Aggressively controlling unethical use of online resources makes graduates who are equipped and resourceful for the world of work in the twenty-first century sub-Saharan Africa. The lack of critical institutional sanctions against software piracy, plagiarism, and cheating has become endemic and gradually degrading the quality of graduates from these institutions (5). Higher institutions of learning exist primarily to support the society in fostering innovations and continuously contribute to the growth of our 21st century world of work. As such, the primary role of higher education institutions is to provide learning materials and tools that will push learning to be more participatory and meaningful. Ultimately, higher education is responsible for the development of students' autonomy and the development of a resourceful society (6). Achieving a well-informed society requires a higher institution of learning equipped with the requisite information technology to provide meaningful services to education (7). The goal to make students productive and exceptional in their life pursuits unquestionably falls with a higher learning institution that offers the necessary learning resources in all forms. As such, the 21st century world of learning has been revolutionized by an industry which strives to significantly engage learners in digital devices.

This study indicates that; the issue of easy access to online resources has been abused and used flagrantly with little or no restrictions to monitoring students' assignments. Also,

it is revealed that limited contribution has been made by scholars in the area of ethical use of information technology by students in Faith-based institutions in sub-Saharan Africa. Much of the literature on unethical use of online resources have often focused on problems associated with social media use.

The general objective of this study is to find out the current status of unethical use of information technology by students in Faith-based higher learning institutions in sub-Saharan Africa. This study would seek to answer the following questions:

- i) What is the general knowledge of students on information technology in Faith-based universities in Ghana?
- ii) Why do students in Faith-based universities use information technology unethically?
- iii) Is the unethical use of information technology in Faith-based universities in Ghana driven by gender or educational level?

Methods

Study Design

This is a descriptive cross-sectional study that aimed to assess the current state of unethical use of information technology by students in faith-based higher learning institutions in sub-Saharan Africa. The study was conducted between June and July of 2021.”

Participants

Eligibility criteria for participants:

All undergraduate and graduate students who were affiliated with the Pentecost University in Ghana, were willing to participate in the study and provided informed consent, were enrolled in the study. Participants who did not complete more than 20% of the questionnaires were excluded from the study.

Sampling

The target population of the study comprised 2,730 students at Pentecost University in Ghana. To determine the sample size, we used Cochran’s formula and

Morgan’s table.

Accordingly, the sample size was estimated to be around 330 individuals. However, considering the reduced accessibility to students during the pandemic and the possibility of attrition, we sent out questionnaires to 600 individuals, and ultimately received complete responses from 574 of them.

Data Collection Tools

A structured questionnaire were distributed online for students willing to participate in the study to complete and submit online. The data collection tool consisted of two parts. The first part focused on gathering demographic information such as age, gender, marital status, and educational level of the university students. The second part of the tool evaluated the extent to which students engage in unethical use of information technology, based on their perspective. This was done using closed-ended questions that allowed them to respond with either “yes (positive response)” or “no (negative response).” The reasons for a closed-ended questionnaire were meant to limit unnecessary responses that would not yield considerable benefit to the study’s objectives. Steps to fully explain each questionnaire were taken to avoid ambiguity. The validity of the questionnaires was confirmed by five specialists in the fields of ethics and virtual learning. For reliability test, the Cronbach Alpha was 0.72 which indicates that the responses were reliable. Some of the students did not fully answer the questions and were excluded in the analysis for not answering specific questions. As a result, the total respondents utilized for such cases was 574.

Results

In all, 574 students completed the questionnaires and submitted them online, from both undergraduate and graduate studies. The demographic characteristics of the respondents are presented in Table 1.

Table 1 shows demographic characteristics of the respondents from the data; 42.5%

Table 1: Demographic Information of the Respondents

Variable	Demographics	Frequency	Percentage (%)
Sex	Male	239	42.5
	Female	324	57.5
	Total	563	100
Age in years	18-20	67	11.7
	21-23	119	20.8
	24-26	132	23.0
	27-29	127	22.1
	30-32	80	14.0
	≥33	48	8.4
	Total	573	100
Marital status	Single	356	62.3
	Married	135	23.6
	Separated	31	5.4
	Divorce	34	5.9
	Widow or Widower	16	2.8
	Total	572	100
Educational level	Diploma	99	17.4
	Level 100 (Year One)	108	19.0
	Level 200 (Year Two)	103	18.1
	Level 300 (Year Three)	74	13.0
	Level 400 (Year Four)	102	17.9
	Post Graduate	83	14.6
	Total	569	100

were male, and the remaining 57.5% were female. In the age group category, 32.5% were between the ages of 18-23, 45.2% between the ages of 24-29, and the rest were up to or above 30 years. Also, 62.2% were single, but 23.6% were married; 5.4% of them were separated, 5.9% were divorced, and 2.8% had lost their spouses. The highest respondents were Level 100 students, 19.0% and the least were, level 300 students, 13.0 %.

Table 2 is the result of test for research “Question One”. We found the students’ understanding of unethical information technology by asking the following questions. These three questions provided specific answers to students’ perspectives on unethical use of information technology.

Analysis of their responses showed that 78.6% selected the positive answers, and 21.4% provided negative answers. This suggests that most of the students are aware of the illegal activities undertaken regarding information technology at all times. Another question was “Do you agree that ethical use

of information technology shows a person’s morality?” It emerged that 74.2% answered “yes” and 25.8% “no”. The results are shown in Table 2 above.

The study sought to find out through the students’ perspectives why people get involved in unethical use of information technology. Specific questions were asked. The questions started with “Do you think the following factors can be an impediment to adherence to the information technology ethics? If you agree, tick “Yes” and if you disagree, tick “No”.

The first one was lack of money; 73.4% agreed to the fact that lack of money can be an impediment to adherence to the correct use of information technology. On the contrary, 26.6% answered “No”. As to peer pressure, 69.9% said “Yes” and 30.1% said “No”. Peer pressure cannot be an impediment in the wrong usage of information technology. On ineffective punitive measures, 34.5% answered yes, but 65.5% said no. This suggests that learners involved in unethical

Table 2: Students' Knowledge on Unethical Information Technology

Question	Response	N	(%)
Have you heard about plagiarism before	Yes	451	78.6
	No	123	21.4
	Total	574	100.0
Ethical use of information technology shows a person's morality	Yes	426	74.2
	No	148	25.8
	Total	574	100
Do you think the following factors can be an impediment to the adherence of the information technology ethics?			
Lack of money	Yes	309	73.4
	No	112	26.6
	Total	421	100
Peer pressure	Yes	295	69.9
	No	127	30.1
	Total	422	100
Ineffective punitive measures	Yes	135	34.5
	No	265	65.5
	Total	400	100
Poor economic situation of the country	Yes	210	51.3%
	No	199	48.7%
	Total	409	100

Table 3: Internet Usage and its Reasons

Components	N	(%)
Internet User		
Yes	544	96.3
No	21	3.7
Total	565	100
Reasons for Usage		
All Reasons	91	15.9
Education, Information & Socialization	313	54.5
Education, Information & Cheating	13	2.3
Education & Cheating	6	1.0
Education & Social	8	1.4
Education & Information	28	4.9
Social & Information	10	1.7
Social & Cheating	6	1.0
Cheating only	13	2.3
Education only	29	5.1
Socialization	13	2.3
Information	29	5.1
Information and Cheating	9	1.6
Information, Socialization and Cheating	2	0.3
Total	570	99.3
No Response	4	0.7
Total	574	100.0

use of information technology are aware of the consequences. Over 51% said that poor economic situation of the country can lead to unethical use of information technology. All respondents agreed that students use

unethical information from the Internet; interestingly, 3.7% said they did not use the Internet since they did not own a laptop (Table 3), although they used their mobile phones to access the Internet.

Table 3 also answers “Research Question One”; it highlights Internet usage and its reasons. As indicated, students use Internet resources based on various reasons. From the responses, 24.6% selected at least cheating and any other reasons (that is close to a quarter), and those not involved in cheating were 75.4%. This is a clear indication that some of the students themselves accept that they do use information technology unethically. The next table illustrates the reasons the students stated for involving in unethical use of the information technology.

Cheating in this paper refers to plagiarism, software pirating, and all the unethical use of information technology. The study also sought to highlight the key reasons behind violations of information technology use. Respondents were asked to provide information on motivations behind violations of information technology; these were statements on a Likert scale scored 1=Strongly disagree (SD); 2=Disagree (D); 3=Neutral (N); 4=Agree (A); 5=Strongly agree (SA). The responses from the nine statements are shown in the Table 4a below. It answers “Research Question Two” which are the reasons students often

gave when they were involved in unethical information technology use.

Table 4 displays the students’ opinions regarding the reasons for violation of information technology among students, and Figure 1 illustrates the average opinions.

The first statement was “Easy access to information technology enables students to use it for different wrong activities”; 27.8% either agreed or strongly disagreed, 47.1% agreed or strongly agreed, and 25.1% were neutral (M=3.11, SD=1.15). The next statement was “Students with financial support are likely not to be involved in unethical information technology to perform well”. The analysis showed that 35.3% either strongly disagreed or disagreed, and 43.6% strongly agreed or agreed. The corresponding mean and standard deviation were 3.00 and 1.17. Again, the study sought to find out whether many courses offered by students made it easier to plagiarize. It was found that 19% disagreed or strongly disagreed, and 55% agreed or strongly agreed, but 26.5% were neutral. The mean was 3.35 and standard deviation 0.999. With the rest of the statements, more than 50% either agreed or

Table 4: Reasons for Violation of Information Technology among Students

Statements	SD	D	N	A	SA	Total
S1. Easy access to information technology enables students to use it for different wrong activities.	74 (13.2)	82 (14.6)	141 (25.1)	226 (40.3)	38 (6.8)	561 (100)
S2. Students with financial support are likely not to be involved in unethical IT to perform well.	79 (13.8)	123 (21.5)	121 (21.1)	219 (38.2)	31 (5.4)	573 (100)
S3. Many courses offered by students can make it easier to plagiarize.	37 (6.45)	72 (12.6)	152 (26.5)	275 (48.0)	37 (6.45)	573 (100)
S4. Student working and studying at the same time do not have time to study and get involve in unethical use of IT.	42 (7.3)	92 (16.1)	138 (24.1)	262 (45.7)	39 (6.8)	573 (100)
S5. Lack of instructions from lecturers for students’ use of IT makes it easier for students to cheat.	46 (8.0)	98 (17.1)	130 (22.7)	261 (45.5)	38 (6.7)	573 (100)
S6. Ineffective country laws on ethical use of information technology can lead to violation of IT ethics.	24 (4.2)	60 (10.4)	118 (20.6)	312 (54.5)	59 (10.3)	573 (100)
S7. Program of study, gender and computer experience have effect on students’ judgment regarding IT ethics.	41 (7.1)	72 (12.6)	135 (23.5)	296 (51.6)	30 (5.2)	574 (100)
S8. Lack of understanding of ethical use of new technology may lead to irresponsible use.	38 (6.7)	42 (7.3)	128 (22.3)	3/803 (52.9)	62 (10.8)	573 (100)
S9. IT resources provide capabilities and opportunities for unethical acts and positively influence students’ intention for the act.	36 (6.3)	70 (12.2)	148 (25.9)	286 (50.0)	32 (5.6)	572 (100)

*Strongly disagree (SD); Disagree (D); Neutral (N); Agree (A); Strongly agree (SA)

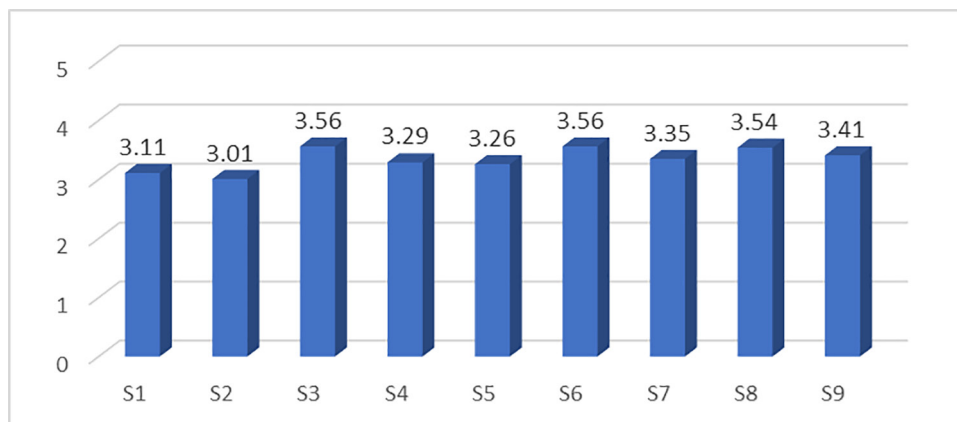


Figure 1: The average of the students’ opinions regarding the reasons for violation of information technology

Table 5: Cross-tabulation of Sex and Reasons for Violation of IT among Students

Response	SD	D	N	A	SA	Total
S1 Female	28 (8.7)	49 (15.2)	71 (22.0)	149 (46.1)	26 (8.0)	323 (100)
S1 Male	44 (18.4)	42 (17.6)	68 (28.5)	73 (30.5)	12 (5.0)	239 (100)
S2 Female	37 (11.4)	58 (17.9)	60 (18.5)	151 (46.6)	18 (5.6)	324 (100)
S2 Male	40 (16.7)	64 (26.8)	57 (23.9)	65 (27.2)	13 (5.4)	239 (100)
S3 Female	16 (4.9)	30 (9.3)	79 (24.4)	178 (54.9)	21 (6.5)	324 (100)
S3 Male	21 (8.8)	40 (16.7)	71 (29.7)	93 (39.8)	14 (15.9)	239 (100)
S4 Female	18 (5.6)	47 (14.5)	71 (21.9)	172 (53.1)	16 (4.9)	324 (100)
S4 Male	23 (9.6)	42 (17.6)	66 (27.6)	86 (36.0)	22 (9.2)	239 (100)
S5 Female	20 (6.2)	51 (15.7)	67 (20.7)	165 (50.9)	21 (6.5)	324 (100)
S5 Male	25 (10.5)	46 (19.2)	61 (25.5)	91 (38.1)	16 (6.7)	239 (100)
S6 Female	12 (3.8)	30 (9.2)	69 (21.3)	186 (57.4)	27 (8.3)	324 (100)
S6 Male	12 (5.0)	28 (11.7)	46 (19.3)	122 (51.0)	31 (13.0)	239 (100)
S7 Female	17 (5.2)	41 (12.7)	71 (21.9)	184 (56.8)	11 (3.4)	324 (100)
S7 Male	24 (10.0)	29 (12.1)	61 (25.5)	107 (44.8)	18 (7.6)	239 (100)
S8 Female	18 (5.6)	20 (6.2)	62 (19.1)	197 (60.8)	27 (8.3)	324 (100)
S8 Male	20 (8.4)	22 (9.2)	60 (25.2)	102 (42.9)	34 (14.3)	238 (100)
S9 Female	12 (3.8)	35 (10.9)	80 (24.9)	177 (55.1)	17 (5.3)	321 (100)
S9 Male	22 (9.2)	35 (14.4)	65 (27.2)	106 (44.4)	11 (4.6)	239 (100)

Strongly disagree (SD); Disagree (D); Neutral (N); Agree (A); Strongly agree (SA)

strongly agreed, and with some less than 20% disagreed or strongly disagreed. Even in the case of ineffective laws in the country, 60% agreed or strongly agreed with the statement, with a mean of 3.56 and standard deviation of 0.958. All these show that students are aware of unethical use of information technology.

The study used cross-tabulation distribution of responses by the students’ gender and the educational level of the student against the reasons given by each student in the table showing the unethical conduct. Thus, Tables 5 and 6 are the result of the test

for “Research Question Three”. The objective of this section is to find out the reasons by gender and education.

As Table 5 shows, there were mixed responses from both genders. For example, as to “Easy access to information technology enables students to use it for different wrong activities,” whereas 23.9% of the females disagreed or strongly disagreed, 36.0% of the males responded similarly. On the contrary, more than half (54.1%) of the females agreed or strongly agreed to the statement, while only 35.5% of the males answered positively.

Table 6: Education level and Reasons for Violation of Information Technology among Students

Cheap access to information makes it easy to cheat (1)						
Response	Dip	L100	L200	L300	L400	Grad
S1. Cheap access to information makes it easy to cheat						
S.D	12 (12.1)	18 (16.8)	13 (12.7)	12 (16.2)	10 (9.8)	9 (10.8)
D	13 (13.2)	17 (15.9)	19 (18.6)	10 (13.5)	18 (17.6)	14 (16.9)
N	20 (20.2)	20 (18.7)	28 (27.5)	23 (31.1)	27 (26.5)	23 (27.7)
A	52 (50.5)	42 (39.3)	31 (30.4)	23 (31.1)	43 (42.2)	32 (35.6)
SA	2 (2.0)	10 (9.3)	11 (10.8)	6 (8.1)	4 (3.9)	5 (6.0)
S2. Students with Financial Support less likely to cheat						
S.D	10 (10.1)	15 (13.9)	15 (14.5)	12 (16.2)	14 (13.7)	12 (14.5)
D	13 (13.2)	23 (21.3)	28 (27.2)	12 (16.2)	23 (22.5)	22 (26.5)
N	18 (18.2)	16 (14.8)	25 (24.3)	23 (31.1)	23 (22.5)	15 (18.1)
A	55 (55.5)	45 (41.7)	30 (29.1)	24 (32.4)	37 (36.3)	28 (33.7)
SA	3 (3.0)	9 (8.3)	5 (4.9)	3 (4.1)	5 (5.0)	6 (7.2)
S3. Many courses offered by students leads to plagiarism						
S.D	9 (9.1)	3 (2.8)	5 (4.9)	8 (10.8)	6 (5.9)	6 (7.2)
D	11 (11.1)	16 (14.8)	19 (18.4)	4 (5.4)	14 (13.7)	8 (9.6)
N	18 (18.2)	34 (31.5)	24 (23.3)	30 (40.5)	24 (23.5)	20 (24.1)
A	56 (56.6)	50 (46.3)	48 (46.6)	27 (36.5)	51 (50.0)	41 (49.4)
SA	5 (5.0)	5 (4.6)	7 (6.8)	5 (6.8)	7 (6.9)	8 (9.7)
S4. Working and Studying at the same time						
S.D	6 (6.1)	6 (5.6)	8 (7.8)	7 (9.5)	8 (7.8)	7 (8.4)
D	7 (7.1)	25 (23.1)	21 (20.4)	11 (14.9)	13 (12.8)	13 (15.7)
N	22 (22.2)	21 (19.4)	22 (21.4)	22 (29.7)	29 (28.4)	22 (26.5)
A	61 (61.6)	49 (45.4)	43 (41.7)	28 (37.8)	43 (42.2)	36 (43.4)
SA	3 (3.0)	7 (6.5)	9 (8.7)	6 (8.1)	9 (8.8)	5 (6.0)
S5. Lack of role from lecturers for students lead to cheating						
S.D	8 (8.1)	12 (11.1)	7 (6.8)	9 (12.1)	6 (5.9)	4 (4.8)
D	4 (4.1)	18 (16.7)	17 (16.5)	15 (20.3)	27 (26.5)	15 (18.1)
N	23 (23.2)	20 (18.5)	24 (23.3)	21 (28.4)	23 (22.5)	19 (22.9)
A	61 (61.6)	52 (48.1)	46 (44.7)	23 (31.1)	40 (39.2)	37 (44.6)
SA	3 (3.0)	6 (5.6)	9 (8.7)	6 (8.1)	6 (5.9)	8 (9.6)
S6. Ineffective country law on ethics						
S.D	2 (2.0)	3 (2.8)	4 (3.9)	8 (10.8)	3 (2.9)	4 (4.8)
D	10 (10.1)	13 (12.0)	8 (7.8)	6 (8.1)	15 (14.7)	8 (9.6)
N	22 (22.2)	17 (15.7)	19 (18.4)	22 (29.7)	21 (20.6)	16 (19.3)
A	60 (60.6)	69 (63.9)	55 (53.4)	29 (39.2)	50 (49.0)	47 (56.6)
SA	5 (5.1)	6 (5.6)	17 (16.5)	9 (12.2)	13 (12.8)	8 (9.7)
S7. Programme of Study and gender						
S.D	6 (6.1)	5 (4.6)	7 (6.8)	9 (12.2)	6 (5.9)	8 (9.6)
D	7 (7.1)	19 (17.6)	12 (11.7)	11 (14.9)	9 (8.9)	12 (14.5)
N	26 (26.2)	24 (22.2)	20 (19.4)	18 (24.3)	29 (28.7)	18 (21.7)
A	56 (56.6)	52 (48.2)	57 (55.3)	32 (43.2)	53 (52.5)	43 (51.8)
SA	4 (4.0)	8 (7.4)	7 (6.8)	4 (5.4)	4 (4.0)	2 (2.4)
S8. Lack of understanding of ethical use						
S.D	4 (4.0)	8 (7.4)	6 (5.8)	6 (8.2)	9 (8.8)	5 (6.0)
D	7 (7.1)	9 (8.3)	5 (4.9)	7 (9.6)	5 (4.9)	9 (10.8)
N	26 (26.2)	27 (25.0)	20 (19.4)	17 (23.3)	21 (20.6)	17 (20.5)
A	58 (58.7)	55 (51.0)	54 (52.4)	32 (43.8)	58 (54.9)	48 (54.2)
SA	4 (4.0)	9 (8.3)	18 (17.5)	11 (15.1)	11 (10.8)	7 (8.4)

Cheap access to information makes it easy to cheat (1)						
Response	Dip	L100	L200	L300	L400	Grad
S9. IT Resources provide opportunities to cheat						
S.D	5 (5.1)	10 (9.3)	5 (4.8)	6 (8.2)	5 (4.9)	5 (6.0)
D	11 (11.1)	9 (8.3)	17 (16.5)	9 (12.3)	13 (12.8)	11 (13.3)
N	16 (16.2)	24 (22.2)	30 (29.1)	31 (42.5)	26 (25.5)	21 (25.3)
A	62 (62.6)	61 (56.5)	40 (38.8)	25 (34.3)	54 (52.9)	41 (49.4)
SA	4 (4.0)	4 (3.7)	10 (9.8)	2 (2.7)	4 (3.9)	5 (6.0)
S.D	99 (100)	108 (100)	103 (100)	73 (100)	102 (100)	83 (100)

Strongly disagree (SD); Disagree (D); Neutral (N); Agree (A); Strongly agree (SA)

The second statement was “Students with financial support are unlikely to find themselves involved in unethical information technology use to perform well.” They adhered to the same pattern discussed earlier. However, the third statement which states that “many courses offered by students can make it easier to plagiarize” showed slightly different responses. There were over 60% of the females that agreed or strongly agreed, and over 55% of males responded similarly. Responses from the fourth statement “student working and studying at the same time do not have time to study and engage in unethical use of information technology” and the fifth question which indicated that “lack of clarification from lectures for students” use of information technology makes it easier for students to cheat” were not different from the statements one and two. Responses from the sixth, seventh and eighth statements followed that of the third statement, but the ninth statement answers were similar to the first statement. The following section is the responses based on the current level of study and the reasons for the unethical use of information technology by the students (Table 5).

As to statements 1 in Table 6, it is noticed that over 50% of students pursuing diploma and at Level 100 (first year) strongly agreed that easier access to information technology enabled them to engage in unethical activities; the rest were less than 50% with the least being 30.4% as responses from the Level 200 (second year) students. In statements 2, the pattern of responses was not different from the first statement, “Students with financial

support are less likely to be involved in unethical information technology use to perform well”. Thus, the students know very well that they are involved in unethical use of information technology in their field of studies. The result here suggests that students at the early years of studies appear to agree with the statements.

The analysis of the third and fourth statements were done based on their education level. This pattern was not significantly different from the previous statements. For all the educational levels, over 50% either agreed or strongly agreed to the statements, and over 60% of the diploma students favored the fourth statement. The Level 300 (third year) students tended to be more indifferent in their responses though all the other year’s cohorts’ responses in the neutral section appeared not to differ too much.

The statements 5 and 6 were “Lack of roles from lecturers for student’s use of information technology makes it easier for students to cheat” and “ineffective country laws on ethical use of information technology can lead to violation of IT ethics”. The responses for ineffective country laws were highly in favor of agreed or strongly agreed. This is another indication that students are well informed of the wrong use of information technology, albeit they continue to do it. Responses from statements 7, 8 and 9 all follow the same pattern. These are displayed in Table 6

Discussion

Results of the study corroborate the findings by (8), indicating that access to the Internet and availability of online databases

contribute to flouting of ethics in information technology. Further, ineffective country laws on ethical use of information technology were found to be one of the causes of students' cheating and copying verbatim. This study found out that students with extensive financial support from parents or guardians were less likely to violate information ethics. This is not in the same line with the findings by scholars such as (9). The studies have observed that the desire to obtain high grades to please their parents or guardians is the strongest motivation for violating ethics of information. A study researchers (10) hold the opinion that the 21st century world of higher institution of learning is made of students who are so much attached to technology, with little professional experience and are prone to violating information ethics practically. On one hand, this study found out that students who participated in this study held the perspective that easy access to the Internet was one of the reasons in using information technology unethically. On the other hand, (11) assert that software is expensive for students in sub-Saharan African, as compared to their counterparts in the Western world.

The finding that students are aware of plagiarism conforms to (12) who asserts that Egyptian students are quite familiar with plagiarism. This can be said to be academic dishonesty as declared by (11). The factors that could inhibit adherence to computer ethics as expressed by most of the respondents were attributed to the poor economic situation of the country, peer pressure, and lack of financial resources. The findings of this study conform with other socio-economic circumstances in Ghana, where students and employees in both private and public sector organizations are engaged in other social vices with the excuse of economic hardships. This is in line with (13) who stated that unethical behaviors associated with the use of information technology might be caused by economic, social, moral, or personal reasons. Further, (14) also found some of the reasons identified for increasing software piracy (illegal downloading of qualitative and quantitative research software)

to include lack of sustainable monthly income. Students agreed to ineffective country laws which enable easy means to indulge in unethical use of information technology. Furthermore, (15) also substantiated the findings of their paper by indicating that adult students, particularly those working, have a strong drive to use unethical approach to their academic work. The authors suggest that frequent training sessions on academic integrity should be held for these students to ensure conformance with academic integrity. Similarly, the findings of this paper are consistent with those of the study by (16) who asserted that attitude, subjective norm and perceived control were the key factors that influenced unethical behavior of students in the use of IT. On the contrary, environmental conditions can be a sufficient reason for some of the differences in the findings. Particularly, access to online resources in Ghana is a bit unreliable and erratic because of the poor digital infrastructure.

Limitations and Suggestions

One primary limitation related to this study is based on the fact the data collected is only from one Faith-based university. This does not provide a comprehensive review of unethical use of information technology in sub-Saharan Africa. This study thus assert that the identity of Faith-based institutions should be upheld in terms of moral code of conduct and integrity. The identity of Faith-based universities should be guarded at any cost to ensure that students are equipped with the highest level of integrity, honesty, and truthfulness. The fact that Faith-based universities represent the moral fabric of the society should be sacred and enshrined in the moral structure of the student's handbook. Compromises should not be tolerated, and stringent measures should always be provided to safeguard academic integrity and its moral sustainability in any way.

Conclusion

This study was conducted to examine unethical use of information technology in

a Faith-based higher institution of learning. It was concluded that students found easy access to online resources for their academic work because of less stringent measures put in place by these institutions to regulate their use. Students also perceived access to online resources as the easiest means to attaining their academic journey due to the lack of monitoring by their tutors and supervisors. Further, the availability of online academic resource personnel who are engaged in writing the academic papers of students for monetary rewards has ruined the credibility of higher institutions of learning in sub-Saharan Africa. Importantly, Faith-based institutions should enact moral standards and ethical structures to moderate the students' engagement of unethical academic practices. Much effort should also be geared towards regular institutional monitoring and seminars to stem the tide of unethical use of information technology in higher learning institutions in sub-Saharan African countries.

Acknowledgement

Researchers wish to express their gratitude to all experts who participated in this study.

Authors' Contribution

PO wrote the research questions, analyzed and interpreted the results, undertook the research interviews with participants. RA prepared the first draft of the manuscript and helped his colleague analyze the findings. All researchers approved the final paper.

Conflict of Interest: None declared.

Ethical Consideration

The study commenced following approval by the local ethics committee and coordination with the vice president of research at the universities. The informed consent of the participants and strict observance of the human rights for the study participants have been duly respected based on the underlying principles of this research study. Before starting the study, the researcher explained the study objectives to the participants over

a phone call and emailed them an informed consent form, which they were required to sign before participating in the study. To protect the confidentiality and privacy of the participants, we included no identifying information such as names in the surveys. This paper is a further study of a previous work on unethical use of information technology in public universities in sub-Saharan Africa.

Funding

No financial support was provided by any institution.

References

- 1 Dutton WH, Cheong P, Park N. An ecology of constraints on e-learning in higher education: The case of a virtual learning environment. *Prometheus*. 2004; 22(2), 131–149. doi: 10.1080/0810902042000218337.
- 2 Al-Emran M, Elsherif HM, Shaalan K. Investigating attitudes towards the use of mobile learning in higher education. *Computers in Human Behavior*. 2016;56, 93-102. doi:10.1016/j.chb.2015.11.033.
- 3 Koch F, Assuncao M, Netto M. A cost analysis of cloud computing for education, springer, Berlin. doi:10.1603/EC11270.
- 4 Stuckelberger C. Ethics in higher education. *Globethics.net*, Geneva; 2017. doi:10.1108/030905997.
- 5 Mdlongwa T. Information and communication technology (Information Technology) as a means of enhancing education in schools in South Africa: Challenges, benefits and recommendations. Africa Institute of South Africa, Johannesburg; 2012. doi:10.5897/ERR2019.3777
- 6 Duarte M. Formative assessment in b-learning: Effectively monitoring students learning. Second International Conference on Technological Ecosystems in Enhancing Multiculturality. 2014; TEEM'14, Salamanca, October 1-3, pp.1-6. doi:10.1002/bit.25266.
- 7 Alshwaier A, Youssef A, Emam A. A new trend for e-learning in KSA using

- educational clouds. *Advanced Computing: An international Journal*. 2012;3(1), 81-97. doi:10.5121/acj.3107.
- 8 Straw D. The plagiarism of generation ‘why not? *Community College Week*. 2002;14(24): 4-7. doi:10.1016/j.sbspro.2012.09.320.
 - 9 Whiteman SA, Gordon JI. The price of an A: an educator’s responsibility to academic honesty. *English Journal*, 2001; 91(2):25-31. doi:10.11575/cpai.v3i2.71654.
 - 10 Wang X, & McClung SR. Toward a detailed understanding of illegal digital downloading intentions: an extended theory of planned behavior approach. *New Media & Society*. 2011; 13(4), 663-677. doi:10.1177/1461444810374225.
 - 11 Afedzie R, Onyina PA. Unethical information technology use in higher education: A review of literature in Sub-Saharan Africa. In: Măță L. (eds) *Ethical Use of Information Technology in Higher Education*. EAI/Springer Innovations in Communication and Computing. Springer, Singapore. doi:10.1007/978981-16-1951-9_2.
 - 12 Nejati M, Ismail S, Shafaei A. Students’ unethical behaviour: insights from an African country. *Global Business and Management Research: An International Journal*. 2011;3(3-4), 276- 295. <https://ssrn.com/abstract=2018149>
 - 13 Ceyhan AA, Ceyhan E. Loneliness, depression and computer self-efficacy as predictors of problematic internet use. *International Journal of Environmental Resources and Public Health*, 2008; 11(6):699-701. doi:10.1089/cpb.2007.0255.
 - 14 Rahman MA, Sultana S. Software piracy in Bangladesh: The student perceptions study on two selected public universities in Dhaka City. *Manarat International University Studies*. 2015;4(1), 148-157. doi:10.1633/JISTap.2017.5.4.5.
 - 15 Chankova M, Teaching academic integrity: The Missing Link. *Journal Academy of Ethics*, 2020; 18, 155–173 doi:10.1007/s10805-019-09356-y.
 - 16 Kante M, Oboko R, Chepken C. An ICT model for increased adoption of farm input information in developing countries: A case in Sikasso. Mali. *Information Processing in Agriculture*, 2019; 6(1), 26–46. doi:10.1016/j.inpa.2018.09.002.