

Questionable Work Practices

The Views of Postgraduate Students in IT Courses

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Introduction

This is a report on a study that aimed to determine attitudes towards questionable work practices of postgraduate and graduate diploma students within the School of Computer Science and Software Engineering. This is part of a wider project that aims to:

- establish undergraduate and graduate students' understanding of what constitutes cheating and plagiarism and what practices are acceptable to them in this context
- determine the extent of cheating and plagiarism amongst undergraduate and postgraduate students
- identify motivations for cheating and plagiarism, and factors that influence cheating behaviour
- suggest measures which may be taken to discourage the practice of cheating and plagiarism

The longer-term aim of the project is to assist in determining measures that can be taken to address this problem and will facilitate the development of an informed policy on student plagiarism and cheating.

Research Method

Selected postgraduate and graduate diploma subjects were surveyed near the end of second semester 2000. A paper questionnaire was given to the students in their tutorial classes. The questionnaire contained questions to determine:

- demographic information
- students' rating of the acceptability of various questionable work practices described in 18 different scenarios
- students' practice and knowledge of others practising each questionable work practice
- reasons which could cause cheating
- reasons which could prevent cheating

Questionable work practice scenarios

A brief description of the questionable work practice scenarios is as follows:

1. Two students collaborating on an assignment meant to be completed individually
2. Posting to an Internet newsgroup for assistance
3. Showing assignment work to a lecturer for guidance
4. Resubmitting an assignment from a previous subject in a new subject.

5. Submitting a friend's assignment from a past running of the subject
6. Being given the answer to a tutorial exercise worth 5% by a class mate if the computer you used has problems
7. Hiring a person to write your assignment for you
8. Copying another student's assignment from their computer without their knowledge and submitting it
9. Not informing the tutor, that an assignment has been given too high a mark
10. Taking a student's assignment from a lecturer's pigeonhole and copying it
11. Copying material for an essay from the Internet
12. Copying the majority of an assignment from a friend's assignment, but doing a fair bit of work yourself
13. Copying all of an assignment given to you by a friend
14. Hiring someone to sit an exam for you
15. Using a hidden sheet of paper with important facts during an exam
16. Obtaining a medical certificate from a doctor to get an extension, when you are not sick
17. Copying material for an essay from a text book
18. Swapping assignments with a friend, so that each does one assignment, instead of doing both.

A copy of the Questionable Work Practices survey form can be found at:
<http://cerg.csse.monash.edu.au/reports/>

Demographic Profile

152 students from a total population of 384 were surveyed and 103 valid questionnaires were returned. The students surveyed were enrolled in the graduate diploma subject CSE9000, or the postgraduate subjects CSE5000, COT4310 or SFT5610, or Honours.

The following tables show the numbers of student classified according to categories used in the analysis of the results from the surveys. . NR is used to indicate no response was given to the question.

Numbers of students classified by course type

Course type	Completed questionnaires	Number of students surveyed	Total population
Postgraduate (including Honours)	43	68	230
Graduate diploma	60	84	154

Numbers of students classified by study mode

Full time	Part time	NR
59	33	11 (10.7%)

Numbers of students classified by gender

Male	Female	NR
63	29	11 (10.7%)

Numbers of students classified by age

The students were classified into 2 age groups as follows:

- born in 1975 or after (younger group)
- born before 1975 (older group)

Year of birth \geq 1975 (young)	Year of birth $<$ 1975 (old)	NR
30	51	22 (21.4%)

Numbers of students classified by average performance in course to date

Fail	Pass	Credit	Distinction	High Distinction	NR
0	6	26	39	17	15 (14.6%)

From the above data the students were further classified into low performance (fail, pass, credit) and high performance (distinction, high distinction).

Low performance	High performance	NR
32	56	15 (14.6%)

Survey Results

Questionable work practice scenarios

Student ratings of acceptability of scenarios and extent of practise of the scenario

The students were asked to consider 18 different scenarios, each describing a questionable work practice. For each scenario they were asked to rate how acceptable the practice was, whether they had done it, and whether they personally knew someone who had done it. For the ratings of acceptability a 5-point Likert scale was used, where 1 indicates acceptable and 5 indicates not acceptable. The results are shown in the table below. NR is used to indicate no response was given to the question. The “Acceptable” column shows the percentage of students who rated the scenario as acceptable (1 or 2 on the Likert scale).

Scenario	Acceptability					Practised personally		Know someone personally	
	Acceptable	Mean	SD	NR %		Yes %	NR %	Yes %	NR %
1	35.3	3.1	1.3	2.9		23.3	4.9	38.8	4.9
2	68.0	2.1	1.4	3.9		24.3	1.0	28.2	1.9
3	59.2	2.4	1.4	0		38.8	1.9	48.5	1.9
4	40.2	2.9	1.4	1.0		15.5	0	29.1	1.9
5	21.6	3.6	1.3	1.0		17.5	1.0	41.7	1.0
6	11.9	4.2	1.2	1.9		3.9	1.9	19.4	1.9
7	3.9	4.7	0.9	0	*	1.0	1.0	11.7	1.0
8	5.9	4.5	1.0	1.0	*	3.9	1.0	13.6	1.0
9	17.0	3.1	1.4	2.9		11.7	0	16.5	1.0
10	0	4.9	0.3	0	*	1.0	1.9	3.9	1.9
11	7.8	4.2	1.1	1.0		15.5	1.0	22.3	1.0
12	30.1	3.1	1.2	0		19.4	1.0	31.1	1.0
13	1.9	4.8	0.6	0	*	2.9	1.9	23.3	1.0
14	1.0	4.9	0.4	0	*	0	1.0	3.9	1.0
15	1.9	4.8	0.6	0	*	3.9	1.0	17.5	1.9
16	5.9	4.3	1.0	1.0		2.9	0	28.2	0
17	8.7	4.3	1.0	0		11.7	1.0	27.2	1.0
18	2.9	4.6	0.8	1.0	*	1.9	1.0	13.6	0

* indicates that results were skewed (< -2.0 or >2.0) and/or had high kurtosis

For the above scenarios independent groups *t*-tests were used to determine any significant differences ($p \leq 0.05$) in the means obtained for the students' ratings of the acceptability of scenarios when classified according to course type (postgraduate or graduate diploma), study mode (fulltime or part time), gender, age group, or average course performance to date (low or high). The *t*-tests were not performed on the scenarios for which the results had skewed distributions, or too high or too low kurtosis.

The following results were obtained:

- There were no significant differences between the means of acceptability ratings students for any scenarios based on study mode, gender, or age group.
- The postgraduate students felt that scenario 3 was more acceptable than the graduate diploma students. This scenario described the practice of showing work to a lecturer with the intention of getting the lecturer to approve answers and gain hints on an assignment.
- The low performing students felt that scenario 11 was more acceptable than the high performing students. This scenario involved the practice of copying paragraphs of text from the Internet and using it in an essay without acknowledgement.

Acceptable scenarios

The most acceptable scenarios were 2 and 3. These presented situations where students obtained low level assistance with assignment work. Pearson's moment correlation co-efficient calculated for these scenarios showed a strong relationship ($r = 0.57$, significant at the 0.01 level).

Other acceptable scenarios (in decreasing order of acceptability) were:

- 4 (resubmitting an assignment from a previous subject for assessment in a new subject)
- 1 and 12 (getting assistance with assignment work from a friend – more assistance than described in scenarios 2 and 3)
- 9 (discovering that an assignment mark was added up incorrectly to give a higher mark, and not telling the tutor)

All of the above scenarios were significantly more acceptable than the others.

Unacceptable scenarios

The least acceptable scenario was 10. This involved theft of an assignment from a lecturer's pigeonhole.

Other unacceptable scenarios (in increasing order of acceptability) were:

- 14 and 15 (exam cheating)
- 13, 18 and 7 (submitting complete assignments that were someone else's work)
- 8 and 17 (submitting assignments containing significant parts which were someone else's work)
- 16 (using fraud to obtain an extension to an assignment)

Most practised scenarios

The scenarios describing work practices which the highest numbers of students admitted to having done were:

- 3 (showing assignment work to a lecturer for guidance)
- 2 (posting to an Internet newsgroup for assistance)
- 1 (two students collaborating on an assignment meant to be completed individually)
- 12 (copying the majority of an assignment from a friend's assignment, but doing a fair bit of work yourself)

These four scenarios were rated in the top five most acceptable scenarios. The fifth scenario, scenario 4, probably doesn't rate among the most practised because it is likely that not all students have had the opportunity to do this.

The scenarios describing work practices which the highest numbers of students admitted to having known someone personally who had done it were:

- 3 (showing assignment work to a lecturer for guidance)
- 5 (submitting a friend's assignment from a past running of the subject)
- 1 (two students collaborating on an assignment meant to be completed individually)
- 12 (copying the majority of an assignment from a friend's assignment, but doing a fair bit of work yourself)
- 4 (resubmitting an assignment from a previous subject in a new subject)

Least practised scenarios

The scenarios describing work practices which the least numbers of students admitted to having done were:

- 14 (hiring someone to sit an exam for you)
- 7 (hiring a person to write your assignment for you)
- 10 (taking a student's assignment from a lecturer's pigeonhole and copying it)
- 18 (swapping assignments with a friend, so that each does one assignment, instead of doing both)
- 13 (copying all of an assignment given to you by a friend)
- 16 (obtaining a medical certificate from a doctor to get an extension, when you are not sick)
- 6 (being given the answer to a tutorial exercise worth 5% by a class mate if the computer you used has problems)
- 8 (copying another student's assignment from their computer without their knowledge and submitting it)
- 15 (using a hidden sheet of paper with important facts during an exam)

These scenarios were also all rated as highly unacceptable.

The scenarios describing work practices which the least numbers of students admitted to having known someone personally who had done it were:

- 10 (taking a student's assignment from a lecturer's pigeonhole and copying it)
- 14 (hiring someone to sit an exam for you)
- 7 (hiring a person to write your assignment for you)
- 8 (copying another student's assignment from their computer without their knowledge and submitting it)
- 18 (swapping assignments with a friend, so that each does one assignment, instead of doing both)

Reasons for cheating

For this questions students were asked to indicate the likelihood that each reason would cause them to cheat. A 5-point Likert scale was used, where 1 indicates not at all and 5 indicates highly likely. NR is used to indicate no response was given to the question.

Reason	Likelihood of causing cheating			
	Mean	SD	NR %	
Not enough time	2.6	1.6	1.9	
Too great a workload at university	2.6	1.5	1.9	
Will fail otherwise	2.7	1.6	1.9	*
Lazy	1.4	0.9	2.9	*
Everyone does it	1.6	1.1	1.9	
Need to get better marks	1.9	1.2	1.9	
Parental pressure	1.5	1.1	1.9	
Can't afford to fail	2.4	1.6	1.9	
Assignments are too hard	2.3	1.5	1.9	
To help a friend	2.1	1.2	1.9	
Missed classes due to ill health	2.0	1.3	1.9	
Exams for the subject are too hard	2.1	1.4	1.9	
Afraid of failing	2.3	1.4	1.9	
For a monetary or other reward	1.3	0.8	1.9	*

* indicates that results were skewed (< -2.0 or >2.0) and/or had high kurtosis

Independent groups *t*-tests were used to determine any significant differences ($p \leq 0.05$) in the means obtained for the students' ratings of likelihood of each reason causing cheating when classified according course type (postgraduate or graduate diploma), study mode (fulltime or part

time), gender, age group, or average course performance to date (low or high). The *t*-tests were not performed on the scenarios for which the results had skewed distributions, or too high or too low kurtosis.

The only significant differences were between full and part time students. The full time students indicated that exams that were too hard and feeling that they couldn't afford to fail would be more likely to cause them to cheat than the part time group.

Reasons for not cheating

For this questions students were asked to indicate the likelihood that each reason would prevent them from cheating. A 5-point Likert scale was used, where 1 indicates not at all and 5 indicates highly likely. NR is used to indicate no response was given to the question.

Reason	Likelihood of preventing cheating			
	Mean	SD	NR %	
Want to know what your work is worth	4.4	1.0	2.9	
Pride in your work	4.3	1.1	2.9	*
Can get good marks without cheating	4.0	1.2	2.9	
Against your moral values	4.0	1.2	3.9	
Against your religious beliefs	2.5	1.6	2.9	
Fear of being found out	3.2	1.6	4.9	
Never thought about it	3.3	1.5	6.8	
Don't know how to	2.5	1.5	6.8	
Fairness to other students	3.3	1.4	2.9	
Penalties if caught are too high	3.6	1.6	4.9	
* indicates that results were skewed (< -2.0 or >2.0) and/or had high kurtosis				

Independent groups *t*-tests were used to determine any significant differences ($p \leq 0.05$) in the means obtained for the students' ratings of likelihood of each reason causing cheating when classified according to course type (postgraduate or graduate diploma), study mode (fulltime or part time), gender, age group, or average course performance to date (low or high). The *t*-tests were not performed on the scenarios for which the results had skewed distributions, or too high or too low kurtosis.

The only significant differences were between the two age groups. The older student group indicated that not knowing how to cheat and cheating being against their moral values would be more likely to prevent them from cheating than the younger student group.

Commissioning assignment work

What would you be prepared to pay for an assignment that is worth 40% of the semester's marks?

Payment	Yes %
Wouldn't pay	84.5
< \$10%	1.0
\$10-\$19	1.9
\$20-\$49	1.9
\$50-\$99	2.9
\$100-\$199	3.9
\$200 plus	3.9
NR	0
Total	100.0

These result were positively skewed and had high kurtosis so no further analysis was done.

Would you be prepared to write an assignment for a fee?

Yes %	NR %
21.0	8.7

Cross tabulations were performed to determine any significant differences (chi-squared ≤ 0.05) in the responses classified according to course type (postgraduate or graduate diploma), study mode (fulltime or part time), gender, age group, or average course performance to date (low or high).

These showed that the male students would be more inclined to write an assignment for a fee than the female students, and the fulltime students would be more inclined to write an assignment for a fee than the part time students.

There no differences in responses based on course type, age group or average course performance.

Detection of cheating

If as part of the assessment for the assignment, you had to attend an interview with a tutor and explain your work would it:

Response	Yes %
Reduce the likelihood of you cheating	28.2
Have no affect on the likelihood of you cheating	9.7
Increase the likelihood of you cheating	1.9
I never cheat so it is irrelevant	58.3
NR	1.9
Total	100.0

Cross tabulations performed showed that there were no significant differences in the responses classified according to course type (postgraduate or graduate diploma), study mode (fulltime or part time), gender, age group, or average course performance to date (low or high).

What would you do if you observed someone cheating in an exam?

Response	Yes %
Ignore it	77.7
Call the supervisor and inform them	7.8
Talk to the student after the exam	7.8
Other	5.8
NR	1.0
Total	100.0

These result were positively skewed and had high kurtosis so no further analysis was done.

What would you do if you observed someone cheating in an assignment?

Response	Yes %
Ignore it	81.6
Inform the lecturer	7.8
Talk to the student about it	6.8
Other	2.9
NR	1.0
Total	100.0

These result were positively skewed and had high kurtosis so no further analysis was done.

Staff and University attitudes to cheating

In your opinion, how strongly do lecturers and tutors feel about preventing cheating in their subjects?

Mean %	SD	NR %
3.9	1.0	1.0

In your opinion, how strongly does the university as a whole feel about preventing cheating?

Mean %	SD	NR %
3.9	1.1	1.0

For the above two questions, independent groups *t*-tests showed that there were no significant differences ($p \leq 0.05$) in the means obtained for the students' ratings of how strongly their teachers or the University feel about cheating when classified according course type (postgraduate or graduate diploma), study mode (fulltime or part time), gender, age group, or average course performance to date (low or high).

A Pearson's correlation between these two questions showed a strong relationship between the responses ($r = 0.69$, significant at the 0.01 level)

Are you aware of the University regulations on cheating?

Yes %	NR %
77.7	1.9

Cross tabulations were performed to determine any significant differences (chi-squared ≤ 0.05) in the responses classified according to course type (postgraduate or graduate diploma), study mode (fulltime or part time), gender, age group, or average course performance to date (low or high).

These showed that the younger age-group students are more aware of the university regulations than the older age group.