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Classmate peer-coaching: "A Study Buddy Support scheme"

Jyothi Thalluri, Jackie A. O'Flaherty, and Paul L. Shepherd

ABSTRACT

This study had two aims: firstly, to determine whether participation in a peer support scheme called Study Buddy Support (SBS) improves pass rates of "at risk" students, and secondly, to examine the advantages of this model over hierarchical models where senior students tutor junior years.

Bachelor of Nursing and Midwifery students in a first year Bioscience course completed an assessment early in the semester. Based on their performance, "at risk" students (Buddies) and high achievers (Buddy Leaders) were identified to participate in this scheme, either on campus (internal) or via Virtual Classrooms (VC) (external). Quantitative percentage failure rates for those "not at risk" and those "at risk" utilising and not utilising SBS were compared. Qualitative comments were also examined.

Of those in the SBS scheme, 72% passed, while only 49% of those not participating passed. Buddies identified the reassurance of not being alone, as well as a friendly, non-intimidating learning environment, as SBS positives. For Buddy Leaders, consolidation of learning, developing networks, and improved team and leadership skills were positives. The current SBS scheme increased percentage pass rates and Buddies and Buddy Leaders alike suggested personal benefits for the initiative.

The networks developed in this SBS scheme can progress throughout the entire degree but are lost in a hierarchical model as senior mentors graduate. This suggests that the advantages of the SBS scheme may persist beyond first year and may further strengthen retention in later years.

INTRODUCTION

Students commonly gain important perceptions about the quality of their undergraduate experience in their first year of study (McInnis, 2001). As Pitkethly and Prosser (2001) note, it is the initial experiences that influence student persistence in higher education. Negative experiences can lead to failure and withdrawal from the program (Peat, Dalziel, & Grant, 2001). One-third of students who enter Australian universities fail to graduate, many of whom withdraw in their first year (Tinto, 2000). The financial and psychological costs for students and institutions are significant (McInnis, 2001). This article describes and evaluates an initiative to reduce attrition in a Nursing first year science course and seeks to identify the advantages of a peer support model.

Students are most likely to fail courses during their first year of study (Tinto, 1996; Williams, 1982). Such failures have been linked to a number of social,

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educational, health, and financial problems that present themselves during the transition into university life (McInnis, 2001). With the broadening of access to higher education, student population diversity has increased considerably (McInnis, James, & McNaught, 1995).

Student diversity and background

The Bradley Review (Department of Education, Employment and Workplace Relations, 2008) called for an increase in the number of university graduates in the Australian population. It identified under-represented target groups for recruitment. Consequently, student populations within the Division of Health Sciences at the University of South Australia reflect a remarkable diversity. This includes quotas from various equity groups, despite a skewed gender balance (90% females). Many students enter this sector from non-traditional backgrounds, with varying socioeconomic backgrounds, academic abilities, physical locations, and equity group characteristics (Christensen & Evamy, 2011; King & Thalluri, 2006; O'Flaherty & Laws, 2014; O'Flaherty, Scutter, & Albrecht, 2010; Thalluri & King, 2009).

To complete the nursing degree program successfully, students need to complete three science courses. One of these, Human Body 1 (HB1), is offered by both off-campus (external) and on-campus (internal) modes in the first half of the first year. There are no prerequisites or co-requisites for enrolment in the course. Content includes human anatomy and physiology with relevant/integrated basic chemical/physical concepts to underpin physiological processes. This inevitably involves the learning of medical and anatomical terms associated with the physiological concepts.

In 2012, an online survey of those enrolled (external and internal) in the HB1 course revealed that over half were mature age students (over the age of 21), many of whom had no previous background in science. Furthermore, a large number were from non-English-speaking backgrounds (NESB) (Table 1). Our experience has been that these sub-populations struggle to cope with science courses and experience a negative first year outcome; hence, they are likely candidates for withdrawal from the Nursing Program. As a consequence, a high failure rate in science courses is strongly correlated with overall program failure or withdrawal.

Having identified the root of the problem, the challenge for academic staff was to focus effort on improving retention rates as well as student satisfaction. As a first step, a review of various methods of learning support and assessments to assist students at risk was undertaken. The *Australian Health Workforce 2025* study found that there will be a significant shortage of nurses by 2025 (Health Workforce Australia, 2012). Therefore the implementation of strategies to support "at risk" students would help aid nursing student retention and increase the numbers of those completing their university education and joining the workforce.

The critical requirement is to identify "at risk" students as early as possible and provide appropriate, sustainable support. The key is to provide a positive experience for first year Nursing students, which should result in increased retention and success both in the Program as well as in society as practising professionals.

Peer support/coaching

Background

Peer coaching can be defined as social interaction between similar social groupings with benefits flowing in both directions. Such interactions have been found to break down barriers and assist in the development of academic and social competence (Barnett, 2008). Wider experience in universities suggests that "Peer Coaching" enhances student learning, particularly among disadvantaged students (Sawyer, Sylvestre, Girard, & Snow, 1996; Quinn, Muldoon, & Hollingworth, 2002). Peer coaches may interact with their fellows either one-to-one or in small groups by continuing classroom discussions, sharing study skills, evaluating one another's work, resolving specific problems, and encouraging independent learning (Colvin, 2007). Students enjoy the informal setting and feel more comfortable discussing topics with a peer rather than with a lecturer. The opportunity for active participation, questioning, and discussion encourages students to continue with their studies (Reid, Topping, & McCrae, 1997; Tariq, 2005).

Models of peer support/coaching

Various models of peer coaching have been reviewed by Andrews and Clark (2011), who set out a seven-fold typology. This includes peer coaching in one-to-one and group situations, using both same level and higher level mentors, offered to all students or targeting those felt to he most in need, and of varying duration (Andrews & Clark, 2011, p. 21). Mentors were paid in three of the seven programs they analysed (five United Kingdom universities, one of which had two programs, and one university in Oslo) (Andrews & Clark, 2011, p. 101). An earlier review by Topping (1996) included discussion of "same-year dyadic fixed-role tutoring" (p. 332) and reciprocal tutoring by students in the same year. Secomb's (2008) systematic review of peer teaching and learning in clinical education illustrates the prevalence of these forms of peer learning in undergraduate education. An example of a peer-assisted learning model developed for physiotherapy undergraduate students' clinical training is provided by Sevenhuysen et al. (2013). In a review of the value of peer learning for nursing undergraduates, Stone, Cooper, and Cant (2013) surveyed a variety of models. They suggest that peer learning may be more successful when peers are close in experience or stage of training as it provides a more relaxed, less intimidating, and more "user friendly" learning experience (p. 8). However, Falchikov (1990, as cited in Kowalsky & Fresko, 2002, p. 262) identified a need for sensitivity when peer tutors and their tutees were "of similar age and/or at a similar stage of study." While participants had positive comments, they were sometimes not confident about their tutor's abilities.

There are also online avenues for peer mentoring, such as the monitored blogging described by Ladyshewsky and Gardner (2008). This model, known as supplemental instruction, targets courses which have proved difficult for students rather than focusing on individual students who appear at risk of failing (Arendale, 1994). Terrion and Leonard's (2007) review focuses on the characteristics of successful student mentors. Zeegers and Martin (2001) also developed an approach for helping struggling science students (in this case, chemistry), using a model that incorporated some peer learning as well as focusing on learning how to learn.

Implementation of the Study Buddy Support (SBS) Scheme

The reasons for implementing the SBS scheme

A peer coaching initiative was decided upon to improve success rates of our students. An earlier model of mentoring first year nursing students was the Student Coaching Scheme, where competent second and third years became mentors for first year students who were having difficulties. While it was successful up to a point, it had several drawbacks (Thalluri, Kokkinn, & O'Flaherty, 2008).

With the aim of providing more effective assistance, the "Study Buddy Support" (SBS) scheme initiative was implemented for first year science courses in the Bachelor of nursing program. There are two main advantages with this new model: (i) Buddies (students "at risk") and Buddy Leaders (academically gifted students) are identified within the same year group, and (ii) it has the ability to extend the student services to on-campus and off-campus student cohorts.

Early identification of students "at risk" and "high achievers"

The SBS scheme initiative was first introduced in the first half of 2012 for both Internal and External Human Body 1 (HB1) students. Students "at risk" were identified from their poor performance in online formative and summative assessments conducted in the first two weeks of their study period. Due to the implementation of a new assessment piece (Pearson Education, 2014) all "at risk" students (Buddies) and academically gifted students (Buddy Leaders) were identified early in the study period. Both "at risk" students and students who gained perfect or near perfect scores were invited to participate.

Organisation of SBS groups

Face to Face SBS organisation: Once students accepted to be part of the SBS scheme, both Buddies and Buddy Leaders were briefed on the benefits of participating in the scheme. Buddy Leaders who accepted the invitation were required to attend a face-to-face training session. An SBS training handbook prepared by the science academic staff and the Learning and Teaching Unit was supplied to those who accepted the invitation to become Buddy Leaders. The topics in the handbook included: different types of learning styles, how to deal with students with varied backgrounds/knowledge, mind map techniques, strategies for success in sciences, preparing for assessments, etc. Buddy Leaders and Buddies were a mixture of school leavers, mature age, and international students. The staff member matched them appropriately.

The SBS sessions were conducted on campus in the Sciences laboratory for internal students (where many resources are available). SBS sessions ran for eight weeks. Each session was two hours in duration and each Buddy Leader was allocated 7–10 Buddies. Teaching staff undertook the responsibility for this initiative and the Buddy Leaders worked closely with the teaching staff throughout the study period. Staff organised the time and venue and supplied broad academic topics for discussion each week. At least one staff member was accessible to Buddy Leaders if they needed assistance during the sessions. The focus of the sessions was on the forthcoming assessment and this continued until the final assessment for the HB1 course was completed.

Virtual SBS organisation: The virtual classroom (VC) is a tool for delivering live synchronous e-learning. The interface mimics the face-to-face classroom in many ways. The primary difference between face-to-face classroom learning and virtual classroom learning is that the latter is used to deliver content live over the Internet to people who are geographically dispersed, so it is ideally suited for the external HB1 students.

Key staff conducted several VC training sessions to prepare and train both Buddies and Buddy Leaders before commencing the virtual SBS. Many external students work during the daytime so Virtual SBS sessions were also recorded and made available to Virtual Buddies so that they could access the session at their own time/pace. The course content covered each week and the number of SBS sessions conducted were identical for both internal and external SBS groups.

The course coordinator set up the classroom each week so that all Study Buddy leaders had the information they needed in the correct format and layout. For example, Word documents had to be changed to PDF files, multiple choice questions needed to be supplied for student polls, and multiple content layouts needed to be created for the different teaching sections.

Towards the end of the semester, all Buddies and Buddy Leaders and staff involved in the SBS scheme were invited to an end of course celebration. Buddy Leaders, who were not paid for their time, were acknowledged and presented with certificates and book gift vouchers.

RESEARCH METHODS

Ethics approval was obtained from the university's Human Research Ethics Committee. Demographic data relating to the HB1 cohort were extracted from the TellUs survey. At the end of the semester all Buddies and Buddy Leaders were asked to complete anonymous evaluations on their experiences and the strengths and weaknesses of the SBS sessions. The online anonymous survey comprised of 21 closed-ended questions, each with a 5-point rating scale (*Strongly disagree*, *Disagree*, *Neutral*, *Agree*, and *Strongly agree* – see Table 3), followed by four text response questions. The final grades of 2012 and 2013 students identified as "at risk" were compared depending on whether or not they had chosen to take up the offer of SBS scheme assistance.

The evaluation was conducted during the final study buddy session. Students were given a printed evaluation form to complete and the responses were analysed manually.

RESULTS

Quantitative data

The demographic details of the 2012 Human Body 1 cohort are summarised in Table 1. A total of 1280 students (internal and external combined) were enrolled in Human Body 1 during 2012 and 2013. Of the 1280 students enrolled in the unit, 272 (21%) were classified as "at risk." Table 2 illustrates the effect of participation in the SBS scheme on the academic success of "at risk" students.

Before the introduction of the SBS, the percentage withdrawal rates in HB1 were 21% for internal students and 28% for external (24% overall). After the implementation of SBS, the withdrawal rates dropped to 20% for internals and 22% for externals (average 21%).

As is clearly demonstrated in Table 3, positive statements in the survey (response rate just under 20%) were overwhelmingly agreed to, with a negative reaction to only three questions by a single student, and very few providing a neutral response.

Table 1
2012 Demographic details of Human Body 1 internal and external cohort

Factor	Percentage of cohort
Mature aged students (> 21 years)	55
Non-science background	38
Non-English-speaking background	29
Mode:	
Internal	67
External	33

Table 2
Comparison of HB1 2012 and 2013 students' academic success

	Number of 'at risk' students (internal and external)	Pass rate
SBS participants	141	72%
SBS non-participants	131	49%

Table 3
Study buddy student evaluation, external and internal results (n = 28)

Evaluation Statement	Strongly Agree /Agree	Neutral	Strongly Disagree /Disagree
1. Overall, participating in the SBS group enhanced my understanding of Human Body 1 course content.	27 (96.5%)	1 (3.5%)	0
2. There were many learning opportunities for me when I attend SBS group session.	24 (85.7%)	3 (10.7%)	1 (3.6%)
3. As a result of the SBS group session experience, I engaged well with the course content.	25 (89.3%)	3 (10.7%)	0
4. I found SBS session made me more confident for my summative assessments.	25 (89.3%)	3 (10.7%)	0
5. The SBS group sessions provided me opportunities to learn with my peers.	27 (96.5%)	1 (3.5%)	0
6. The SBS group sessions provided me opportunities to clarify some of the difficult concepts.	27 (96.5%)	1 (3.5%)	0
7. The SBS group sessions provided me with the opportunity to direct my own learning.	26 (92.9%)	1 (3.5%)	1 (3.5%)
8. This initiative facilitated the development of life-long learning skills.	24 (85.7%)	4 (14.3%)	0
9. The initiative increased my interest on the subject.	26 (92.9%)	3 (10.7%)	0
10. The initiative allowed me to synthesise my past and present knowledge.	25 (89.3%)	3 (10.7%)	0
11. The initiative further honed my learning skills.	22 (78.6%)	6 (21.4%)	0
12. The SBS initiative provided extra support with academic and with non-academic matters.	26 (92.9%)	2 (7.1%)	0
13. The duration of involvement and attention required for the SBS initiative was acceptable.	27 (96.5%)	1 (3.5%)	0
14. The initiative assisted my learning on regular basis.	28 (100%)	0	0
15. It provided me opportunities to interact with the Buddy Leader.	26 (92.9%)	2 (7.1%)	0
16. I am satisfied with my Buddy Leader.	26 (92.9%)	1 (3.5%)	1 (3.5%)
17. My expectations of the SBS group sessions were fulfilled.	26 (92.9%)	2 (7.1%)	0
18. The initiative was a good substitute for a traditional classroom.	26 (92.9%)	2 (7.1%)	0

19. I found attending SBS group session an effective way to learn in a non-threatening environment.	28 (100%)	0	0
20. I found the SBS group is an innovative way to learn with others.	27 (96.5%)	1 (3.5%)	0
21. I recommend this initiative to other students who have difficulty with the course content.	27 (96.5%)	1 (3.5%)	0

Qualitative data

The closed-ended questions were followed by four open-ended questions, which provided qualitative data:

22. The best things about the SBS group session are: ...

23. Something that I think would improve future course offerings is: ...

24. What was the most important outcome gained from this initiative? ...

25. Additional comments ...

The comments showed that, as well as providing additional opportunities to engage with the course material with fellow students in a less daunting environment than a lecture theatre or a lecturer's office, the SBS scheme gave students the reassurance that they were not alone in experiencing difficulties.

Positive comments from Internal and External Buddies also identified both academic and personal advantages:

In the VC [the Buddy Leader] helped clarify concepts for me that prepared me for assessments, which I wouldn't have been confident about emailing and seeking help from those in higher places.

Being able to ask questions in a comfortable environment

Being in a group and having things explained, and being able to ask questions

Explaining things simply

The extra help being able to talk about issues

Knowing that I'm not alone

Gives student the opportunity to discuss issues, learn from others

The extra help is fantastic

The leaders were amazing, needs to run throughout the whole course

Academic benefits are illustrated by the following:

Personally I did get a lot out of tutoring in the virtual classroom as it not only gave me satisfaction to be able to help other students learn, but it provided me an opportunity to revise myself.

Having to explain concepts to others meant that I had to explore the topics more than if I were just learning it by myself, so it really consolidated my own learning.

Being a leader allowed me to keep focus on HB1.

Overall, this was very useful for me as a student (10 out of 10).

There were also personal benefits:

I gained/experienced a strong sense of responsibility and duty of being a leader in a group.

I gained a sense of involving/belonging in a group & university (positive social impact on me as an individual student).

It allowed me to minimise wasting time in a daily life (I had more productive days after become a leader).

I met new students in my course. This was helpful because I had few friends in nursing course.

They also identified timeliness advantages of the program:

I think it is a real advantage to have us in the same study period as the other students since we're learning it right now and don't have to look back retrospectively.

Other students were able to ask me specific questions as they came up which they might not be able to do in a lecture/practical setting.

Moreover SBS participation helped them to understand the lecturers' challenges:

It certainly increased my empathy for teachers!

On the other hand, a negative Buddy Leader comment was:

I feel rushed to get through the topics in the detail they need to understand to concepts of the course. I feel that we need to spend one week on each topic so they can understand it better.

DISCUSSION

With the previous peer tutoring system, there were many problems associated with coordinating consistent coaching throughout the study period because second and third year mentors were off-campus undertaking industry or clinical placements or working on their own course assignments/assessments. In developing same year level coaching, there are certain advantages. The SBS scheme has demonstrated that it has positive outcomes with regard to academic achievement and student interaction in a comfortable setting, which is consistent with reviews of peer coaching models in the literature (Colvin, 2007; Stone et al., 2013). It encourages open and effective dialogue amongst peers and breaks down social barriers amongst their classmates. It helps create a collaborative learning environment in which peers feel less hesitant to raise questions than if they

were interacting with their lecturers. In the SBS, students more effectively learn from each other under the leadership of Buddy Leaders.

Our results, particularly data provided in Tables 2 and 3, show that the advantage of initiating a SBS scheme within the same year level group is that it helps both Buddy Leaders and Buddies as they progress through the program together. This enables students to develop networks, friendships, cross-cultural experiences, and close rapport with their peers, stimulating a relationship based on equality. This suggests that improved pass rates (Table 2) may persist beyond first year, further strengthening retention in later years. It offers additional benefits in enhancing recognition for students who excel in science-based courses and facilitates the sharing of knowledge and experiences. The SBS scheme reduces the levels of anxiety experienced by students who struggle to engage with course material or with the university in general. The SBS scheme gives rise to increased self-confidence for all involved in the system and helps build trust and collegiality within the individual study groups. It is very encouraging to see that the pass rate is higher in the group who participated in the SBS scheme compared to the group who did not, and this is a sustained result across a two-year period. Early identification of academically gifted and "at risk" students within the same year level benefits both groups. They have sufficient time to obtain support to succeed or they can withdraw before the census date without bearing the financial cost of the course.

Over the years, key staff members have devoted much time and effort to perfecting the art of student coaching. The focus has been on improving positive student satisfaction and lowering the attrition rate. With continuous modification over the years, staff have also seen the sessions adopt a more structured approach in the consistency of delivery. Consequently, based on the results of our research and the years of experience that staff now have in this field of coaching, lecturers are convinced that the SBS scheme is the way forward in the future. Our research shows that it benefits all: Buddies, Buddy Leaders, faculty, the university, and stakeholders.

The SBS scheme encourages students to aspire to become Buddy Leaders themselves. Observing their colleagues undertake leadership responsibilities inspires confidence in their own leadership abilities. The SBS helps achieve a positive outcome for students and the faculty by reducing the attrition rate. Overall, students have shown positive interest in the SBS scheme and the aims of implementing this scheme have been achieved; that is, to provide effective support for "at risk" students and to lower the attrition rate.

The Virtual SBS classroom sessions

The "virtual classroom" (VC) is an exciting and very powerful new support that has been used to engage external students more deeply with the practical component of the course. External students have struggled previously completing their practical work compared to their internal face-to-face counterparts as they have had no formal opportunities to discuss this work with their academics other than a weekly discussion forum.

As internal and external students' results were combined it is difficult to comment on what the data say specifically about the use of the virtual classroom. However, they do suggest that the use of the virtual classroom, by

allowing synchronous real-time interactions between students and leader, is just as effective as the traditional face-to-face internal platform at delivering a mentoring program. For example, an external student commented: "It allowed us to ask questions in real time and interact with others and the tutor." External students also commented that in addition to the VC contributing to improved student learning and retention, it also helped foster mutual collaboration between fellow external students, enhance their sense of online community, and help reduce anxieties of isolation and disconnectedness from the course.

Preparing the virtual classroom for such a support scheme was essential. The virtual classroom can simulate a physical classroom, but thought is needed to adjust the resources (tutors and course content) that are used and identify how best to engage the participants. As Colvin (2007) states:

> ...use of peer tutors is not something that can be grafted onto a standard classroom configuration with automatic success—the system must be designed specifically with peer tutors in mind. It is a whole system of training and support concerning the socialisation of students, teachers, and instructors in the interaction. (p. 178)

Further Research

A limitation of the study is that the survey responses were provided by only 28 of the 141 "at risk" students who participated as Buddies, a response rate of slightly under 20%. Hence there are no survey data concerning the ways in which the SBS scheme impacted on the other 113 students. It is possible that those who felt most positive were also the students who felt most motivated to complete the survey. Further research could involve identifying ways of encouraging a greater proportion of the "at risk" students to participate in evaluations.

The unit-based SBS scheme will continue with first year Nursing students for science courses with the aim of implementing this scheme into other courses within the Division of Health Sciences. The SBS scheme can be further expanded to regional students where students may feel isolated and this can provide extra support for those who need assistance with science courses. The regular evaluation of such initiatives is important so that weaknesses may be identified and strengths enhanced. Areas for further research could also include any unmet induction needs and ongoing training needs of Buddy Leaders, criteria for selecting them, and increasing support for underrepresented cohorts of students.

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