

Questionable Work Practices

Comparison of the Views of Undergraduate and Postgraduate Students in IT Courses

Judy Sheard, Martin Dick, Selby Markham
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Introduction

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

Students from selected postgraduate, graduate diploma and undergraduate subjects from each year level of CSSE courses were invited to participate in the study. A paper questionnaire was given to the students in their tutorial classes near the end of second semester 2000. Most students returned a completed questionnaire. 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

The students surveyed were enrolled in the undergraduate subjects CSE1203, CSE2203, CSE3200, CSE1434 and CSE2302, the graduate diploma subject CSE9000, or the postgraduate subjects CSE5000, COT4310 or SFT5610, or Honours. A total of 602 valid questionnaires were returned. The total enrolment in these subjects was 1189 students.

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 this question.

Numbers of students classified by level

Undergraduate	Graduate diploma/ postgraduate
490	112

Numbers of students classified by study mode

	Full time	Part time	NR
Undergraduate	426 (86.9%)	17 (3.5%)	47 (9.6%)
Graduate diploma/ postgraduate	62 (55.4%)	36 (32.1%)	14 (12.5%)

Numbers of students classified by gender

	Male	Female	NR
Undergraduate	308 (62.9%)	134 (27.3%)	48 (9.8%)
Graduate diploma/ postgraduate	67 (59.8%)	31 (27.7%)	14 (12.5%)

Numbers of students classified by age

The students were classified into 2 age groups as follows:

- born during 1980 or after (younger group)
- born before 1980 (older group)

	Year of birth ≥ 1980 (young)	Year of birth < 1980 (old)	NR
Undergraduate	232	178	80 (16.3%)
Graduate diploma/ postgraduate	0	87	35 (31.2%)

Numbers of students classified by average performance in course to date

	Fail	Pass	Credit	Distinction	High Distinction	NR
Undergraduate	7	39	162	168	64	50 (10.2%)
Graduate diploma/ postgraduate	0	7	27	44	19	15 (13.4%)

Survey Results

Questionable work practice scenarios

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, using a 5-point Likert scale, where 1 indicates acceptable and 5 indicates not acceptable. The results are shown in Table 1.

For each scenario, Independent groups t-tests and Mann-Whitney U tests were used to determine differences in the means obtained for the students' ratings of the acceptability of scenarios when classified according to student group (undergraduate or postgraduate). The results of the t-tests are shown in Table 1.

Scenario	Acceptability				<i>t</i>
	Undergraduate		Postgraduate		
	Mean	SD	Mean	SD	
1	2.6	1.2	3.2	1.3	-4.45(590) ***
2	2.0	1.1	2.1	1.4	-0.20(587)
3	2.1	1.1	2.3	1.4	-1.56(593)
4	2.6	1.3	2.8	1.4	-1.28(592)
5	3.1	1.3	3.5	1.3	-3.21(594) ***
6	3.9	1.2	4.1	1.2	-2.30(592) **
7	4.5	0.9	4.7	0.9	S/K
8	4.3	1.0	4.5	1.0	S/K
9	3.1	1.4	3.2	1.4	-0.69(589)
10	4.7	0.7	5.0	0.3	S/K
11	3.7	1.1	4.1	1.1	-2.18(590) **
12	3.0	1.2	3.1	1.2	-0.76(589)
13	4.4	1.0	4.8	0.6	S/K
14	4.7	0.8	4.9	0.4	S/K
15	4.6	0.8	4.8	0.7	S/K
16	4.0	1.1	4.2	1.0	-1.94(589)
17	3.9	1.1	4.2	1.0	-3.39(587) ***
18	4.1	1.1	4.5	0.9	S/K

* = $p < 0.05$
** = $p < 0.01$
*** = $p < 0.005$
S/K indicates high skewness or kurtosis

Table 1 Students' ratings of acceptability of scenarios

Differences between groups in admissions of cheating and knowledge of others cheating

For each of the 18 scenarios the students were asked if they had practised it personally or knew someone who had practised it. The results are shown in Table 2.

Cross tabulations were performed to determine differences between numbers of undergraduate and postgraduate students admitting to practising the scenario, or knowing someone personally who had practised the scenario. The significant results are shown in Table 2. The non responses were never greater than 3% and these have not been shown.

Scenario	Practised personally			Know someone personally		
	U/grad %	P/grad %	X	U/grad %	P/grad %	X
1	47.9	24.5	19.31(1)***	69.2	43.4	25.34(1)***
2	23.8	24.5		37.6	28.4	
3	36.0	42.2		54.7	53.2	
4	28.7	15.3	8.35(1)***	38.7	27.5	4.76(1)*
5	29.2	17.3	6.46(1)**	44.8	40.9	
6	10.6	4.6	3.72(1)*	32.6	20.2	6.46(1)*
7	3.1	0.9		11.0	10.9	
8	7.1	5.5		21.8	12.8	4.47(1)*
9	18.0	11.7		26.8	18.2	
10	2.9	0.9		4.2	3.7	
11	19.2	15.5		28.4	20.9	
12	31.6	21.8	4.07(1)*	46.8	33.6	6.31(1)*
13	8.6	3.7		28.6	22.7	
14	2.9	0.0		4.4	3.6	
15	3.8	4.5		13.6	17.4	
16	10.9	3.6	5.54(1)**	34.5	30.6	
17	20.2	13.6		30.9	28.2	
18	8.4	4.5		20.5	16.2	
* = $p < 0.05$ ** = $p < 0.01$ *** = $p < 0.005$						

Table 2 Students' admissions of cheating practice and perception of other students' cheating practice

Frequency of cheating practice

The frequency of cheating practice is shown in Table 3. The numbers and percentages of students who have practised each scenario are shown. Scenarios 2 and 3, which are not considered cheating practices, have not been included in these totals.

A cross tabulation performed on the number of scenarios practised against students classified according to group (undergraduate or postgraduate) showed a significant difference.

Number of scenarios practised	U/grad		P/grad	
	Number of students	Percentage of students	Number of students	Percentage of students
0	102	20.8	52	46.4
1	115	23.4	21	18.8
2	77	15.7	11	9.8
3	65	13.3	8	7.1
4	45	9.2	8	7.1
5	33	6.7	6	5.4
6	16	3.3	2	1.8
7	11	2.2	3	2.7
8	7	1.4	0	0
>8	15	3.0	0	0

Table 3 Frequency of cheating practices

Reasons for cheating

For this question 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. The results are shown in Table 4.

Independent groups t-tests and Mann-Whitney U tests were used to determine any significant differences ($p < 0.05$) in the means obtained for the ratings of the likelihood of each reason causing cheating when classified according student group (undergraduate or postgraduate).). The results of the t-tests are shown in Table 4.

Reason	Likelihood of causing cheating				
	U/grad		P/grad		<i>t</i>
	Mean	SD	Mean	SD	
Not enough time	3.1	1.5	2.7	1.6	2.54(580) **
Too great a workload at university	3.1	1.4	2.6	1.6	2.81(579) ***
Will fail otherwise	3.1	1.4	2.7	1.6	2.30(575) *
Lazy	2.0	1.2	1.5	1.0	S/K
Everyone does it	2.0	1.2	1.5	1.0	S/K
Need to get better marks	2.2	1.3	1.9	1.2	2.27(575) **
Parental pressure	2.0	1.3	1.6	1.1	S/K
Can't afford to fail	2.8	1.5	2.4	1.6	1.91(574)
Assignments are too hard	2.7	1.4	2.3	1.5	2.73(575) ***
To help a friend	2.5	1.2	2.2	1.3	2.40(577) *
Missed classes due to ill health	2.4	1.3	2.1	1.4	2.08(576) *
Exams for the subject are too hard	2.5	1.4	2.1	1.4	2.39(572) *
Afraid of failing	2.7	1.4	2.3	1.5	2.69(574) ***
For a monetary or other reward	1.8	1.2	1.3	0.7	S/K
<p>* = $p < 0.05$ ** = $p < 0.01$ *** = $p < 0.005$ S/K indicates high skewness or kurtosis</p>					

Table 4 Reasons which may cause cheating

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. The results are shown in Table 5.

Independent groups t-tests and Mann-Whitney U tests were used to determine any significant differences ($p < 0.05$) in the means obtained for the ratings of the likelihood of each reason preventing cheating when classified according student group (undergraduate or postgraduate). The results are shown in Table 5.

Reason	Likelihood of causing cheating				
	U/grad		P/grad		t
	Mean	SD	Mean	SD	
Want to know what your work is worth	4.1	1.2	4.4	1.0	-2.46(570) *
Pride in your work	4.1	1.1	4.3	1.1	S/K
Can get good marks without cheating	4.0	1.1	4.1	1.2	-1.87(574)
Against your moral values	3.8	1.2	4.0	1.2	-1.10(568)
Against your religious beliefs	2.7	1.6	2.4	1.6	2.05(564) *
Fear of being found out	3.4	1.4	3.1	1.6	1.70(565)
Never thought about it	3.1	1.4	3.2	1.5	-0.71(560)
Don't know how to	2.7	1.4	2.5	1.5	1.42((564)
Fairness to other students	3.1	1.4	3.3	1.3	-1.10(571)
Penalties if caught are too high	3.6	1.4	3.4	1.6	1.40(568)
* = $p < 0.05$ ** = $p < 0.01$ *** = $p < 0.005$ S/K indicates high skewness or kurtosis					

Table 5 Reasons which may prevent cheating

Commissioning assignment work

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

Payment	U/grad %	P/grad %
Wouldn't pay	76.2	84.7
< \$10%	2.7	1.8
\$10-\$19	3.3	1.8
\$20-\$49	5.4	1.8
\$50-\$99	5.6	2.7
\$100-\$199	2.9	3.6
\$200 plus	3.8	3.6
Total	100.0	100.0

A cross tabulation performed on these responses showed no significant differences.

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

U/grad %	P/grad %
23.1	22.3

A cross tabulation performed on these responses showed no significant difference.

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	U/grad %	P/grad %
Reduce the likelihood of you cheating	32.7	26.6
Have no affect on the likelihood of you cheating	17.0	11.9
Increase the likelihood of you cheating	2.7	1.8
I never cheat so it is irrelevant	46.5	59.6

A cross tabulation performed on these responses showed almost significant differences.

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

Response	U/grad %	P/grad %
Ignore it	79.7	79.8
Call the supervisor and inform them	8.6	6.4
Talk to the student after the exam	5.1	9.2
Other	4.7	4.6

A cross tabulation performed on these responses showed no significant differences.

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

Response	U/grad %	P/grad %
Ignore it	79.0	83.5
Inform the lecturer	5.8	6.4
Talk to the student about it	10.1	7.3
Other	3.2	2.8

A cross tabulation performed on these responses showed no significant differences.

Student perceptions of staff and University attitudes to cheating

For the following two questions a 5-point Likert scale was used, where 1 indicates not at all and 5 indicates very strongly.

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

	Mean	SD
U/grad	3.8	1.1
P/grad	3.9	1.1

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

	Mean	SD
U/grad	4.0	1.0
P/grad	3.9	1.1

For the above two questions Independent groups t-tests showed no significant differences in the means obtained for the students' ratings of how strongly their teachers or the University feel about preventing cheating when classified according to student group.

Are you aware of the University regulations on cheating?

U/grad %	P/grad %
84.6	79.6

A cross tabulation was performed on these responses and there was no significant difference.