

Mentoring through ‘Self-help study groups’ for International students promotes academic success

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ABSTRACT

A ‘Self-help study groups’ (SHSG) program to assist international students to network with students studying the same subject was launched in October 1996. The program was premised on the basis that international students were disadvantaged and ‘at risk’ of failing. It was aimed at international students enrolled in the Business core Computing unit. At the end of the semester, participating students’ results were analysed and compared with the cohort of all students enrolled in the subject. The results confirm that international students are disadvantaged and at risk compared to the general population of students, but that participation in an SHSG program provided a significant enhancement to their likelihood to succeed.

INTRODUCTION

An analysis conducted in 1990 of results in a core unit, Computer Systems, offered by the Faculty of Business highlighted the discrepancies in the results between international students, ‘English as a second language’ students and students whose mother tongue is English. The analyses showed that the international and ‘English as a second language’ students, on the whole, scored much worse than the population set.

Studies reported in the Literature of students commencing university suggest that international students have more concerns than local students about the various aspects of University life (Quintrell and Westwood, 1994). Different styles of delivery in the teaching and learning environment add a further dimension to the problems experienced by first year international students, especially those students from Southeast Asian countries where rote learning and lack of independent thought is the norm (Ballard and Clanchy, 1991, Burns, 1991, Felix and Lawson, 1994).

The Literature reported on the different approaches taken by universities to combat the problem:

- Some encouragement to persevere may often be required. International students who received positive feedback from their supervisors gained confidence and were better able to cope with their course work than were their compatriots. Those with the least contact with their supervisors were the most disoriented (Felix and Lawson, 1994).

- Formal mentoring schemes have been proposed to emulate the nurturing relationship found in informal mentoring (Clulow, 1995). Such schemes can be time intensive on the mentor, usually a supervisor or other academic staff. Peers on the other hand may be able to function in the role as well as mentors (Clulow, 1995, Kram and Isabella, 1985).
- Advantages can be gained from forming a peer-peer relationship. Peers are more readily available and do not sustain the costs associated with using supervisors (Kram, 1985). Additionally, peer relationships offer the opportunity for both parties to give and receive in a mutual reciprocal relationship, thus enhancing the likelihood of success (Clulow, 1995, Shapiro, Haseltine and Rowe, 1978).

Marion, in particular, argues for the formation of co-national peer relationships as an ideal coping mechanism for international students (Marion in Quintrell and Westwood, 1994). Benefits may include the restoration of a feeling of belonging and self-esteem, and a reduction in the sense of loneliness arising from alienation from ones home country. Mutual support is provided by such friendships (Oei and Notowidjojo, 1990).

Little empirical evidence is available, however, to support the notion that peer-peer mentoring promotes academic success (Clulow, 1995). In the right environment, testing such a hypothesis could prove highly rewarding.

The Dean of the Faculty of Business of Victoria University of Technology, in a letter to all Faculty staff dated 14 March 1996, wrote that the Faculty should be seen:

‘to serve the needs of non English speaking students exceptionally well both on our Melbourne campuses and in the students’ countries of origin.’

A pilot study was conducted amongst Information Systems students in the Faculty of Business in Semester 2, 1996.

The Study Program

The major aims of the program were:

- Develop a friendship network amongst current students for their own benefit.
- Develop self help units promoting mutual academic, social and cultural support.
- Develop a cohort of students as mentors for future intake of students.

The launch of the program was held in October 1996 at a lunch forum for international students enrolled in the Business Core Computing Unit. One of the objectives of the forum was to establish a ‘Self-help study groups’ program to assist international students to network with students studying the same subjects.

Of 29 students invited to attend fourteen elected to participate in the SHSG program. This represented a participation rate of 48%, and enabled a comparison to be drawn between the results of international students who chose to participate and those who declined the offer.

METHODOLOGY

The population under study was the whole body of international and non-international students undertaking the core Computing unit. (Students who failed to show for the examination and three students pending result of a supplementary exam were excluded.) Student's results are categorised as HD high distinction, D distinction, C credit pass, P pass, N1 fail or N2 deep failure. The level of success of the program was assessed on the key performance indicator of the total pass rate.

A statistical analysis was conducted to test the significant differences in the pass rates of:

- I. International and non-international students
- II. Previously failed, repeating (N1 & N2) students and non-repeating students
- III. International students, and non-international repeating students and non-international, non-repeating students
- IV. International non-repeating students in the program and outside the program.

Results were compared using a two-tailed chi-squared test with a significance set at the 0.05 level.

ANALYSIS

Determination of the significance between pass rates of international and non-international students.

The data in Table 1 identifies the breakdown of the results of all students who sat for the Examination.

TABLE 1: Results Semester 2, 1996, by international status

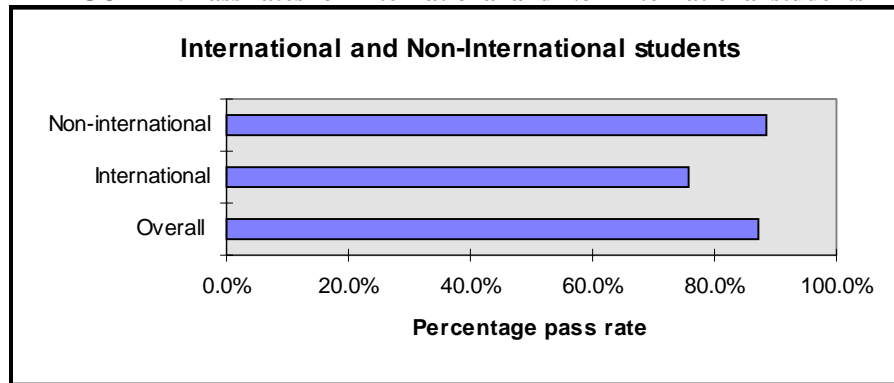
Grade	Count of Grade			Distribution		
	non-international	international	Population	non-international	international	Population
HD	42	4	46	17.8%	13.8%	17.4%
D	62	3	65	26.3%	10.3%	24.5%
C	76	11	87	32.2%	37.9%	32.8%
P	29	4	33	12.3%	13.8%	12.5%
Total Pass	209	22	231	88.6%	75.9%	87.2%
N1	18	7	25	7.6%	24.1%	9.4%
N2	9	0	9	3.8%	0.0%	3.4%
Total Fail	27	7	34	11.4%	24.1%	12.8%
Grand Total	236	29	265	100.0%	100.0%	100.0%

The overall pass rate was 231/265 which represents an 87.2% pass rate.

This can be decomposed as:

international students: 75.9% pass rate and
 non-international students: 88.6% pass rate.

FIGURE 1: Pass rates for International and Non-international students



Although the results indicate a bias in favour of non-international students, a χ^2 statistical test for significance indicated that the difference between the results of international and non-international students was not significant.

However, there are other factors in the data that are likely to bear on this result and which need consideration. The fact that the population consists of students who have previously failed the unit and are now repeating it, and first attempt, non-repeating students suggests further exploration was needed.

Determination of the significance between pass rates of repeating and non-repeating students.

Table 2 summarises the data for non-repeating and repeating students. In addition, two categories of repeating students are taken into account, those that previously failed with a deep failure rate (N2) and those who previously failed not quite so poorly (N1).

TABLE 2: Results Semester 2, 1996, by repeating status

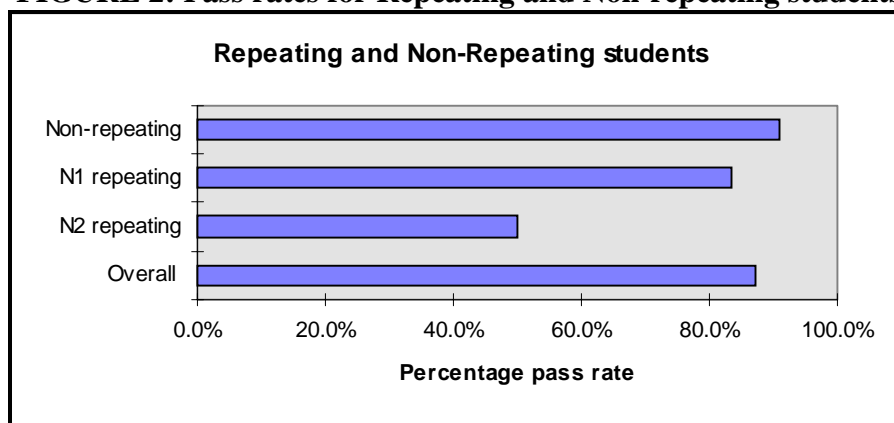
Grade	Count of Grade			Distribution		
	non-repeat	N1	N2	non-repeat	N1	N2
HD	45	1	0	21.3%	2.8%	0.0%
D	60	3	2	28.4%	8.3%	11.1%
C	64	18	5	30.3%	50.0%	27.8%
P	23	8	2	10.9%	22.2%	11.1%
Total Pass	192	30	9	91.0%	83.3%	50.0%
N1	14	5	6	6.6%	13.9%	33.3%
N2	5	1	3	2.4%	2.8%	16.7%
Total Fail	19	6	9	9.0%	16.7%	50.0%
Grand Total	211	36	18	100.0%	100.0%	100.0%

The overall pass rate includes non-repeating students, repeating students with a previous N1 result, and those with a previous N2 result.

The results are:

Non-repeating students 91.0% pass rate
Repeating, previously N1 students 83.3% pass rate, and
Repeating, previously N2 students 50.0% pass rate,
which can be compared to the overall pass rate of 87.2%.

FIGURE 2: Pass rates for Repeating and Non-repeating students



The χ^2 test for significance showed that there is a highly significant difference between the pass rates of non-repeating students, repeating students with a previous N1 result and repeating students with a previous N2 result.

The significant difference between repeating and non-repeating students was expected to have confounded the results between international and non-international students. Therefore an analysis of the interaction between international v non-international and repeating v non-repeating student's pass rates was deemed an essential step.

Determination of the significance between pass rates of international and non-international repeating (N1 & N2) and non-repeating students.

Table 3 provides an extended breakdown of the results taking into consideration both factors considered previously, international v non-international and repeating v non-repeating students.

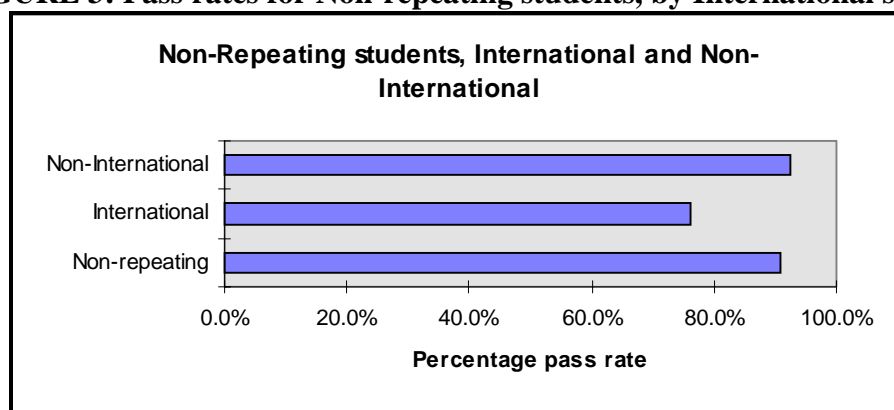
TABLE 3: Results Semester 2, 1996, by international and repeating status

Grade	Count of Grade						Distribution						
	international			non-international			Total	international			non-international		
	non-repeat	repeat N1	repeat N2	non-repeat	repeat N1	repeat N2		non-repeat	repeat N1	repeat N2	non-repeat	repeat N1	repeat N2
HD	4	0	0	41	1	0	46	19.0%	0.0%	0.0%	21.6%	3.3%	0.0%
D	3	0	0	57	3	2	65	14.3%	0.0%	0.0%	30.0%	10.0%	12.5%
C	6	4	1	58	14	4	87	28.6%	66.7%	50.0%	30.5%	46.7%	25.0%
P	3	1	0	20	7	2	33	14.3%	16.7%	0.0%	10.5%	23.3%	12.5%
Total Pass	16	5	1	176	25	8	231	76.2%	83.3%	50.0%	92.6%	83.3%	50.0%
N1	5	1	1	9	4	5	25	23.8%	16.7%	50.0%	4.7%	13.3%	31.3%
N2	0	0	0	5	1	3	9	0.0%	0.0%	0.0%	2.6%	3.3%	18.8%
Total Fail	5	1	1	14	5	8	34	23.8%	16.7%	50.0%	7.4%	16.7%	50.0%
Grand Total	21	6	2	190	30	16	265	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The non-repeating students' results were:

international students: 76.2% pass rate, and
 non-international students: 92.6% pass rate.

FIGURE 3: Pass rates for Non-repeating students, by International status



The χ^2 test returns a highly significant difference between these two groups.

On the other hand the international status of the student has no observed effect on the pass rate in each of the categories of repeating students.

Previously N1

international students: 83.3% pass rate
 non-international students: 83.3% pass rate, and

Previously N2

international students: 50.0% pass rate
 non-international students: 50.0% pass rate.

Determination of the effect of the SHSG program on pass rates of non-repeating and repeating (N1 & N2) international students.

The effectiveness of the ‘Self-help study groups’ program on international students’ results may be assessed taking into account the material factor of repeating and non-repeating students (see Table 4).

TABLE 4 International students’ results, Semester 2, 1996, by Program participation status

Grade	Count of Grade							Distribution				
	International SHSG			International Not in SHSG				International SHSG		International Not in SHSG		
	non-repeat	repeat N1	Total	non-repeat	repeat N1	repeat N2	Total	non-repeat	repeat N1	non-repeat	repeat N1	repeat N2
HD	3	0	3	1	0	0	1	23.1%	0.0%	12.5%	0.0%	0.0%
D	1	0	1	2	0	0	2	7.7%	0.0%	25.0%	0.0%	0.0%
C	5	1	6	1	3	1	5	38.5%	100.0%	12.5%	60.0%	50.0%
P	3	0	3	0	1	0	1	23.1%	0.0%	0.0%	20.0%	0.0%
Total Pass	12	1	13	4	4	1	9	92.3%	100.0%	50.0%	80.0%	50.0%
N1	1	0	1	4	1	1	6	7.7%	0.0%	50.0%	20.0%	50.0%
N2	0	0	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
Total Fail	1	0	1	4	1	1	6	7.7%	0.0%	50.0%	20.0%	50.0%
Grand Total	13	1	14	8	5	2	15	100.0%	100.0%	100.0%	100.0%	100.0%

For the non-repeating international students, the results were:

- Those in ‘Self-help study groups’: 92.3% pass rate, and
- Those not in ‘Self-help study groups’: 50.0% pass rate.

The χ^2 significant test returns a statistically highly significant difference between these two groups. It is also noted that the pass rate for non-repeating international students in the ‘Self-help study groups’ of 92.3% bears a close resemblance to the 92.6% pass rate for non-international non-repeating students.

FIGURE 4: Pass rates for International non-repeating students by SHSG status

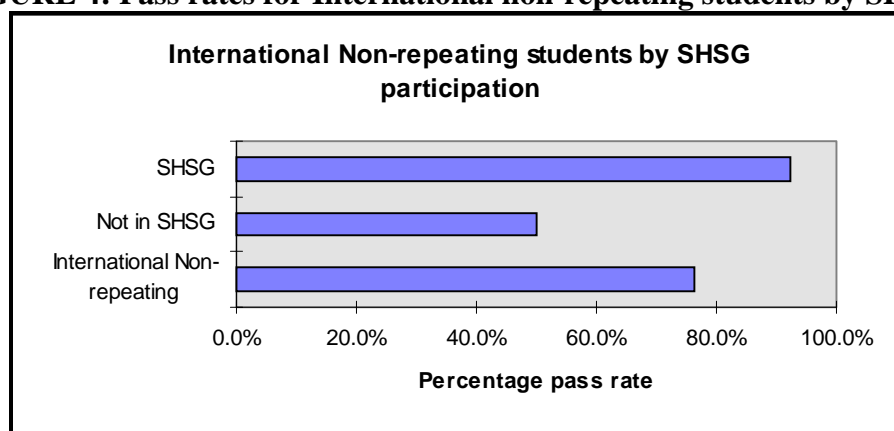
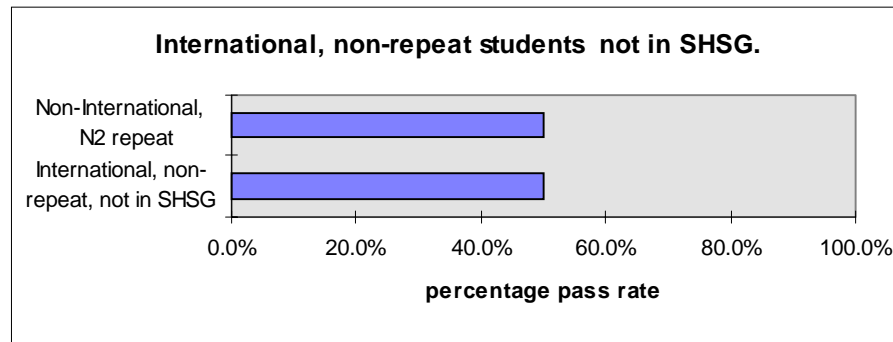


FIGURE 5: Comparison drawn for International, non-repeat students not in SHSG



The numbers of Repeating students are too small to make any reliable comparison.

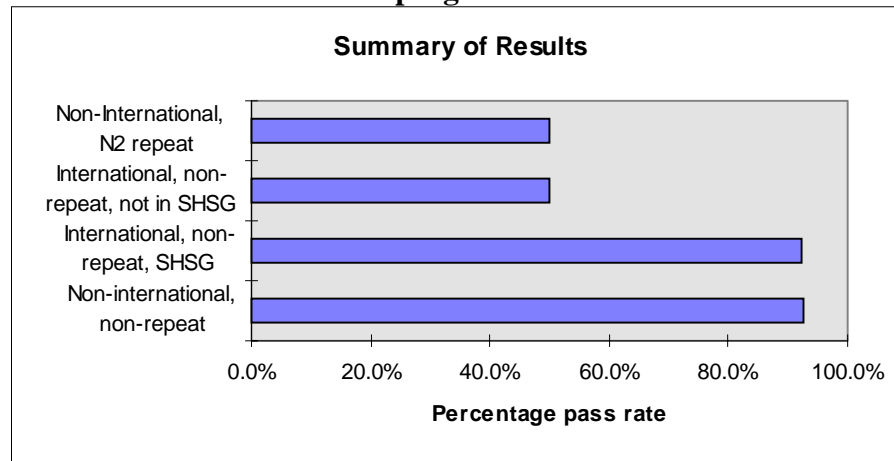
CONCLUSION

The major findings indicated that:

- Taking the whole population into consideration, international students have a pass rate of 75.9% compared with 88.6% for non-international students. (Refer Figure 1)
- For all non-repeating students, the overall pass rate is 91.0%, comprising international students at 76.2% and non-internationals at 92.6%. (Refer Figure 3)
- Of the non-repeating international students (pass rate 76.2%), the self-help study groups pass rate was 92.3%, a figure in keeping with the pass rate for non-repeating non-international students. (Refer Figure 4)
- Whereas for the non-repeating international students who were not in the 'self-help study groups', the pass rate was 50%. This is as low as the pass rate of repeating students with a previous N2 result. (Refer Figure 5)

The pass rate of the non-repeating international students who were not in the 'self-help study groups' was 50%, a figure which is in line with the pass rate of repeating students with previous N2 results; whereas the pass rate of the non-repeating international students who were in the 'self-help study groups' jumped to 92.3%, a figure in keeping with the pass rate for non-repeating non-international students.

FIGURE 6: Pass rates of International students in SHSG program and those not in the program.



The difference is highly significant, and would suggest that both the stronger and weaker students have been able to improve their study skills and examination techniques from working together with their peers.

It is surmised that other non-English speaking students or mature age students might equally benefit from the SHSG program, and that the program could be migrated to other core units with similar results.

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