

Cross Discipline Undergraduate Students' Perception on Cheating

Group 2

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Abstract— Cheating has become a serious problem in the society nowadays especially in colleges or universities. This problem is not particularly happening in engineering disciplines, but the same problem also appeared in other disciplines such as nursing and business disciplines. Therefore, the purpose of this study is to compare the perception of undergraduate students from different discipline on cheating in education. This study is done by reviewing the journal articles which can be obtained from online journal database. After that, the data from those journal articles are analysed by first classifying the data according to the disciplines of the students and followed by analysing it. It was found that engineering students have the highest average percentage in cheating once or more than once, 36% compared to other discipline and this result is most probably due to engineering students does not aware that they are actually cheating in terms of assignment. This can be shown by referring to score of engineering students gave for collaborating on an assignment that they supposed to do alone, 2.67 which is the highest compared to other discipline. This means that they think that this behaviour belongs to not cheating. This problem requires immediate attention since these behaviours might lead the students to become even worse in their future especially when they step into this society.

Index Terms — Ethics

I. INTRODUCTION

Cheating has always been a problem among students regardless of their social background, gender, religion or even academic background. However, the perception of cheating differs from one place to another because of different factors that come into play. Thus, the severity of cheating is not the same. Cheating can be defined in many ways. Generally, the term academic dishonesty is used to describe the concept of cheating or plagiarism [1]. This means that students try to gain access to unauthorized info or answers during exams or assignments. So instead of answering the questions themselves, they tend to cheat to gain an unfair advantage. In an academic setting, students are exposed to cheating and studies show that most student admits to cheating or know people who cheat.

One of the main concern for cheating is that students who cheat are most likely do wrongdoings in their future career. These actions of corruption might involve a lot of money and most importantly the safety of people. In more critical occupations like medical practitioner which involves lives, students who cheat are most likely to become incompetent in

work. Serious concerns of human lives, social values, and economy is what makes cheating in medical and health institution unacceptable [2]. Each career have different contributions to society, so the degree of hazard that comes along are unalike.

In an effort to study cheating in multidisciplinary fields, we conducted a research paper comparing previous studies on cheating from students with different majors. The study will show similarities and differences of cheating from these group of students.

II. PROJECT METHODOLOGY

There are much of published journal articles and researches about the academic dishonesty or as known as cheating is done with a large population with homogeneous background. There are very little of study which compared the perception of undergraduate student from different discipline on cheating in education during their time in university. In this project, several researches about cheating in the respective discipline is compared such as Engineering, Business, Nursing and the Combination of varies discipline. The Journal that we found are mainly from several online journal database, for example, ScienceDirect, Springer, Wiley Online Library, etc. There are three comparisons in this journal: *Comparison of Different Discipline of Undergraduate Students' Perception on the Behaviours or Actions Constitute as Cheating*, *Comparison Between Frequencies of Cheating Behaviour Among Three Disciplines*, and *Comparisons of Different Reasons of Cheating by 3 Different Major Disciplines of University Students*

A. *Comparison of Different Discipline of Undergraduate Students' Perception on the Behaviours or Actions Constitute as Cheating*

Total of 3 papers is compared in the section which are *Cheating during the College Years: How Do Business School Students Compare?*, from Journal of Business Ethics (2007)[3], *Academic cheating among nursing students*, from the research Nurse Education Today 33 (2013)[4], and *Engineering Students' Perceptions of and Attitudes Towards Cheating*, from Journal of Engineering Education[5]. The three journals are using student questionnaire survey which involve responses of 268, 655, 643 students from the journals respectively. The journals that taken into comparison are specifically research at a discipline of student except *Cheating during the College*

Years: How Do Business School Students Compare? which has compared the business student and the combination of different discipline of students (which included Biomedical, Business, Criminal Justice, Engineering, Nursing, and Social Work).

B. Comparison Between Frequencies of Cheating Behaviour Among Three Disciplines

For this section, the data obtained are based on three journal articles: *Am I cheating? An Analysis of Online Student Perceptions of their Behaviours and Attitudes* (2013) [6], *Nurse Education Today* (2013) and *Engineering Students' Perceptions of and Attitudes Towards Cheating* (2006). Three types of disciplines will be compared in this section. These three researchers are using the same technique stated in the previous section which is delivering a questionnaire to the students. The number of participants for engineering, business and nursing disciplines are 643, 194 and 655 respectively. Data of frequency of cheating of cheating behaviour for engineering, business and nursing is based on average semester, past semester and last semester respectively. Since all the data is based on one semester, it can be used for comparison. At the end of this section, these data will be analysed and compared.

C. Comparisons of Different Reasons of Cheating by 3 Different Major Disciplines of University Students

Different reasons of cheating are very much related to the disciplines that students take during their studies. Certain disciplines have more unique reasoning as to why they cheat in the first place. One of the key elements that will be highlighted here is the perception of students towards cheating which ultimately is a reason students cheat in the first place. We compare a total of 3 papers from 3 different disciplines which are business, engineering and medical.

The three papers are *Cheating and Plagiarism: Perceptions and Practices of First Year IT Students* for Engineering and IT; *Cheating on examinations and its predictors among undergraduate students at Hawassa University College of Medicine and Health Science, Hawassa, Ethiopia* for medical, *Social-motivational factors affecting business students' cheating behaviour in Hong Kong and China* for business studies.

Each study uses almost the same method of survey which is distribution questionnaires. Though each paper has different approach in choosing their target. For the IT student, the survey participants are first-year students from Monash and Swinburne University in Australia. For medical student, the participants are 1732 undergraduate medical students from Hawassa University College in Ethiopia. For business student, the scope is even broader which is Hong Kong and China. These settings of the variable may be different because of cultural differences but this paper examines the value of which perceptions based on their educational environment.

III. RESULT AND ANALYSIS

The study participants involved in the research papers are mainly students within a range of 17 – 26 years of age. The students were from varies different academic years programs and some of the research also involved pre-university student. The participants are mostly female except the research of Engineering student which are 81% are male. The gender of participates in the different discipline is depend on the study of the discipline, for example, there are more male in engineering but there are more female in business and nursing. The section shows an overall comparison on different discipline of student responses on the 7 survey questions regarding cheating: *Comparison of Different Discipline of Undergraduate Students' perception on the behaviours or actions constitute as cheating*, *Comparison Between Frequencies of Cheating Behaviour Among Three Disciplines*, and *Comparisons of Different Reasons of Cheating by 3 Different Major Disciplines of University Student*.

A. Comparison of Different Discipline of Undergraduate Students' perception on the behaviours or actions constitute as cheating

Before discussing cheating happened among undergraduate students, the definition of cheating is an important element to this study. What behaviours and action are considered as cheating in the idea of student. Therefore, a comparison between 3 papers: *Cheating during the College Years: How Do Business School Students Compare?*, *Academic cheating among nursing students*, and *Engineering Students' Perceptions of and Attitudes Towards Cheating* are been made. From the 3 journals, 7 similar questions are picked up and compared to the other discipline. The tabulate method used in these journals have a minor different where research in nursing and engineering is using number of students while research in business is using scoring method. After normalisation and mathematically transfer the number of students into scoring method, the results from different discipline can be compared together in Table I below. There are 3 possible responses for every question of what behaviour that student considers as cheating and each of the answer has a different score:

- Cheating (score of 1)
- Unethical (score of 2)
- Not Cheating or unethical (score of 3)

There are some interesting results from the analysis of the comparison of the response of the students from different discipline. Engineering has the lowest score of 1.31 in the statement of “copying another student’s homework/assignments” among the 3 other disciplines. In other words, it shows that engineering students are more constituted copying another student’s homework/assignments is a cheating compared to business, nursing and the combination of different disciplines. However, on the other hand, engineering score the highest, 2.67 in “collaborating on assignment that you are supposed to do alone” which shows that engineering constituted that collaborate an individual assignment is neither a cheating nor unethical actions. This result might due to most engineering projects are in the form of group project due to its complexity of the assignment that

TABLE I
STUDENT PERCEPTION ON THE BEHAVIOURS AS “CHEATING” (THE MEAN SHOWN, 1 = CHEATING, 2 = UNETHICAL, 3 = NOT CHEATING OR UNETHICAL)

Statement	Engineering n = 643	Business n= 124	Nursing n = 655	Combined n = 268
Copying another student’s homework/assignments	1.31	1.73	1.81	1.63
Collaborating on assignment that you are supposed to do alone	2.67	2.16	2.14	2.03
Collaborating on take-home exams that you are supposed to do alone	1.92	1.77	-	1.64
Using an unauthorized cheat sheet or reference sheet on an exam	1.09	1.08	1.39	1.10
Looking at or copying from another student during a test or quiz	1.04	1.10	1.4	1.11
Allowing someone else to copy from your answer during a test	1.30	1.28	1.41	1.23
Storing answer or programming extra information into a calculator or Personal Digital Assistant (PDA) then use on exam	1.35	1.32	1.35	1.39

need many hands-on and technical skills.

Moreover, all the students from different discipline have given the lowest score in the 2 statements: “using an unauthorized cheat sheet or reference sheet on an exam” and “looking at or copying from another student during a test or quiz”. Students have a same opinion on the 2 behaviours as cheating may due to these 2 statements are the most common situations where students are being taught as the cheating behaviours. For example, students are emphasized not to do any cheating during examinations. At the same time, teacher and examiner are very serious in catching student cheating in the exam and give a very severe punishment to the student who cheating in exam including ban the student for taking an exam in the semester.

Meanwhile, it was surprising that all the discipline student gave about the same score in “Storing answer or programming extra information into a calculator or Personal Digital Assistant (PDA) then use on exam” which about 1.35 scores. They all has the same opinion on that using electronic tools in storing answer or program for the exam is considered as cheating. Storing extra information in PDA is not fair to other students who were not doing that and this lead to the feeling and perceptive that constitute it as cheating. There was a missing data in nursing column, at the statement of “collaborating on take-home exams that you are supposed to do alone”. This may due to the students of nursing has very less opportunity to have a take-home exam thus the statement is not in the questionnaire.

B. Comparison Between Frequencies of Cheating Behaviour Among Three Disciplines

This section will discuss the frequency of cheating behaviour among students who are taking disciplines in business, engineering and nursing field. Data obtained are shown in Table II below. These data show the percentage which students

involved in cheating for one or more than one times for one semester. From Table II, engineering students show the highest percentage in involving in cheating among these three disciplines for six out of seven specific cheating behaviours. This indicates that engineering students have cheated once or more than once for one semester in both assignment and test.

In order simplify the comparison between the data, the average percentage for students involved in cheating once or more than one for one semester is calculated. From the bar chart plotted in Fig. 1, engineering students is the highest among three disciplines (36.9 %), second is nursing students and followed by business students (8.7 %). There are some assumptions can be made from these data. Engineering students prone to cheat frequently might be caused by the difficulties of their test and assignments. Engineering disciplines involve a lot of calculation and formulae which makes the disciplines more difficult. This may cause the students to take exam question from others who have taken it earlier (67.4%). They also show the high percentage for “working in group for individual assignment”.

The average percentage for business student to cheat once or more than once per semester is only 8.7 %, the lowest among the three disciplines. This is probably because their question for test and assignment is difficult to discuss and copy. Answer for the questions might be different for every student. It only shows 5.7 % for “working in group for individual assignment” which is much lower than that for engineering (40.1%) and nursing (18.6 %) students. The average percentage for nursing student is 27.2 % which is second highest among three disciplines. All the percentage of the seven cheating behaviours that nursing students did for once or more than once is lower than that of engineering students and is higher than that of business students.

TABLE II
FREQUENCY OF CHEATING AMONG DIFFERENT DISCIPLINE OF STUDENTS

Cheating behaviours	Percentage of students involved in cheating (once or more than once for one semester)		
	Engineering n=643	Nursing n=655	Business n=194
Use electronic devices to search for answer	38.9	1.7	0.5
Asking student about questions on an exam you have not yet taken	67.4	16.1	1.5
Copying from unapproved source during test	26.3	10.1	29.9
Asking other to take exam for you	4.5	1.2	1.0
Working in group for individual assignment	40.1	18.6	5.7
Fabricating or falsifying a bibliography	27.7	11.8	11.5
Paraphrasing or copying material, almost word to word from textbook, journal or any written source without citation	53.3	27.2	10.8

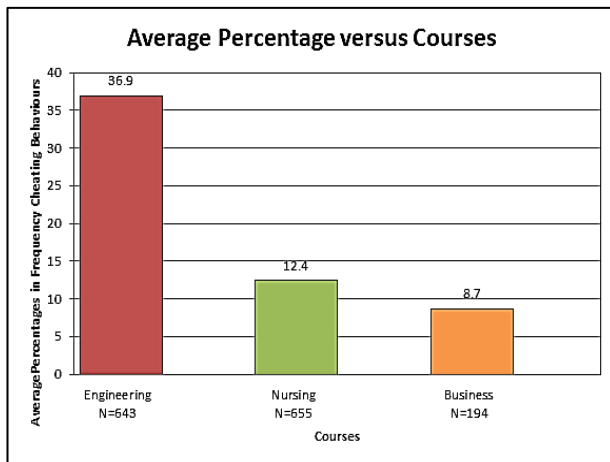


Fig 1: Graph of average student percentage of different disciplines involved in cheating for one semester

C. Comparisons of Different Factor of Cheating by 3 Different Major Disciplines of University Student

The factor of student to cheat is compared based on their respective discipline. The numbers of each test subject are different, but the percentage will give an indication of the majority and minority. Studies have shown that most of the students are aware that someone are cheating and plagiarism but chose not to take action. We will consider each discipline with symbols business (B), medical (M) and IT (I) in the comparison of factor of cheating among student from different discipline in Table III.

As we can see the primary factor that should be considered is the behaviour of the student. According to the research of Pennycook, cultural factors had affect behaviour of business students in China towards cheating. For example, Chinese Confusion culture does not view the repeated use of words as dishonourable [7], in other words, accepting plagiarism. Other than cultural differences, factors such social backgrounds, economic status and political institutions constitute the

TABLE III
FACTOR OF CHEATING AMONG STUDENT FROM DIFFERENT OF DISCIPLINE, BUSINESS (B), MEDICAL (M), AND IT(I).
(✓ = YES, N/A = NOT AVAILABLE)

Factors of Cheating	B	M	I
Behaviour of Students	✓	✓	✓
Approachability of teacher	✓	N/A	✓
Peers Influence	✓	N/A	N/A
Admissions and Knowledge of Others' Cheating	N/A	✓	✓

behaviours of the students. Besides that, among medical students 24.4% (95% CI = 22.1-26.8) views cheating as normal practice. The perception leads up to the practice of cheating itself.

Next factor we consider is the approachability of teachers. This factor is highlighted in two papers involving business and IT students. Research shows that a friendly teacher would influence students not to cheat. For example, a research in Hong Kong shows that the students are less likely to misconduct if the teachers are approachable and provide strong academic support.

The last factor to compare is admissions and knowledge of cheating. In the research of Sheard, IT students from Monash University student admitted cheating or knowing someone does cheating (85.4%) compared to Swinburne University student (69.3%) [8]. Meanwhile, there are 21.2% of medical students admit that they did cheating during their high school and repeated the behaviour of cheating in their university. This shows that students who did cheating before, tend to repeat cheating afterwards.

IV. CONCLUSION

To conclude, this paper showed different aspect of comparison generated from cheating behaviours. The behaviours are dependent on the type of students, the course of study and era of generation. For the comparison of Different Discipline of Undergraduate Students' perception on the behaviours or actions constitute as cheating, collaboration on academic assignments is considered the most not cheating behaviour and quite ethical to do it. While using reference source to cheat an exam or directly copying from another student during a test or quiz are considered unethical in student perception. This proved that students tend to more ethical during the official academic evaluation that is supervised by their lecturer.

For the assignment that can be done at home and outside the class, students have the perceptive that it is fine and ethical to collaborate to finish the task together. For the comparison between frequencies of cheating behaviour among three courses, engineering students tend to have more cheating behaviour than nursing students while business students stand last among the three courses. Engineering and nursing tend to have more intensive examination paper that triggers their actions of cheating against their conscience.

For the comparisons of different reasons of cheating by 3 different major courses of university students, unknown reasons and not preparing well for the examination contribute to the top 2 reasons of cheating. On competent in another hand is the main reason why students not cheating in examination. Cheating in the examination is a behaviour that everyone should look into and study as it started since young among students. In the nutshell, students will cheat in the examination because they felt that the value of getting good results is more important than having their knowledge evaluated honestly.

REFERENCES

- [1] McCabe, D., & Pavela, G. (2000). Some good news about academic integrity. *Change: The Magazine of Higher Learning*, 32, 32-38.
- [2] Desalegn, A. A., & Berhan, A. (2014). Cheating on examinations and its predictors among undergraduate students at Hawassa University College of Medicine and Health, 1-11.
- [3] Klein, H. A., Levenburg, N. M., McKendall, M., & Mothersell, W. (2007). Cheating during the college years: How do business school students compare? *Journal of Business Ethics*, 72(2), 197-206.
- [4] Park, E. J., Park, S., & Jang, I. S. (2013). Academic cheating among nursing students. *Nurse Education Today*, 33(4), 346-352.
- [5] DONALD D., C., TREVOR S., H., CYNTHIA J., F., SUSAN M., M., & HONOR J., P. (2006). Engineering Students' Perceptions of and Attitudes Towards Cheating. *Journal of Engineering Education*, (July), 181-194.
- [6] Jones, Irma S., Blankenship, Dianna, Jollier, Gerald. (2013). AM I CHEATING? AN ANALYSIS OF ONLINE STUDENT PERCEPTIONS OF THEIR BEHAVIORS AND ATTITUDES, 20(1), 59-69.
- [7] Pennycook, A. (1996). Borrowing others' words: Text, ownership, memory, and plagiarism. *TESOL Quarterly*, 20, 201-230.
- [8] Sheard, J., Dick, M., Markham, S., Macdonald, I., & Walsh, M. (2002). Cheating and Plagiarism : Perceptions and Practices of First Year IT Students, 183-187.