Are formal peer support programs the answer for construction students transitioning to University study?

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Are Formal Peer Support Programs the Answer for Construction Students Transitioning to University Study?

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ABSTRACT
The transition to university life has always been problematic for some students. The self-directed nature of university study comes as an unwelcome surprise to many students who have been used to close supervision from their teachers at high school. Difficulty in adjustment can also be experienced by those students who enter university through pathways other than straight from secondary school. Students transitioning from TAFE programs may have expectations about staff availability, class size, attendance rules and teaching style. The university experience is likely to be quite different and expectations may have to be amended. Similarly, mature age students who have been in the workforce may find university requirements both unfamiliar and frustratingly ill-defined. A great deal of effort has gone into the easing of this transition process, by researchers in many fields, especially in education and the social sciences. Incorporating this cross disciplinary expertise, this paper looks at the design of a peer support study program as a mechanism for bridging the gap between student expectations and university reality, in a construction management program. Later year students in the undergraduate program become mentors to first year students and facilitate scheduled study sessions. Informal social networks may partly fill this role once students are established at university, but it is likely that many students can benefit from an organised peer support program in the early stages of their academic careers.

KEYWORDS
AUBEA, construction management, peer mentoring, articulation

INTRODUCTION
In response to the Bradley Review of Higher Education (Bradley 2008), the current Prime Minister Julia Gillard, when Minister for Education, set the goal that by 2025, 40% of all Australians aged 25 to 34 should hold a bachelor’s degree or higher (Gilmore and Narushima 2009). If this is to be achieved, pathways to higher education will need to be established which enable increased participation by groups who are currently under-represented among the student body at many of our universities. These groups include...
students classified as Low Socio-Economic Status (LSES); students with a disability; those from non-English speaking backgrounds (NESB); those from rural or isolated areas; and women in non-traditional areas of study. James et al. (2004), in a large scale review of the participation of these equity groups in higher education, described the varying levels of success that have been achieved in this area. Concentrating on the initial university experiences of students in these categories is likely to be a useful strategy for improving participation rates as well as retention percentages.

The transition to university has been widely reported to be a difficult one for many students (Abbott-Chapman 2006; Krause et al. 2005; Moodie 2004; Nelson et al. 2008; Peat et al. 2001; Watson et al. 2001; Watson 2008; Wilcox et al. 2005). The learning environment is often quite different from that of high school, TAFE or even career development training in the workforce. Consequently, many students come to university with expectations which are unlikely to be met. In particular, many students are unused to large lecture-style classes and some find the experience alienating and disorienting. Many students may not have yet acquired the systematic study habits that are crucial for university success. Some students have an expectation of close supervision in a similar manner to school, where teachers act in loco parentis. There is also sometimes an expectation that academics will be available to answer student questions at any time during the working day, as well as during scheduled classes. University attitudes to plagiarism and collusion can come as a surprise to some students who have a tendency to see copying from textbooks as ‘the way you learn’. Other students are unwilling to approach staff for assistance, even in fairly straightforward situations which could be easily handled. University policies and administrative procedures can be daunting for some students who tend not to read information provided on these matters until after they have developed a problem. Attendance requirements at university can be problematic for those students in the workforce or with family responsibilities. The traditional university teaching model tends to assume that students are free to spend their time in the full-time study of the chosen discipline. This is less and less likely to be true, as the great majority of students have some form of paid work and many have other conflicting demands on their time. Add to this, the fact that many students travel long distances to their universities, and timetables are not always flexible enough to take account of this circumstance.

The university sector has sought to address these issues in a variety of ways. Some matters are resource-based, while others relate largely to administration. More flexible modes of delivery of teaching programs are another approach that has been tried with varying degrees of success. Self-directed study via online learning resources works very well for highly motivated students, but can increase the sense of alienation for others. It
may solve the time management issues but cannot provide the full ‘university experience’ that some students seek. Some personal contact with staff as well as with other students is beneficial in most cases, but especially for those students who find the transition to university study overwhelmingly difficult. When equity issues are added to the general difficulties which are experienced to some extent by most new university students, problems can be more extreme. Nevertheless, it has been demonstrated that with appropriate support both retention rates and performance of students from these groups can be comparable to those of other students (Levy and Murray 2005).

**TRANSITION ISSUES FOR STUDENTS FROM IDENTIFIED EQUITY GROUPS**

‘Demystifying’ higher education has been noted as an essential strategy for increasing the participation of commencing students from non-traditional backgrounds (Yorke and Thomas 2003). Induction programs which give clear guidance about available support systems and how to access these services are an essential element in this demystification. Yorke and Thomas (2003 p.69) found that this needs to extend well beyond the traditional first week of orientation. Assistance and support should be available to students as problems arise, rather than in one large serving at commencement of their period of study.

Establishing social networks among other students has been identified as a useful aid to retention, particularly for those students who are doubtful about their suitability for a place at university (Wilcox et al. 2005). A feeling of isolation and disengagement at university is a commonly reported precursor to voluntary drop out from study (Laing and Robinson 2003). Traditionally, extra-curricular activities such as clubs and sporting groups have played a strong role in establishing social contacts for new students. This option is less available now at many universities because of government funding changes and the competing demands on student’s time. Students from LSES may be less likely to join these bodies than other students because of the costs involved.

Workshops specifically designed to allow students to make contact with others are a strategy employed in some universities (Peat et al. 2001). Internet chat rooms have proven to be a useful strategy for establishing social contacts in other universities (Mubarak et al. 2009). There are safety and responsibility issues involved when universities establish such services, but strong user behaviour protocols and adequate supervision can help avoid problems in these areas.

Even if students feel welcome at university and have adequate social and technical support available to them, they may still have difficulty with matters such as mastering particular academic content and understanding what is required by assessment tasks.
Advice from staff and from more experienced students can be of assistance in these matters. Indeed, such advice or ‘mentoring’ can sometimes be seen as a panacea for educational problems, which is perhaps overstating the case.

MENTORING AS AN EDUCATION STRATEGY

The term ‘mentor’ can refer to a broad range of both formal and informal relationships which involve one person guiding the progress of another. There is a sense of seniority implied, in that the mentor is at least more experienced, if not actually older than the mentee. There is also an implication of a relationship that exists on a small scale, personal level as opposed to the larger-scale relationship between a teacher and a class. Beyond that, mentoring encompasses varied strategies for the transmission of learning from pastoral guidance to provocative challenging of assumptions and stretching the mentee to explore new ways of thinking and operating. The highly experienced practitioner who inducts the initiate into the established practice of a profession or calling is one manifestation of mentorship. However, mentoring can also be practised by individuals only slightly advanced on the mentee’s level but who are able to understand the difficulties and challenges that the mentee faces. This is an example of peer mentoring when later year students take on the function of facilitating learning for new students.

PEER MENTORING METAPHORS

In a university based study, Terrion (2007 p.42) has identified peer mentoring as being one of the more successful interventions for ensuring student. Scanlon (2009) describes the role of the mentor in student education as having four possible aspects or metaphors: the navigator; the sage; the teacher; and the friend. The idea of the mentor as navigator or guide was the most common metaphor used by the student mentors in Scanlon’s study. They referred to ‘walking alongside’ the new students and ‘double-checking the map’ for those whom they mentored. This is classically the appropriate role for a peer mentor. By contrast, the idea of the mentor as sage is less commonly applied to peer mentoring. Traditionally, the sage has not only much more experience than the mentee but also greater wisdom and discriminatory power. If the mentor is a sage then the mentee is a follower or acolyte, and this is not the idea behind peer mentoring. Similarly the peer mentor is normally not a teacher except in the most general sense of the word. The peer mentors are not experts in a subject specialty, transmitting a prescribed body of knowledge. However, mentors can be seen as those who provide the ‘scaffolding’ for the mentees to build within. Peer mentors do commonly adopt the role of friend. They can assist new students outside the academic sphere by introducing their mentees to
established social networks within the university and thereby reducing isolation and alienation.

Mindful of the roles that a more established student can play in introducing new students to the university culture, formal schemes that bring potential mentors together with mentees can play a significant role in assisting new student orientation and retention. Many students tend to act very strategically with regard to their time allocation. It has been observed that they are less likely to come to campus for informal gatherings than previous generations. Attendance rates are often low unless there is a specific incentive such as assessment or formal credit. Consequently, successful peer mentoring programs need to provide students with clearly recognised value for time invested, or they are unlikely to be successful. As such, the University of Western Sydney (UWS) has decided to put effort into a scheme of Peer Assisted Study Sessions (PASS) in order to induct new students into useful practices for success in university life. This program is particularly helpful to students from non-traditional backgrounds, who may not possess such skills when they arrive at university.

PASS PROGRAM
PASS is a peer assisted collaborative learning program of study sessions run by students for the benefit of students. The program is currently in its fourth year at UWS, and student participation has risen from approximately 200 in the first semester to almost 2000 per semester in 2010. Eleven schools currently participate in the program (UWS PASS Program 2010). The individual study sessions involve up to 30 students. The program is evaluated using both quantitative and qualitative data. The average marks of students who attend PASS are compared with non-attendees, and this data is provided in chart format to the university and the participating schools. Additionally, the actual grades of attendees and non-attendees are compared and this information is provided in a separate report to each School and unit. Generally, the average marks of students who attend PASS four or more times during a semester are higher than those who do not attend. The average marks of students who attend less than four times also tend to be higher than non-attendees, but this is not consistent across all units. The actual marks of students who attend PASS range along the spectrum from High Distinction to Fail and this varies proportionately according to each unit.

Student attendance is recorded at each PASS. All attendees are emailed a link to an online survey and aggregated data from their responses and a sample of comments are included in the program report. Unit specific responses are provided with the School reports. Students’ comments provide insight into their experiences of attending PASS.
and the benefits they gain such as deeper understanding of the content through activities and discussion, greater confidence in their learning and rich interactions with their peers. PASS facilitators or mentors, the students who run the PASS session, also complete an online survey and provide feedback comments. These mention the benefits they experience in their roles as PASS facilitators both personally and professionally and their impression of the impact of attending PASS for the mentees. Periodically students who have not attended any PASS sessions are also surveyed. A clash with other commitments is the most commonly cited reason for not attending PASS sessions.

Each semester, new PASS facilitators are recruited to join the program. They must attend a two-day training session before qualifying for the role. As the program becomes a more embedded part of university culture, facilitators are increasingly students who have previously attended PASS. For newly established sessions the facilitators are recommended by lecturers, or they may volunteer by sending recruitment letters based on their academic performance. During the teaching session each PASS facilitator is observed at least once by a PASS trainer or senior facilitator. The PASS facilitator’s primary role is to encourage learning by creating collaborative and active learning opportunities. One of the main challenges faced by the facilitators is that they are not to re-teach the subject matter delivered in formal classes. Facilitators are paid one hour preparation for their sessions and one hour for running the sessions. They are expected to prepare activities that support students in learning how to learn the content and to guide them through these processes in the sessions. Feedback, and where necessary, guidance is provided to the facilitator by the program coordinator. This relates to how to improve skills in providing interactive learning opportunities. At mid-year a forum is held which provides feedback to the facilitators as well as running mock sessions to provide tips for future and continuing facilitators.

**RESEARCH PURPOSE AND METHODOLOGY**

The purpose of this paper is to report on a current student engagement program at UWS with the intention of sparking discussion about similar programs at other universities and learning from the experience elsewhere. Evaluation strategies for such programs that provide statistically verifiable data on effectiveness could also be the subject of an interchange of ideas. This has not yet been done for the PASS project. Ongoing monitoring of the impact of PASS on student results is being undertaken in a more limited fashion. At the moment, it is mainly done by recording attendance and comparing the end marks for attendees and non-attendees. This is, of course, a simplistic measure of effectiveness because it may well be that the attendees are the more motivated or able students who would have out-performed the others in any circumstances. It could also be
the case that the students who would most benefit from the program are those least likely to attend. It would be desirable to map student performance against moderating factors such as socio-economic background, kind of school attended and other background factors. Future research aims to evaluate some of these factors in a manner that de-identifies individuals. There are ethical issues, however, with staff members who have actual day to day contact with students having access to such potential predictors of individual performance. Consequently such mapping has not been done for this paper. Qualitative surveys of student responses to the program are the principle research methodology adopted.

The marks achieved by attendees and non-attendees have been compared as a first step in verifying the program’s effectiveness and these results are presented here. The first subject or unit in the Construction Management program to join the PASS system was Design Science which is an introductory subject which provides students with an understanding of how the built environment works. The unit provides an introduction to physical units of measure, tolerance, statics, dynamics and optics. It also introduces students to electricity and magnetism as well as the concepts of momentum, energy, work, power and the operation of motors and machines. Students engage with these concepts through a hands-on learning experience including practical projects and live demonstrations (UWS Handbook 2010). Essentially it is a practically-based introductory physics unit. Total enrolment in 2010 was 299 students who completed the subject plus 63 who discontinued during the semester. Many construction students have experienced difficulty with the unit in the past because of lack of formal background in science at high school. This is particularly likely to affect students who come to the program from non-traditional backgrounds. Figure 1 shows the results achieved by students compared with their attendance at PASS during the semester. There is a clear relationship between attendance and end result in the unit although a statistical correlation excluding other critical factors is not yet possible to establish.

Unfortunately, uptake of the sessions by students has been uneven. In 2010 14% of students attended a PASS session. In the case of Design Science, 41 students (14%) attended a PASS session which equates to the university-wide average. Hopefully this will improve as a variety of timetable sessions are made available. The benefits of the program appeared to extend beyond academic performance for those students who did attend.
Student surveys reported the following reasons for attending PASS:

- “Because, I need someone to repeat what was said in lectures. It really helps me remember.”
- “I only attended when I have a particular problem to get extra help in.”
- “I thought it would be helpful in preparation for an upcoming assignment.”
- “First year student and wanted to avail myself to as much help as possible to ensure that I succeed”.
- “Because I had a friend who failed this unit last year and I did not want that to happen to me.”
- “A past student told me it would help. I am a mature age student and haven’t studied for 25 years - need all the help I can get!”
- “I liked the statistic that you are 2.5 times more likely to retain information if you study in a group”
- “Wanted reinforcement of what I was learning in class.”
- “To get further tips from student who had gone through the unit and the exams.”
- “Because I did not feel I was getting any benefit from tutorials to understand lecture material and thought to explore another option available”
- “Good way to meet people in my class that are keen to do well too.”
- “I had failed the subject twice and was told that the PASS program would help greatly.”

(PASS Report Autumn 2010).

As the comments demonstrate, students attended PASS for both academic and social networking reasons. With considerable anecdotal evidence about the time pressures on
students who are juggling study with work, family and other commitments, it is evident that programs which assist students academically as well as enabling greater social interaction within the university are a positive development for construction management programs.

The facilitators also benefited from their participation in PASS as revealed in their open-ended responses to feedback surveys:

- “It has given me a "voice" for helping other students and has given me a patience.”
- “It has allowed me to further develop my inter-personal skills and to expand my own knowledge in the subject I was facilitating.”
- “I feel more confident in my understanding of the area, as I have been able to guide others through the material, and improve my communication skills.”
- “It has given me a bit of insight into group dynamics, and how to use the strengths of each individual member to achieve a common goal.”
- “Personally, the PASS Program has developed my ability to cater for the needs of different groups of people at different levels, and who have different expectations of the unit. This is very important because the goals of each individual are not always the same, and you have to tailor a plan to suit that goal.”
- “Professionally, my public speaking and interpersonal skills has improved vastly as a result of running PASS sessions in excess of 30 people.”
- “It has improved the way I approach people, made me realise that students can be inspired by intelligent peers, the importance of cross communicating between groups is something I would take on board for my career.”
- “It has enhanced my confidence and ability to speak in front of large groups with various people which is a major requirement of my degree.”
- “It's good to give something back to an organisation that you are involved with.”

Although the program adds to the demands on facilitator’s time, there was no discernable deficit on their academic performance. It has yet to be determined what the optimum student number is for different groups of students. Given the dual role of academic and social support, sessions of up to thirty students per facilitator are currently viewed as viable.

CONCLUSIONS

While this preliminary study indicates that there is a prima facie case that peer mentoring may have a positive impact on student performance, a great deal of further work is required to formally test the research hypothesis of peer mentoring effectiveness.
Feedback from others involved in similar or related projects would greatly assist this process. Given the trend towards involvement of greater percentages of the overall population in higher education, universities need to adapt in order to cope with an intake stream of students who may have come from different and more diverse backgrounds than did previous generations of students. Fostering the safety valve of social networks within the university community for all students is a positive move. When these networks also provide aid with study techniques and tips on how to negotiate one’s way through the system there is a double advantage. Of course, continued investment in such networking facilities needs to be tested and evaluated over time to ensure effectiveness. Beyond establishing peer mentoring opportunities, we also need to look at other potential mechanisms for student engagement, such as relationships that can be established with industry mentors. A particularly important area for future research is how various mentoring schemes affect specifically disadvantaged students and those from non-traditional backgrounds. There are many ethical issues involved in the careful planning of such a research project.

REFERENCES


