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Undergraduate student peer mentoring in a multi-faculty, multi-campus university context

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INTRODUCTION

This article explores research that utilised a mapping strategy to investigate the elements of peer mentoring and peer tutoring programs across a multi-campus Australian university. Peer mentoring, peer tutoring and peer learning activities at the multi-campus university are occurring in a manner that may be considered ad-hoc which does not necessarily reflect an organisational commitment to, or philosophy of peer activities in the higher education setting. There is a significant body of research that reveals that mentoring activities benefit all students, mentoring particularly increases access, progress and success of students who traditionally struggle in tertiary education (Barnett, 2008; Walker and Walsh, 2008; Allen, Elby and Lentz, 2006; Budny, Paul and Bon, 2006; Eby, Durley, Evans and Ragins, 2006; Fox and Stevenson, 2006; Ferrar, 2004; Heirdsfield, Nelson, Tills, Cheeseman, Derrington, Tracy, Jagsi, Starr and Tarbell, 2004; Hansford, Tennent and Ehrich, 2003). While it is important to distinguish peer mentoring from peer tutoring/learning in any integrated model, both activities would complement Australian curriculum and student service reforms by providing an added valuable learning resource to all students.

LITERATURE REVIEW

Mentoring: the concept and the practice

Defining mentoring comes with significant challenges considering the wide variety of contexts within which it might be used. Mertz (2004) argues the term 'mentoring' is often applied out of context and is incorrectly used to describe a wide variety of interpersonal relationships (Mertz, 2004, pp: 541). The most popular definitions, however, are in relation to career advancement and professional development. Driscoll, Parkes, Tilley-Lubbs, Brill and Pitts Bannister (2009) describe mentoring as a process where two or more individuals enter into a coequal relationship that supports mutual mentoring for career and psychosocial validation. The most common types of mentoring in a university setting include academic mentoring, peer tutoring and peer mentoring.

Academic mentoring typifies the apprentice model of education where a faculty member imparts knowledge, provides support and offers guidance to a student mentee on academic (e.g., classroom performance) as well as non-academic matters

(e.g., personal problems, identity issues) (Eby, Allen, Evans, Ng and Dubois, 2008; Ewing, Freeman, Barrie, Bell, O'Connor, Waugh and Sykes, 2008). Academic mentors may boost the self esteem, self efficacy and overall satisfaction of the student with the academic program (Ferrari, 2004). Academic mentoring appears to be most successful when mentor and mentee are well matched in the areas of work and life balance, research outcomes and aspirations for career advancement (Ewing et al., 2008).

Peer tutoring is, in its most basic definition, students teaching other students (Colvin, 2007). Peer tutoring involves those of the same societal group or social standing educating one another when one peer has more expertise or knowledge (Colvin, 2007). In general, peer tutors assist other students either one-to-one or in small groups by continuing classroom discussions, developing study skills, evaluating student work, resolving specific problems and encouraging independent learning (Colvin, 2007).

Peer mentoring can be undertaken in various formats; generally involving two students at different stages of study in the same or similar courses. Fox and Stevenson (2006) describe a semi-formal tutorial setting for peer mentoring where it is not the responsibility of the mentor to undertake academic tutoring, rather peer mentors are encouraged to offer support and share past experiences of undergraduate courses and being a student, with their mentees (Fox and Stevenson, 2006).

Formal mentoring programs differ greatly in nature, focus and outcomes, particularly across different disciplines and organisations (Ehrich, Hansford and Tennent, 2004). The specific differences include the absence or presence of, and method of mentor training, the assignment of mentors to mentees and vice versa. Some programs designate the location and frequency of meetings, whereas others leave it to the discretion of the participants (Ehrich, Hansford and Tennent, 2004). Furthermore there are differences as to whether a program is evaluated and if it is, how (Ehrich, Hansford and Tennent, 2004).

Peer mentoring challenges the traditional assumption that the mentor knows more and knows best. Traditionally the functions of mentoring in general include being a role model, teacher and challenger to the mentee with the mentor acting as a sounding board, and providing personal guidance to the mentee when appropriate (Ferrari, 2004). Peer mentoring can be considered more of a collegial or collaborative relationship (Le Cornu, 2005). As such there are less likely to be barriers to successful peer mentoring caused by disparities in such things as age, experience and life background (Driscoll et al., 2009).

Ideally the characteristics of a peer mentor should include: (1) the ability and willingness to commit time, (2) the willingness to be matched to a mentee by gender and race, (3) have current university experience, (4) have high academic achievement in order to have credibility in the role, (5) have prior mentoring experience and good communication skills, (6) be supportive and trustworthy, (7) have an interdependent attitude to the mentoring process, (8) have empathy, (9) have a good personality match with the mentee and, (10) be enthusiastic and flexible (Terrion and Leonard, 2007). It is of vital importance that the peer mentor is not only carefully chosen but also receives adequate training and preparation for the role as mentor (Kohut, Burnap and Yon, 2007). In order for the student peer mentoring process to be successful research suggests that the mentee also possess a number of characteristics. These include being engaged in the same discipline as their mentor and possessing a desire for self-enhancement and motivation (Terrion and Leonard, 2007).

Personal barriers to successful peer mentoring
The two most commonly reported barriers to successful mentoring are lack of time and expertise and/or personality mismatch (Ewing et al., 2008; Nelson, Kift, Humphreys and Harper, 2006; Kilburg and Hancock, 2006; Ehrich, Hansford and Tennent 2004; Hansford, Tennent and Ehrich, 2003;). Other barriers included difficulties in matching up timetables and meeting times (Ewing et al., 2008; Beecroft,

Santner, Lacy, Kunzman and Dorey, 2006) and mentees being able to relate with comparatively junior mentors with recent experience of the transition process (Beecroft et al., 2006). This does however have its obvious limitations in the scope of what the mentor can offer the mentee.

Long (as cited in Ehrich, Hansford and Tennent, 2004, p.520), states, that *"under various conditions, the mentoring relationship can actually be detrimental to the mentor, mentee or both"*. Some areas for concern include the lack of time for mentoring, poor planning of the mentoring process, unsuccessful matching of mentors and mentees, a lack of understanding about the mentoring process, and lack of access to mentors from minority groups. Furthermore, mentoring appears to be more effective and successful in areas such as academic attitudes and less successful in the areas of psychological stress and strain (Eby et al., 2008).

Organisational barriers to successful peer mentoring
Barriers for mentoring programs can also stem from an organisational level of insufficient funding or where it is terminated before a program is well established or where there is a lack of support for the program, difficulty aligning the mentoring program with institutional strategic directions and initiatives, and resourcing of programs (Ehrich et al., 2004). Generally it has been noted that educational institutions too often undervalue mentoring (Sambunjak, Straus and Marusic, 2006) and should see formal mentoring programs as an investment in supporting and retaining new students, whether they be traditional school leaving students or mature age students (Heirdsfield, Nelson, Tills, Cheeseman, Derrington, Walker and Walsh, 2008). In the university environment mentoring programs need to be holistic and extend beyond academic issues with frequently cited positive outcomes being improved grades, attendance and behaviour of students (Ehrich et al., 2004; Ferrari, 2004).

However, Ehrich et al (2004) found that only 35.8% of education studies reported positive outcomes as a result of the mentoring program described. As such the evaluation of mentoring programs should be rigorous and ongoing (Karcher, Kuperminc, Portwood, Sipe and Taylor, 2006; Ehrich et al., 2004). Outcome measures should include participant perceived program effectiveness (Allen, Eby and Lentz, 2006), and the views of both the mentor and the mentee (Heirdsfield et al., 2008; Ehrich et al., 2004) in order to ensure sustainability and justification for ongoing resources.

The researchers chose to compare the university being studied here with other Australian universities via their web pages particularly those with relatively high levels of public information regarding peer mentoring programs. Of the six university web pages viewed, five out of the six had generic student peer mentoring programs, most were based within specific faculties and were facilitated in conjunction with whole of campus student programs. A range of peer mentoring programs catered for different cohorts, including programs for entire generic cohorts of students, mentoring programs for women in male dominated courses and peer mentoring programs for postgraduate students.

It was noted that for all these universities, potential mentors were recruited between September and November of the year prior to the commencement of the mentoring program, some universities recruit potential mentors via registering online and some universities required mentors to include an academic staff member as a referee in their application. All universities expected mentors to attend formal training prior to the commencement of the program. Training sessions varied in length of time and what the expectations and requirements were for completing the training.

The most common framework for peer mentoring in Australian universities is the Peer Assisted Study Sessions (PASS) program which originates out of the University of Wollongong. The PASS program is a form of Supplemental Instruction (SI) which operates autonomously with each specific institution however, all have shared features

which include, *"near peers facilitating collaborative learning situations that improve attendees' learning outcomes and increase retention"* (Power, 2010, pp: 1). Pedagogically, PASS is in essence an academic-only peer learning program where collaborative learning and peer support around formal learning and assessment processes.

The university that was researched had considered PASS but decided that informal peer mentoring was the model it preferred because the informality and social aspects of non-structured peer mentoring programs were less resource intensive and because the university was undertaking wholesale 'design for learning' curriculum changes that peer mentoring should sit outside of the curriculum and be considered as part of student transition/ engagement/ enrichment processes. It was the fact that the university did not choose a successful model from another university and that peer mentoring programs were appearing ad hoc across the four campuses that the research was funded and took place. It was seen was vital to quickly document what was happening and to ascertain whether coherence in philosophy and program development could be coordinated across the many peer mentoring programs being developed by various schools and faculties across four campuses.

RESEARCH DESIGN

This study was undertaken utilising a qualitative action research and action learning strategy (Dick, 1993). Action research and action learning, with thematic feedback, is a methodology by which change and understanding may be pursued at one time through a cyclic process of reflection and action. This method is often utilised in education sectors as a way of implementing or reviewing new programs (Dick, 1993). Using this approach, the aim was to investigate peer mentoring and peer learning programs in particular across all campuses at the same university by undertaking mapping of the processes currently in place. This included semi-structured interviews with key staff and then mapping the mentoring programs available at other Australian universities to ascertain the current benchmark(s) for peer mentoring programs for undergraduate students. Separate thematic summaries were collated for the main regional and urban campuses with a combined summary made of three smaller regional campuses.

Experiential and reflective processes were also inherent parts of this research. Participants, after having previously implemented and facilitated university peer mentoring programs, were asked to reflect on the process and outcomes of such programs which then became the basis for the learning component of action learning and action research processes. Results from this study have informed future planning of peer mentoring programs across the university.

Semi-structured interviews based on six broad questions were conducted with participants. The questions included:

1. Do you know of any peer mentoring programs initiated at your campus (if yes, then what, who, where, how)?
2. What is your understanding of peer mentoring versus peer tutoring?
3. What do you believe to be the benefits of peer mentoring?
4. Do you believe that peer mentoring programs should be campus-based or could be cross-campus (positive/negatives of either)?
5. Do you believe that on-line peer mentoring could be more beneficial than face-to-face peer mentoring?
6. Do you have any other information or opinions about peer mentoring that benefit this project?

A total of thirty participants were involved in seventeen interviews conducted across the four regional campuses, with eight interviews conducted at the urban campus.

University academic personnel with an interest in peer mentoring and tutoring programs were invited via email to participate in the study. Faculties represented included Health Sciences, Law and Management and Science, Technology and Engineering. All participants interviewed were either currently or had previously been involved in the development, implementation and co-ordination of mentoring programs within their departments or faculties.

PEER MENTORING IN REGIONAL AND URBAN CONTEXTS

It was acknowledged during this action research project that two factors were going to differentiate peer mentoring programs on regional campuses compared to the urban campus. Peer mentoring programs at the regional campuses had only been conducted for two years at the time of the research, whereas peer mentoring programs at the urban campus had been conducted for many years. The second factor was the smaller groups of students involved in the peer mentoring programs on the regional campuses. This resulted in more cross-disciplinary relationships between mentors with whole-of-campus events for mentors being conducted at regional campuses, whereas the peer mentors at the urban campus tended to participate in discipline specific events and support.

Findings from regional campuses

Two of the regional campuses at this university were in the infancy stages of developing peer mentoring programs and participants were unaware of any prior peer mentoring programs being conducted at that campus. It was evident that staff knowledge of mentoring programs was specific to the faculty they represented. Several mentoring programs were discussed which included peer mentoring, discipline specific mentoring and academic-student mentoring programs.

In all of the interviews with staff, participants defined and interpreted what mentoring was for them and as such conversations consistently centred around the fact that mentoring is a process and that success is dependent on the specific context and campus environment. During interviews, staff consistently reflected on their own understanding of mentoring being about a process of change, transition and growth. The majority of staff interviewed defined peer mentoring as a holistic transitional process: *"Peer mentoring relates to the broader academic life, the social and the personal, it incorporates the whole life experience of a student"* (RP1).

The general consensus about peer mentoring was that mentors took on a supportive role offering general assistance and advice and referring mentees to appropriate university support services: *"Peer mentoring is just being a support, a contact, a person who I can ask about how to do a question, where can I go to, and that is all it is. It's being able to direct a person to an appropriate service offered by the university"* (RP5).

Peer tutoring on the other hand was seen as more of a teaching role where mentors assist with very specific curriculum assistance. It should be noted that in some isolated instances individual mentors did perform some activities similar to peer tutoring activities: *"I do have to say that some of our mentors really took on a role as mini-tutors because they 'coached' their mentees in very specific content based academic activities rather than mere resources"* (RP7).

Several participants reported how their own mentoring experiences impacted on their subsequent interactions, engagement and communication with students. Mentoring had increased avenues for positive 'engagement' and 'personal interaction' between them and their mentors, which in turn had shaped how they now communicated, interacted and engaged with students. Overwhelmingly, the peer mentors were conscious of their role within their peer mentoring program which allowed them to engage with students in their early years and to develop stronger working relationships with academic staff: *"Most mentors were very clear of their roles as*

mentors, carefully guiding the first year students to resources and to specific academic staff" (RP7)

Most participants at the regional campuses believed that there were many benefits to peer mentoring, both for the mentor and the mentee. For the mentee, it offered a sense of connection to the university and their immediate environment. For the mentor it offered students the ability to be part of a bigger process of change in the life of someone else and assisted in developing their own leadership and communication skills: "*Mentees are able to connect with a year above their current year, so that kind of relationship, having someone not necessarily older, but maybe wiser to the university, who can point them in the right direction"* (RP2).

Furthermore when reporting the benefits for mentors, one participant stated that "*I have seen that particular group (that took on that role), actually become real leaders in their current year as well"* (RP3). The regional setting in relation to community and environment were also key elements discussed: "*Regional students may lack confidence when embarking on the university experience and mentoring can give students the confidence to proceed with the course and take what they have learnt into their community as well"* (RP3).

A strong theme evident in the interview data was the support for campus specific programs. All participants believed that the peer mentoring programs should be campus-specific as it was believed that the mentors and mentees had very particular campus needs in that regional student populations were unique to the specific campus: "*Each campus has different needs, different student groups. Being in a regional campus we have got a lot of students who travel, a lot of mature age students and so their needs are very different to perhaps students from [a urban area]"* (RP4).

Campus-specific structures also allowed for inclusion of local community links in the mentoring process especially at regional campuses: "*The benefits of programs being campus specific are that it targets the needs of the local community you are in…. At [the urban campus] they have a University footy team, we don't here [at the regional campus], so we are going to link them into sporting clubs in our community and if you have a program that is a lot more broadly based, then it does not allow the local community to be a part of how the mentoring program or how it can incorporate the community"* (RP9).

This also meant that mentoring programs were able to be: "*[T]ailored much more specifically to the needs of mentors and mentees. You have much more control over what is done and what happens and you can be more responsive, so you can be more proactive than reactive"* (RP12).

There was however, some support for cross-campus mentoring which would incorporate the benefits associated with linking students within a broader academic structure. Key issues common to regional campuses are their relative isolation and smaller student numbers per campus. The ability to connect students within the same undergraduate courses was seen as something that could be beneficial and could assist in the mentoring process: "*[A] cross campus mentoring program could target these high achievers and provide them with access to other students and staff that will help them achieve to their potential"* (RP12).

Most of the participants interviewed from the regional campuses revealed that there are many benefits in undertaking mentoring programs at a university level and most believed that these benefits had ongoing benefits and eventually a positive impact on the local community: "*This experience can remain with students, indirectly, and influence how they then mentor others throughout their careers"* (RP6).

Although it was believed that the programs should be campus-specific, participants also revealed that generic mentoring resources already existed and could be adapted

for specific programs. All of the coordinators had used existing resources when implementing their own programs. These resources had been sourced from other programs conducted at the major regional and urban campuses. It was noted that it was best to share resources and expertise that was available on-campus and not rely on support from other campuses. In doing so it was seen as being more cost- and time-efficient.

Participants commented on structural aspects of the mentoring programs with which they had been involved. This included planning when the program commenced and how the program was delivered. Many of the participants identified the need to have structured sessions organised for the mentoring groups, particularly in the early stages of the program. Some of the participants felt that structured sessions could have enhanced and strengthened the mentoring relationships.

Some of the programs had been initiated after the first semester had commenced. A number of the participants reported that this was detrimental to the potential success of the program. It was believed that the recruitment and training of mentors needed to commence at the end of the year "*in November or December*" so that mentees had earlier contact with their mentors in readiness for the next semester. It was also seen as necessary to have programs established before orientation week in order to achieve maximum benefit for new students as it was felt that was when "*they really need it*". It was observed that the program that started mid-year was initiated in response to new students who had missed orientation activities.

In all interviews, strong views were expressed in relation to online mentoring. Some participants clearly preferred face-to-face mentoring for their programs but acknowledged this was their own personal preference and that "*there is certainly a place for online mentoring*". One participant went on to relate this preference to the kind of student who might be involved: "*It is my view that health science students are not fussed about online stuff. They are 'people people', that is why they are in health sciences*" (RP12).

Further comments regarding online delivery related to the difficulties experienced by students to meet each other on-campus due to clashing timetables and placement commitments. Most of the participants from regional campuses reported that many of the mentoring contacts had indeed been conducted via email for these reasons and this approach was more likely to yield higher numbers taking up mentoring: "*The students are juggling four units, four different teams within those units, lectures, discipline mentoring meetings which were different to peer mentoring so time restrictions, time tabling, all of that plays a part in all that. So to be able to do it online I think more students might actually take it up. I think it there is potential for it to work and for it to work really well*" (RP15).

A majority of the programs received a considerable amount of support from prospective mentors and recruitment had not been a problem. In most instances it was felt that mentors had enjoyed their training and they were enthusiastic participants. Mentees on the other hand were more difficult to engage. Some participants felt that mentors and mentees should come from the same discipline to maximise the amount of support and advice. Cross-campus mentoring was seen as an alternative to matching mentors and mentees within specific disciplines when new courses were introduced to the campus.

Findings from the Urban Campus
Consistent with the interviews held at the regional campuses, the semi-structured interviews held at the urban campus were based on the same six questions. When asked generally about what was known about mentoring programs, three participants commented that having a structured program was beneficial, in that it provided clear strategies and methods for students to remain engaged across the academic year. Two participants commented that it was important to have programs that were designed

with clear objectives and aims: "*if you are clear from the start about what you are aiming to achieve then you can set your program up to achieve those things and it will then be a benefit to all involved*" (RP20). Also, if programs were structured to be discipline-specific then cross-campus programs could be of benefit for such cohorts. This would then allow more flexibility in and between disciplines, faculties and campuses in how a program was then run, allowing the underlying structure and format to remain the same.

Participants believed that a definite structure also provided a strong basis for mentoring programs, assisting students to be fully informed of the program in which they were participating and what it entailed. It was reported that if students were not fully aware of what the mentoring program involved, they did not remain committed to the process throughout the academic year. As a result, one participant believed that if the program were to run again in the future, she "*would have better defined screening processes in play*" (RP22).

Participants reported that whilst having an underlying structural design was important, flexibility was equally important for successful mentoring programs, including how they were implemented. Participants believed that their programs were successful because they had adapted their programs to meet the needs of specific student demographics. This reflected similar sentiments expressed by participants in the regional interviews.

In relation to the delivery of mentoring programs, participants believed that being able to effectively engage with students was of high importance "*for there to be effective learning, there needs to be effective engagement of students*" (RP25). Numerous participants commented that mentoring in recent times had been a popular way to engage students; however programs that were ill-designed and delivered in an ad-hoc manner were of limited benefit. Being flexible to student needs was considered important, and a mentoring program had been adapted based on direct feedback received from students involved in the previous year's program.

Most urban participants had varying views on the choice between cross-campus or campus-specific mentoring programs. Some participants reported that "*programs should be localised….so that they meet the needs of the student demographic on that campus*" (RP23). Whereas other participants believed that cross-campus mentoring could be beneficial for all, in that students could become more aware of regional students and the issues that they face: "*Students on regional campuses have smaller classrooms, so will have more peer support and interaction with each other and staff as a result of that. As a result they could be better able to communicate and work together. I think students could learn from that. I believe that students on regional campuses are less socially isolated because that structure is not in place here*" (RP23).

One participant was able to comment on a program already coordinated across regional and urban campuses; this program was described as having comprehensive faculty support. Overall, it was reported that it was currently not a feasible option to conduct cross-campus programs without a "*certain level of support allocated to peer mentoring programs*" (RP21). However, if this underlying structure and support was available then mentoring programs could and should "*fall under one umbrella*" (RP21).

When talking about online models of mentoring, participants overwhelmingly believed that peer mentoring programs should involve face-to-face contact, "*face to face interaction was crucial in building up rapport and relationship between students*" (RP28). Most participants commented that online techniques can definitely compliment this process: "*today what we have to do, is be able to meet the needs of the students and communicate in ways that they do and embrace that….need to get good at using technology to our advantage and be clever in how we use that technology and not waste ours or our student's time*" (RP28).

Finally, several participants commented there was potential for blurring the lines between what constitutes peer mentoring and peer tutoring for students and that further clarification of roles and expectations was needed in future mentoring and tutoring programs. Interestingly, several participants talked about both mentoring and tutoring roles and programs and used these terms interchangeably when asked about the benefits of peer mentoring during the interview.

DISCUSSION

The research project described in this article mapped peer mentoring programs at four regional campuses and one urban campus of the same university. It was derived from a 'whole of organisation' model, that investigated the coordination, delivery and evaluation of student peer mentoring and peer tutoring programs. The intention was to ensure future equity, effectiveness and consistency across all faculties and campuses by considering programs that target the diverse needs of 21st century undergraduate students.

The recommendations discussed the need to evaluate current peer mentoring programs and develop an organisational model for peer mentoring and peer tutoring programs at all of the university's campuses. Furthermore, it was recommended that it was important to support a broader program evaluation strategy that links undergraduate peer mentoring programs with the intended curriculum and student transition aims of the university. This evaluation program has been funded for the four regional campuses in 2011 with data being available in 2012.

There was seen to be a need, in this case, to explore new approaches to coordinating, implementing and evaluating undergraduate peer mentoring programs and how these could be more time, effort and cost efficient, and more effective in meeting the varied needs seen in the student demographic across five different campuses. The research project found that peer mentoring, peer tutoring and peer learning activities at all campuses were occurring in an ad-hoc manner and did not reflect an organisational commitment to, or philosophy of peer mentoring activities in a higher education setting. There is a difference between peer mentoring and peer tutoring/learning and these two types of programs need to be distinguished in any future integrated model at this university. Integrated and coordinated peer mentoring and peer learning activities would differentiate this university from many other universities in Australia and complement current curriculum and student services reforms by providing a value-added learning resource to all students.

Mentoring programs at universities provide first-year undergraduate students with adequate and timely access to support services and opportunities to become part of the community that is 'a university' (Nelson et al., 2006). Participants in this research reported that in an overwhelming environment such as the academic culture of a university, peer mentoring can definitely assist the transition process for first-year undergraduate students.

The basic function of peer mentoring programs is to facilitate the career and/or academic development of the mentee (Allen, Eby and Lentz, 2006). Mentoring can add great richness to the university experience through the valuable dimensions of informal guidance, role modelling, support and encouragement that enriches students' ongoing undergraduate academic and social development (Barnett, 2008). Mentoring assists in the development of academic and social competence both on the part of the mentor and mentee (Barnett, 2008) and is linked with favourable attitudes and lower attrition (Eby, Durley, Evans, and Ragings, 2006; Eby, Lockwood and Butts, 2006).

Transition issues for students are common to all universities in all geographical contexts, the benefits of university peer mentoring programs for first-year undergraduate students includes raising the knowledge level of undergraduate

students with regard to lifestyle changes that can occur in moving to a campus environment, developing and awareness of the services offered by the university and their educational and transitional status within the academic environment (Heirdsfield et al., 2008; Budny, Paul and Bon, 2006). There are also benefits for peer mentors such as an increase in an awareness of their own knowledge and development as they advance in their course of study, which can result in increased confidence (Barnett, 2008; Ehrich, Hansford and Tennent, 2004; Heirdsfield et al., 2008). The research explored here revealed that all of these benefits are real for students and staff within the context of first-year undergraduate programs.

However, considering the findings of this research, and the conclusions of other research, universities need to place a high priority on supporting and sustaining peer mentoring programs in a structured way rather than ad hoc, faculty-based or discipline-based programs. Emphasis on student support through peer mentoring can result in positive benefits and satisfaction of both staff and students. It could also benefit the reputation of the university as a program that can be highlighted in marketing for new students. Facilitating a well structured peer mentoring program can increase the likelihood of having more mentors in the future due to word-of-mouth communication of the benefits, reduce workplace stress particularly with regard to academic mentoring and increase collegiality in the university if interdisciplinary and/or cross-campus programs are utilised (Heirdsfield et al., 2008; Barnett, 2008; Ewing et al., 2008; Budny Paul and Bon, 2006; Wassertein, Quistberg and Shea 2006; Ehrich Hansford and Tennent, 2004; Tracy, Jagsi, Starr and Tarbell, 2004).

Mentoring programs need to be designed with a great deal of 'intellectual rigor', be well-planned, well-resourced and sustainable (Ehrich et al., 2004). Institutional and management support must be clear for any mentoring program in order for it to be successful (Eby et al., 2006; Eby, Lockwood and Butts, 2006). Participants in one study emphasised the importance of a '*mentoring agreement as a means of regulating and monitoring progress*' (Ewing et al. 2008, pp: 305). This includes participant input into the mentoring process and training prior to the mentorship (Allen, Eby and Lentz, 2006; Eby et al., 2006; Eby, Lockwood and Butts, 2006; Ehrich et al., 2004). Many studies reveal that mentors are often unclear as to what is expected of them, what they are supposed to do and report feeling frustrated and inadequate in this role (Allen Eby and Lentz, 2006; Eby et al., 2006; Eby, Lockwood and Butts, 2006; Ehrich et al., 2004).

Researchers have consistently found that differences in demographic characteristics of both the mentor and mentee (i.e., age, gender, rank, experience and race) can affect the mentoring relationship and thus the outcomes of the mentoring process (Smith, Howard and Harrington, 2005, pp: 33). Smith et al. (2005) found that ideally, mentors should be flexible, caring, competent, nurturing, authentic, approachable, inspirational and conscientious Their research suggests that it is important that careful selection and matching of mentors and mentees take place to ensure that the first-year undergraduate student feel connected to their mentor and hence the discipline and academic environment.

Other studies advocate the use of current technologies to aid in the mentoring process (Smith-Jentsch, Scielzo, Yarbrough and Rosopa, 2008; Single and Single, 2005). The use of text messages, Facebook, Linked-in, Twitter and email can be beneficial to the process particularly when face-to-face contact may be difficult and affords greater flexibility for the mentoring process (Chan and Lee, 2005; Heirdsfield et al., 2008). As revealed by participants, utilising available technology is a sensible approach, however as also noted by participants, contact via technology does not necessarily suit everyone, and some degree of flexibility in delivery modes must be considered in relation to the context and the needs to specific student cohorts (Chan and Lee, 2005; Heirdsfield et al., 2008). Many mature age students do not want to use technology as a form of contact and prefer to meet with their mentor on campus. Students from rural areas do not always have access to the technology required for this type of interaction (Townsend, 2009).

CONCLUSION

This research found that while the evidence is strong to support peer mentoring and peer learning programs in a university setting, there are a wide variety of opportunities that are perhaps being missed by under utilising the potential of programs currently in place. This study found that peer mentoring and peer learning activities at one university are occurring in an uncoordinated manner and therefore do not necessarily reflect an organisational commitment to, or philosophy of peer activities in a higher education setting. Integrated and coordinated peer mentoring and peer learning activities may increase the capacity of universities to meet the specific needs of their student cohorts. Such an approach would complement current curriculum and student services reforms by providing a valuable learning resource to all students.

The action research and action learning (Dick, 1993) approach to this research has meant that developments have occurred since data collection commenced; the university and faculty concerned formed First Year Experience Committees that meet on a monthly basis and several schools within the university facilitated formal evaluations of peer mentoring in 2011 as a way of producing primary data as evidence of the value of peer mentoring. One such project is facilitated by the authors and the data and analysis will be available in 2012.

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