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Information Ethics among Graduate Students of the University of Ghana

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Introduction

The proliferation of information through information and communication technologies has made information readily accessible in every sphere of life. Be it in the business, banking and financial sectors, information is widespread and is required to enable the actors understand the needs and desires of the customers. Similarly in education, huge amount of information is readily available for faculty and students to exploit for scholarly purposes. For instance, faculty members need information so as to give cutting edge lectures; students need information to complete assignments, write term papers, projects and dissertations/thesis and above all to boost their academic performance. Whichever source faculty members or students are deriving the information from requires decisions having ethical overtones. They need to stay away from certain practices reckoned as breaches of information ethics which include copying (written 'cut and paste', Internet 'cut and paste'), inappropriate referencing, purloining (submitting an assignment that is substantially, or entirely, the work of another student with or without that student's knowledge), sham paraphrasing or verbatim copying (without citing the source, thus presenting the material as one's own) (Warn, 2006). The violation of these practices constitutes academic dishonesty.

Babik (2012) indicated that the core of information ethics is found in creating and upholding worldwide information society that centres on the study of approaches and adherence to ethical standards by information professionals and users of information in terms of information as a whole, information programmes and activities as well as technologies relating to information. Information ethics in the view of Babik (2006), concerns all human activity related to information, that is, our relationship with information,

what we do with information, or how we generate, process and distribute it in the form of new technologies and innovations, which contain a lot of processed information. However, for the purposes of this study, information ethics is the responsible use of Information Communication Technology.

University of Ghana, the oldest university in Ghana, was founded in 1948 as the University College of Gold Coast for the purpose of promoting university education, learning and research. It became a fully-fledged university in 1961 with Dr. Kwame Nkrumah as its first chancellor. The student population of the University is about 38,500 comprising students enlisted on regular, sandwich and distance education programmes as well as others from affiliate institutions. The institution also has an increasing number of international students from over 70 countries enrolled on regular undergraduate and graduate programmes. The University of Ghana now runs a collegiate system which includes Colleges of Applied Sciences, Education, Health Sciences and Humanities with about 1,139 lecturers (Bonney, 2013). Also, there are a number of research institutions and centres for learning and research which includes Noguchi Memorial Institute for Medical Research, Regional Institute for Population Studies, Institute for Statistical, Social and Economic Research among others.

The Graduate School of the University of Ghana runs master and doctorial programmes and was established in 1962. Currently, the Graduate School has a population of about 3538. The university is affiliated with a number of local and international institutions. The university has a decentralized library system with a central library which supervises the activities of all the departmental and residential libraries. The library with the Department of Information Studies runs information literacy programme including information ethics for all the students including graduate students. In addition, the institution subscribes to "Turnitin" plagiarism software which the faculty uses to check copying or similarities in students works.

While there is a significant body of work on information ethics, little of this relates to Ghana. Some works have been carried out including a study by Dadzie (2011) which examined different aspects of information ethics taught in tertiary institutions in Ghana. Dadzie and Mensah (2014) also conducted a study on awareness, opinions and attitudes of some Ghanaian students towards issues of plagiarism and intellectual property. Lowor (2015) focused on information ethics in special libraries. This paper therefore seeks to fill the gap in earlier studies by investigating the extent to which graduate students of the University of Ghana are aware of information ethics and their perspectives on this important subject. The specific objectives are to:

- assess the level of knowledge on Information Ethics by graduate students of the University of Ghana

- evaluate the level of compliance with Information Ethics among the graduate students of University of Ghana.

- assess graduate students' opinions on ethical use of information in the University of Ghana.

- identify the motivations behind violation of Information Ethics by graduate students at the University of Ghana.

The findings of this paper will hopefully enlighten university authorities on the reasons behind information ethics violations and help them to formulate policies that will strengthen the compliance of information ethics.

Literature Review

Information ethics issues may include plagiarism, academic integrity, referencing, computer/cyber ethics, information literacy, copyright, media ethics, censorship, intellectual property, access to information. Information ethics came to the front burner in 1997 with the first UNESCO Conference of InfoEthics in that year (InfoEthics, 2007) followed by the

conference in Karsruhe, Germany under the leadership of the ICIE with support from the Volkswagen-Stiftung in 2004 (ICIE, 2004) and the World Summit on the Information Society (WSIS) in 2003. Currently, there is an African Network of Information Ethics (ANIE) hosted by University of Pretoria which has organized four conferences to highlight the pertinent issues surrounding Information Ethics.

Knowledge of Information Ethics

Information ethics depends on an individual's firm understanding of concepts such as plagiarism, copyright, fair use, computer ethics, information literacy, proper referencing, and so on. Academic dishonesty has become major ethical issue in today's world with an increasing incidence of cheating in the form of `plagiarism' in recent years as a result of the internet and other technological developments. Nejati et al. (2011) opined that graduate students in some universities in Egypt exhibited high moral awareness of plagiarism. On the other hand, Jamil et al. (2013) report that as a result of lack of training, the majority of undergraduate students from four different public and private sector universities in Pakistan had no proper knowledge or information about computer ethics. In a related study on undergraduate students' perception of copyright infringement, it was realised that the level of knowledge of copyright laws by undergraduate students was considerably high (85%) but the knowledge on the provision on the use of printed/literary materials was low among undergraduate in the University of Ibadan. The study also revealed that the majority of them infringed on copyright laws mostly through photocopying and the major reason for infringement of these laws by the undergraduate was because of high cost of materials (Isaikpona, 2012). Students get knowledge from numerous sources including ethics in library and information science, through the codification of codes, manifestoes and charters, through conferences, education and training (Sturges as cited in Ndwandwe, 2009).

Level of Information Ethics Compliance

Students in higher education most often struggle with course demands, writing and reading in a second language, academic writing and conventions, and perhaps an environment they find challenging (Bufton, 2003). According to Ashworth et al. (2003), the conventions that underpin academic integrity and scholarly writing are often complex with the result that students new to higher education, may find the convention incomprehensible. Writing academic essays requires consultation of a number of sources and there is need to cite these sources by both students and lecturers.

Pickard (2006), surveyed occurrences of plagiarism among undergraduate students at Northampton College in the UK and found that 14.6% of respondents admitted to handing in a term paper written by a fellow student; 15.1% reported allowing a friend to submit their paper as the friend's own; 37.9% said they might write a term paper for a friend; and 26.1% admitted to "recycling" a paper. Similarly, as summarized by Lin and Wen (2007) and according to the study by Lupton et al. (2000), almost 55% of the United States students reported that they had cheated during their college lives. While they saw this as no big deal, 45% percent of Georgia Southern University students who were also found to have committed some type of academic dishonesty, agreed that they had been unethical (Pino & Smith, 2003). Pickering & Hornby (2005) are of the view that cultural differences and for that matter values, affects compliance or adherence to information ethics. This was an observation made with students from Asia studying in Australia and New Zealand who face huge challenges in understanding by putting into practice the plagiarism policies of universities in those countries.

Adebayo (2011), observed that the type of cheating behaviours engaged in by Nigerian University students is quite different from those engaged in by British University students. Most frequently occurring cheating behaviours among the Nigerian sample fall under the factors Breen & Maassen (2013) described as collaborative cheating and examination colluding. These include behaviours like writing somebody's coursework, colluding with others to communicate answer to one another, over marking one another's course work. He further concludes that compliance or non-compliance with information ethics may be related to differences in ethnicity and in the emphasis placed on examination as part of education assessment.

The digital age present challenges. Students can use the internet to purchase completed essay, cut and paste information and readily share via instant messaging. The issues within Internet ethics are most commonly discussed within a broader topic of computer ethics. According to Floridi and Sanders (2002), computer ethics stemmed from practical concerns arising in connection with the impact of Information and Communication Technologies (ICT) on contemporary society. Akbulut et al. (2008) have identified and measured several types of academic dishonesty behaviours that can be linked to the use of the Internet. Among them are fraudulence, falsification, plagiarism, delinquency and unauthorized help. Szabo and Underwood (2004) found that a substantial number of students in a large university in UK are involved in academically dishonest activities using the Internet. It was found that male students and those in their first year of study were most likely to offend. The study also highlighted the influence of personal and situational factors in contributing towards engaging and avoiding plagiarism.

Opinions about Ethical Uses of Information

The ethical use of the Internet for conducting research is also found heavily discussed in the literature. The issues fall under concerns over protecting privacy, protecting harm, and validating data collected from subjects using the Internet (DeLorme, Zinkha, & French, 2001 and Walther, 2002). In this regard, academic dishonesty may occur among research students as well as academicians either by getting invalid data or by committing harmful behaviour on the respondents while conducting their research using the Internet.

Freestone and Mitchell (2004) identified 24 aberrant Internet behaviours which were categorized into five factors as illegal activities, questionable activities, hacking activities, human Internet trade and downloading. Though the study was conducted on generation Y, some of the findings are quite relevant to the context of the university students. This is because most of the university students under study are within the categorization of generation Y.

Yusof & Masrom 2011, Delfre, 2005 & Masrom et al. 2010, in their respective surveys concluded that students in tertiary institutions are much more aware that acts such as subletting project work, downloading assignments and submitting them as yours, copying from a textbook without acknowledging source, copying from other students, buying a complete piece of work in order to submit it for marks are all unethical uses of information.

Motivations behind Information Ethics Violation

It is purported that the prevalence or availability of access to the Internet and online academic journals have contributed much to the rising incidence of information ethics violation, as they have made it possible for students to find and save large amounts of information from diverse sources with little reading, effort or originality (Pritchett, 2010).

Internal beliefs that academic cheating is immoral and dishonest are known to discourage information ethics violation such as plagiarism (McCabe, Trevino & Butterfield, 2001). Hughes & McCabe (2006), found that highly religious students were less likely to behave

dishonestly than others. However the strongest drive for cheating by students, according to Ashworth, Freeman & MacDonald (2003), is the desire to obtain high grades, which itself may depend on other considerations. Thus, for instance, the dishonest pursuit of good marks may be as a result of a person's dominant inherent need to prove his or her worth to him or herself and/or to the world at large (Song-Turner, 2008).

Hansen (2003) found that students with lower than average grade point averages were more likely to flout ethical considerations; plagiarise than their better performing classmates. Individuals who receive extensive financial support from their families and/or who are under great parental pressure to succeed might be especially fearful of failure and hence be more inclined to plagiarise.

Another factor responsible for information ethics violation is academic integration. Academic integration is the finesse to blend one's life harmoniously. According to Caruana *et al.* (2000) there is a nexus between an individual's lack of integration in academic life and his or her propensity to behave dishonestly. Breen & Maassen (2005) opine that students who felt 'removed' from their courses or institutions were more inclined to violation ethics regarding information than students who were better 'integrated' (especially in the social sense) with their universities.

Students violate information in order to get better grade and to save time. Some cheat because of what Straw as cited in Park (2003) call the 'GPA thing', there is a belief among students in institutions of higher learning in the United Kingdom that when they succeed in cheating, they get better grades which in turn shores up their Grade Point Average (GPA). So the cheating becomes 'the price for an A' (White & Gordon, 2001). Auer & Krupar (2001) identify a strong consumer mentality amongst students of

Virginia Polytechnic Institute and State University (Virginia Tech) USA who seem to believe that they should get grades based on effort rather than on achievement.

Methodology

The survey method was used to aid the collection of quantitative data with a questionnaire for analysis. The population for the study was made up of Master of Arts (M. A.) and Master of Science (MSc.) students of the University of Ghana which was 3,538. The study focused on the M.A and MSc. students because they enrol on taught courses and could be located on campus. The other graduate students, Master of Philosophy (M.Phil.) and Doctor of Philosophy (Ph.D.) students are not easily accessible because their programmes are usually research based. Below is a breakdown of the population and the sample size

Table 1: Faculties and no. of students

Faculties	No. of Students	No. of selected students (5%)
Social Science	2154	108
Art	331	16
Science	743	37
Health Science	176	9
Engineering	31	3
Law	103	5
Total	**3,538**	**178**

Source: Field data, 2015

The stratified sampling technique was used to divide the population into a number of homogenous groups, being graduate students from the different faculties as shown in Table 1. In other words, the researchers divided the population into different identical groups based on the courses the students are taking (faculties students belong to). Afterwards, a sample was taken from each homogenous group (faculty) using the

convenience sampling technique to form the overall sample size of 178 (refer Table 1). It should be noted that at the time of data collection in 2015, the University of Ghana was not run on a collegiate system as it is at the moment. The administration of the questionnaire was done within two weeks.

Results

Knowledge of Information Ethics

A total of 157 questionnaires were retrieved and found valid for analysis indicating a response rate of 88%. To assess respondents' knowledge on the responsible use of Information Communication Technologies, they were asked to indicate their level of knowledge on information ethics. They were therefore required to explain their familiarity with the concept of plagiarism, computer ethics, laws against indiscriminate photocopying and fair use.

It was found that out of 157 respondents, majority of them 126(80.3%) were very familiar with plagiarism. Again, respondents were asked to indicate their familiarity or otherwise with computer ethics. The results showed that more than half of the respondents 69(43.9%) were almost familiar with computer ethics while the remaining 65(41.4%) were completely familiar with computer ethics.

When respondents were asked to indicate their familiarity with laws against indiscriminate photocopying, just about half them 78(49.7%) were found to be completely familiar with laws against indiscriminate photocopying. In a similar way, it was found that more than half of the respondents 64(40.8%) were almost familiar with fair use and 60(38.2%) of them indicated that they were completely familiar with fair use.

Table 2: Views on the findings.

Responses	Frequency	Percent
Familiarity with Plagiarism		

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I have heard of it	1	0.6
I have heard of it, but know very little or nothing about it	4	2.5
I am almost familiar with it	26	16.6
I am completely familiar with it	126	80.3
Total	**157**	**100.0**
Familiarity with Computer Ethics		
I have heard of it	5	3.2
I have heard of it, but know very little or nothing about it	18	11.5
I am almost familiar with it	69	43.9
I am completely familiar with it	65	41.4
Total	**157**	**100.0**
Familiarity with Laws against Indiscriminate Photocopying		
I have heard of it	2	1.3
I heard of it, but know very little or nothing about it	15	9.6
I am almost familiar with it	62	39.5
I am completely familiar with it	78	49.7
Total	**157**	**100.0**
Familiarity with Fair use		
I have heard of it	15	9.6
I have heard of it, but know very little or nothing about it	18	11.5
I am almost familiar with it	64	40.8
I am completely familiar with it	60	38.2
Total	**157**	**100**

Source: Field data, 2015

Sources of Knowledge on Plagiarism, Computer Ethics, Indiscriminate Photocopying, Fair

Use

The researchers sought to find out the source of respondents' knowledge on plagiarism, computer ethics, laws against indiscriminate photocopying and fair use. The findings revealed that more than half 87(55.4%) of the respondents learned from conferences, education and training while the others learned from their research methodology course, library staff, codes, manifestoes, charters and literature. The results are shown in Table 3 below.

Table 3: Sources of knowledge on Plagiarism, Computer Ethics, Indiscriminate Photocopying, and Fair Use

Responses	Frequency	Percent
From research methodology course	35	22.3
From library staff	10	6.4
From codes, manifestoes and charters	3	1.9
From conferences, education and training	87	55.4
From literature	22	14.0

Source: Field data, 2015

Level of Compliance with Information Ethics

In evaluating the level of compliance with Information ethics, respondents were asked a number of questions which were intended to help the researchers achieve this. With regard to submission of someone's work as one's own work, majority of respondents 124(79%) indicated that they had never done that before. Compliance with information ethics enjoins an individual to shun practices such as submitting someone's work as yours.

Regarding submission of an essay a friend wrote but permitted a colleague to use as his/her own, most of the respondents 127(80.9%) indicated they had never done that

before. Information ethics compliance is against the idea that one submits an essay a friend wrote and gave you the permission to use it.

On the issue of extracting a piece of text and submitting it as yours without citing the source, more than half 89(56.7%) of the respondents indicated that they had never that done that before. In complying with information ethics, one is required to indicate the source of every extract used.

With reference to taking a piece of information from a known source and paraphrasing without citing the reference, 64(40.8%) of the respondents said they had never done that and the remaining 63(40.1%) indicated that sometimes they take a piece of information from a known source and paraphrase without citing the reference. Another requirement of Information ethics compliance is that one needs to indicate the source of the idea even though one has paraphrased it.

In terms of use of the content of someone's original work without paraphrasing the idea, 67(42.7%) of the respondents said they had never done that before whereas 50(31.8%) indicated they sometimes use the content of someone's original work without paraphrasing the idea. Using the content of someone's work without paraphrasing is a gross violation of information ethics.

Information ethics also frowns on copying. Copying is taking both the idea and words of another verbatim. With reference to whether it was right or wrong to copy from another student, 107(68.2%) of the respondents said they had never copied and 26(16.6%) indicated they sometimes copy. These are blatant disregard for information ethics.

In complying with Information ethics, in as much as one does not have to copy, he/she ought not to permit copying. On the issue of permitting copying, 100(63.7%) of the respondents said they had never permitted copying before and 35(22.3%) indicated they permit copying sometimes.

Perspectives on Unethical Use of Information

Respondents were asked to assess their perspectives on the unethical use of information using the Likert scale where 5=Very Ethical, 4=Ethical, 3=Unethical, 2= Very Unethical, 1=Undecided.

On the statement *'providing false information to an instructor concerning a formal academic exercise'*, more than half 107(68.2%) of the respondents indicated it is very unethical whilst the others expressed varying views. With regard to the perspective of '*copying a passage out of the textbook for homework or assignment without acknowledgement'*, again more than half of the respondents 89(56.7%) said it is very unethical. On the statement '*giving incorrect information about the source of a quotation',* more than half of the respondents 107(68.2%) indicated that it is very unethical.

When respondents were asked to indicate their perspectives on the statement '*failing to put quotation marks where it is required'*, about half of the respondents 81(51.6%) indicated that it is very unethical. Similarly, more than half of the respondents 103(65.6%) indicated that '*downloading assignments from the Internet and tendering them as yours' it* is very unethical.

On the statement '*the falsification of data, information or citations in any formal academic exercise',* more than half of the respondents 113(72.0%) said it is very unethical. Again, the

perspectives of students on the statement '*reading from varied sources for assignment, presentation, thesis'*, 84(53.5%) of the respondents said it is very ethical. In looking at the perspectives of the respondents on the statement '*citing every source of information you have used',* it was found that 84(53.5%) said it is very ethical and 63(40.7%) also said it is ethical.

In the same vein, on the perspectives on the statement '*collecting data and not using it for its intended purpose'*, 67(42.7%) of the respondents said it is unethical and 49(31.2%) indicated it is very unethical.

On the statement '*providing appropriate references in a formal academic work',* more than half the respondents 104(66.2%) said it is very ethical.

Motivations for Information Ethics Violation

Respondents were asked to choose one response from a number of responses to indicate their source of motivation to violate information ethics. Access to the Internet attracted the greatest number of respondents being 25.4% followed by fear, lack of motivation and laziness (14.6%), availability of electronic databases (12.7%). Respondents who said they were motivated by the availability of large amount of information from diverse sources to violate information ethics were 8.9%. Those who said they were motivated by lack of knowledge about what is allowed and not allowed were also 8.9%. Job demands as a reason for violating information ethics was selected by 8.3% of the respondents while 7.0% of the respondents said their inability to write scientifically makes them infringe upon ethics regarding information. The desire to obtain higher marks was the source of motivation for 6.4% of the respondents to violate information ethics. 1.9 % of the respondent also said less time to study coupled with high workload were their motivations to violate information ethics while 1.3% of the respondents indicated that lack of information literacy skills was their reason.

Discussion

It was interesting to note that majority of the respondents were familiar with plagiarism. This finding is similar to that of Nejati et al. (2011) who conducted a study on students' unethical behaviour and found that post graduate students in Egypt were also familiar with plagiarism. This finding could be attributed the information literacy classes and seminars on information ethics organized for the students of the University of Ghana. However, a contrary finding regarding computer ethics was reported by Jamil et al. (2013). They reported in a study on IT ethics that majority of students in Pakistan did not have any knowledge or were not completely familiar or almost familiar with computer ethics. The reason was that majority of the students had not received any training on computer ethics.

With regard to laws against indiscriminate photocopying, the findings of the study concur with that of Isiakpona (2012) who found in a study on students' perception of copyright infringement at University of Ibadan, Nigeria that the level of knowledge of copyright laws by the students was considerably high (about 85%). Isiakpona (2012) further revealed that the major reasons for infringement of copyright laws by the students was the non-availability of printed learning resources and the high cost of printed learning resources. This finding also agrees with the finding of a study carried out by Ogunrombi and Bello (1999) (as cited in Isiakpona 2012), which revealed that majority of students infringe on copyright law as a result of scarcity of these printed resources.

Based on the percentages of students' familiarity with plagiarism, computer ethics, laws against indiscriminate photocopying and fair, the conclusion one draws is that students at the graduate level of the University of Ghana are adequately knowledgeable about information ethics.

In evaluating the level of compliance among respondents, majority of them stated that they had never submitted someone else's work as theirs. This means that they complied with information ethics. This finding is in contrast with the findings of Pickard (2006) who indicated in a study on staff and student attitudes to plagiarism at University College of Northampton that a greater percentage of students submitted work done by someone as theirs. This meant they did not comply with information ethics. What could account for this was that the students were not aware of the nuances of the ethical use of information. With this assertion, Pickering and Hornby (2005), opined in a study on plagiarism and international students that the existence of differences in cultural values could be a factor.

With regard to submission of an essay someone wrote and gave you the permission to use as yours, the study found that 80.9% of the respondents had never been involved. This finding is in line with Yeo (2007), who conducted a study on engineering students in Australia revealed that students who wanted to comply with ethical use of information did not indulge in submitting essays or another works written by someone as theirs, they did not buy from paper mill, nor copy/cut and paste, no internet cut and paste. In as much as a 68.2% of the respondents indicated that they never copied from another student during any academic exercise, 63.7% of the respondents never permitted any student to copy their work.

Thus, one can conclude that the level of information ethic compliance is very high among student of the University of Ghana. It is interesting to note the various perspective of the unethical use of information by students. More than half of the respondents found most of the statements to be very unethical. These include providing false information to instructors, copying a passage out of a textbook for academic exercise without acknowledgement,

downloading assignment from the Internet and tendering it as yours. The above findings corroborate studies by Yusof & Masrom (2011), Delfre (2005), Masrom et al. (2010). It is obvious from the above that students of the University of Ghana have the right perspectives on the ethical use of information.

Findings of the study on the motivation to violate information ethics seem to corroborate a submission made by Pritchett (2010) that access to the Internet and availability of online databases contribute to flouting information ethics. Additionally the fear of failure was corroborated as one of the causes of students cheating and copy verbatim. The desire to obtain high marks made students violate information ethics. This finding was also corroborated by Straw 2002; White & Gordon, 2001; Auer & Krupar, 2001. They observed that the desire to obtain high grades was the strongest motivation for violating ethics of information.

In spite of the above discussions, it should be noted that the social and cultural context of the study plays a critical role in the findings of the study. For example, it a difficult challenge for the Balme library of the University of Ghana in getting adequate budget in a form of hard currency to acquire sufficient books and journals from abroad for these students. Though the institution is a member of the Consortium of Academic and Research Libraries in Ghana (CARLIGH) which negotiates and acquires mostly electronic resources (for example, Ebscohost, Emerald, Sage, etc.) for member institutions, it is not enough. This is because sometimes, a library user cannot have full-text access to an article found in some of these subscribed databases. As a result, students are forced to use internet sources and violate information ethics in the process. Modern day students are so much attached to technology but they have limited money to spend, they do not have professional experience therefore they likely to violate information ethics practically (Wang & McClung, 2011).

Conclusion

This study was conducted to examine students' awareness and perspectives about information ethics in the University of Ghana, Legon. Findings indicated that students were adequately knowledgeable about information ethics and the majority of them complied with information ethics practices.

Again, the study revealed that there is high consensus on what is deemed as ethical or unethical, acceptable or unacceptable use of information and that though students sometimes engaged in diverse information ethics violations, they knew they were indulging in an unethical or very unethical use of information. Majority of the students indicated that access to the Internet, fear of failure, access to electronic databases and the desire to obtain high marks were some of the motivating factors for violating information ethics.

Recommendations

Based on the findings, the researchers recommend the following:

Information ethics is an accumulation of concepts and these concepts must be clearly spelt out so that new students would become acquainted with all the concepts that relate to information ethics. This is likely to instil ethical adherence in students or control ethical violations of information where they seem to be predominant.

From the study, students seem to have learned about information ethics from diverse courses. It is about time information ethics is taught as a stand-alone course. This is because of the number of respondents who indicated low understanding of the concept. This course, among other things would teach students about ethical and unethical use of information as well as clarify their perspectives about information ethics.

The University must take proactive stance towards upholding information ethics and stress its importance even though some students understand the concept. This may include codes of information use, academic integrity, and others. The establishment of a Centre for Academic Integrity, though may be expensive, can create information ethics awareness through the organization of conferences, seminars, on academic or scholarly writing or publishing is recommended.

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