Journal of Peer Learning

Volume 5 Article 6

2012

From the Campus to the Cloud: The Online Peer Assisted Learning Scheme

Tim J. Beaumont
University of Melbourne, btj@unimelb.edu.au

Aaron P. Mannion
University of Melbourne, azinexile@gmail.com

Brice O. Shen
University of Melbourne, bshen@unimelb.edu.au

Journal of Peer Learning (2012-13) 5: 20 - 31

From the Campus to the Cloud: The Online Peer Assisted Learning Scheme

Tim J. Beaumont, Aaron P. Mannion and Brice O. Shen

ABSTRACT
This paper reports on an online version of Peer Assisted Study Sessions (PASS), also known as Supplemental Instruction (SI), which was trialled in two subjects in the University of Melbourne in 2011. The program, named the Online Peer Assisted Learning (OPAL) scheme, was implemented with the aims of extending the benefits of a successful peer learning program to students other than those who attend face-to-face sessions and contributing to scholarship on the viability of online peer learning with reference to student interest, leader and participant perspectives, and the suitability of synchronous communication platforms. Qualitative research led to mixed findings. Although OPAL was considered to be a viable online peer learning program by leaders and participants, multiple challenges were encountered. With reference to literature on related initiatives and the use of synchronous online learning platforms in higher education, this paper provides an account of the establishment and progress of the initiative, before presenting an analysis of its strengths and weaknesses and a series of recommendations for researchers and practitioners who are interested in online adaptations of face-to-face peer learning programs.

INTRODUCTION
This paper discusses the piloting of an online implementation of Peer Assisted Study Sessions (PASS), also known as Supplemental Instruction (SI), in two subjects at the University of Melbourne in 2011. The goal of this paper is to offer insights to those considering taking peer learning programs into the online domain. With reference to literature on related initiatives and the use of synchronous online learning platforms in higher education, the paper provides an account of the set up and progress of the initiative, before presenting a discussion of its strengths and weaknesses and a series of recommendations for those planning to implement similar programs.

PASS, as run in Australasia, is intended not only to enhance academic success, retention and engagement, but also to support the first year experience, deepen disciplinary knowledge, optimise learning approaches, develop leadership skills, and support development of both discipline-specific communities of practice and broader social-connectedness (Australasian Centre for PASS, 2010). The positive impact Australasian and international implementations of PASS have on students' academic performance, university experiences and personal development has been well-documented (Bowles, McCoy, & Bates, 2008; Hensen & Shelley, 2003; Huijser, Kimmins, & Evans, 2008; Martin & Arendale, 1993; McCarthy, Smuts & Cosser, 1997; van der Meer & Scott, 2009).

The many successes of PASS have contributed to its striking growth. Notwithstanding variations in name and nature, PASS now exists in over 1000 higher educational institutions throughout 29 countries (Power, 2010). Throughout Australia, the majority of universities run PASS, and interest continues to increase, as evidenced by the number of supervisors being trained at the Australasian National PASS Centre, the popularity of the Australasian National PASS Forum and the proliferation in literature on PASS.

Recently, interest in online versions of PASS has also grown, coinciding with increased interest in e-learning in higher education generally. The extent to which this interest is

Published by the University of Wollongong
ISSN 2200-2359 (online)

fuelled by a desire to address the supposed needs of the 'digital native' (Prensky, 2001) and embrace 'Pedagogy 2.0' (McLoughlin & Lee, 2007) is not altogether clear. Those interested in online PASS may find it useful to note more cautionary findings concerning the supposed e-learning preferences of today's university students (Arthur, Beecher, Elliot & Newman, 2006; Kennedy, Judd, Churchward, Gray & Krause, 2008). Within the PASS community, discussion has intensified about the potential for online PASS to support students who find it difficult to attend campus and to engage with a seemingly ever-more digitally connected student body. PASS supervisor posts to the Australasian PASS List of 2011 and 2012[1] suggest notable activity in the area of online PASS and some initial successes.

Although still rare, literature has emerged on motivations for, and experiences in, transferring some elements of PASS online (Best, Hajzler, Pancini & Tout, 2011; Davies, 2004; Devine & Jolly, 2011; Huijser & Kimmins, 2006; Huijser, Kimmins & Evans, 2008; Paulo, Teixeira, Camacho & de Freitas Gouveia, 2011). Those planning online peer-learning programs are also able to draw upon literature that examines the potential for synchronous communication platforms to support forms of interaction in higher education that are characteristic of PASS (Cappiccie, & Desrosiers, 2011; Karabulut, & Correia, 2008; Kirkwood, 2010; Park & Bonk, 2007a).

Notable successes have been linked to online versions of PASS. These include development of students' subject knowledge, increased collaboration and connectedness (Huijser & Kimmins, 2006; Huijser, Kimmins & Evans, 2008), improved motivation and confidence (Davies, 2004), and collaboration among PASS leaders (Best, Hajzler, Pancini & Tout, 2011). However, as we explored the literature, we became aware of just how small the body of research on online PASS remains. This literature also typically addresses small scale initiatives, and discussion of successes comes qualified with mention of significant risks and drawbacks, which range from low student interest (Devine & Jolly, 2011) to concerns about platforms used, and perceptions of inadequate preparation for managing synchronous online discussions (Huijser, Kimmins & Evans, 2008).

The Online Peer Assisted Learning Scheme

The program that we developed, the Online Peer Assisted Learning (OPAL) scheme, was designed to use a synchronous desktop conferencing platform to run an online form of PASS. We sought to explore:

1. whether the standard PASS principles and approaches can be carried across to an online environment;
2. ways in which an online version of PASS could run in comparison with face-to-face sessions;
3. the suitability of synchronous communication platforms as a means to support PASS sessions;
4. student interest in online PASS; and
5. leader and participant perspectives on online PASS.

Outcomes of the pilot program were mixed. While we gained valuable information on running an online peer program, the participation rate was extremely low.

Implementing OPAL

There were five key elements in the set-up and operation of OPAL.

1. Selecting the subjects in which OPAL would run;
2. Selecting the software platform that would be used for the sessions;
3. Leader selection, training and support;
4. The scheduling of sessions;
5. The promotion of the program.

[1] An email-based communication channel used mostly by Australasian PASS supervisors to discuss issues, events and research of relevance to the PASS community

1. Subject selection

OPAL developed from discussions among PASS supervisors from the Faculty of Business and Economics (FBE) and teaching staff in the Melbourne School of Engineering (MSE). In order to better understand online PASS, we chose two subjects, one from each faculty and from different year levels to increase the diversity of the experiences gained. The subjects chosen were a first-year engineering subject, Engineering Systems Design 2 (ESD2) and a second-year accounting subject, Intermediate Financial Accounting (IFA). Both subjects are typically found challenging by students and are core to the programs they sit within, in accordance with the standard method of identifying PASS subjects. While PASS has run in IFA for over ten years and is received well by students, in ESD2, PASS was introduced for the first time simultaneously with OPAL.

2. Platform selection

A number of platforms were considered by the project leaders, including Google Docs, DimDim, Open Meetings, Sakai, Adobe Connect, Elluminate, and Wimba. Research into the programs was conducted by means of inquiries, software research and trials, and reviews of literature on the use of synchronous platforms in higher education (Huijser & Kimmins, 2006; Huijser, Kimmins & Evans, 2008; Park & Bonk, 2007a; Park & Bonk, 2007b; Karabulut & Correia, 2008).

Based on our analysis, we found Google Docs did not offer sufficient functionality on its own, and we envisaged difficulties in managing security and log-ins. DimDim had been bought out by Salesforce and was no longer taking new registrations. Open Meetings and Sakai were open source offerings that needed to be hosted locally and would have required more investment and preparation to deliver than a small scale trial could justify. This left three strong options with similar functionality: Elluminate, Adobe Connect and Wimba. All platforms offer break-out rooms, video, voice and chat functions together with whiteboards and the ability to upload documents. Further investigation revealed that the University of Melbourne had current licences for Adobe Connect which played a role in its selection as the platform we would use.

3. Leader selection and support

Leaders were selected through a formal application and interview process. The selection criteria were mostly the same as those for PASS leaders, most notably, academic achievement, and perceived commitment to PASS principles and interpersonal skills. In addition, selection was informed by candidates' familiarity with online communication tools such as Skype. We also chose leaders who we considered enthusiastic and resilient enough to deal with the potential problems that may occur in a pilot program. The leaders selected for IFA had experience with the PASS program as participants, unlike the leaders in ESD2. Once chosen, the four OPAL leaders, two for each faculty, took part in the well-established PASS training offered within the FBE. The only significant variation between the training of the OPAL leaders and the PASS leaders was that the OPAL leaders were given training in use of Adobe Connect for OPAL over the last half-day of the two-day training. In this separate session, they practised using the software and role-played sessions using the platform. Additionally, OPAL leaders received a two hour 'refresher' and practice session just before semester began.

During semester, leaders were provided with a range of support materials. These included the FBE PASS handbook, a simple guide to Adobe Connect, a guide for tutoring using Adobe Connect, and Adobe Connect trouble-shooting materials. In addition to the provision of these materials, the FBE OPAL leaders met with a PASS supervisor every week until Week Five of semester when it was determined that meeting every two to three weeks would be sufficient. In Engineering, OPAL and PASS leaders met their PASS supervisor every teaching week of semester as both programs were new. OPAL leaders of both faculties were supported to discuss their experiences with each other and exchange anecdotes, concerns and tips in the face-to-face

meetings. Leaders were also emailed on a weekly basis to elicit their support needs and significant experiences.

4. Timing and scheduling of sessions

Six OPAL sessions of one hour each were initially offered each week of semester in the two subjects. These sessions were offered in weekday office hours, weekday evenings and weekend daytime hours. A range of different types of time slots was necessary to allow for different types of students to attend.

5. Promoting OPAL

While the general methods used to promote OPAL in the two faculties were similar, namely presentations by leaders in lectures, slides shown at the beginning of lectures, informational flyers and notices sent by email and posted on the learning management system, the overall marketing strategy was quite different. PASS was already well-established in IFA and had an established infrastructure for marketing and registration. However in ESD2, PASS was completely new, although it could be promoted very directly as the supervisors were also involved in teaching the subject as lecturers. This resulted in the IFA students interacting with a tested and familiar system for registration and promotion, while the ESD2 students received direct contact from the OPAL supervisors to encourage them to take advantage of the program.

METHODOLOGY

During the planning stage, we had anticipated gathering and analysing quantitative data about OPAL with reference to data associated with face-to-face PASS participation in ESD2 and IFA, and data pertaining to students who neither participated in PASS nor OPAL. Specifically, we had hoped to analyse achievement in the subjects with reference to participation in OPAL. However, due to low take-up in OPAL, the study was conducted using exclusively qualitative methods.

Focus groups were conducted involving OPAL and PASS participants for both subjects. Furthermore, the OPAL and PASS leaders in ESD2 and the OPAL leaders in IFA participated in an additional focus group. The main areas the OPAL participant focus groups covered were perceptions of:

- the approaches used in OPAL sessions;
- the effect of OPAL on participants' understanding of subject content and their broad engagement with the subject;
- the effect of OPAL on participants' academic confidence;
- the effect of OPAL on participants' sense of involvement in a learning community;
- participants' willingness to ask and answer questions online;
- the suitability of the software platform to facilitate this form of peer learning;
- the students for whom OPAL may be best suited.

Related areas formed the basis of the questions asked in the OPAL leader focus group. Students who took part in the PASS focus group were asked questions associated with reasons for choosing PASS over OPAL, approaches used in PASS, the perceived value of PASS, and the suitability of the times in which PASS sessions were offered. All focus groups were audio-recorded and then transcribed, coded and organised into themes. This data forms the basis of the discussion below.

RESULTS AND DISCUSSION

While registrations were modest, with 25 in IFA and 62 in ESD2, these did not translate into attendance, with only 10 active participants across the semester for IFA and 13 for ESD2. Active participants were those who attended at least one full session, although attendance was sporadic.

While all OPAL leaders took part in the focus groups, only five OPAL participants agreed to take part in the focus groups. Although all active participants were invited,

only the more regular OPAL attendees agreed to take part. In this context, self-selection (both staying in OPAL and choosing to take part in an OPAL focus group) may have skewed the feedback towards being more positive.

All OPAL participants who took part in the focus groups indicated that they would strongly consider taking part in OPAL if it was to run in subjects they were to study in the future. Furthermore, in line with Cappiccie and Desrosier's (2011) finding that, for the most part, Adobe Connect offered a satisfactory platform for student learning, all six OPAL leaders reported that they found the platform to be an adequate vehicle for the facilitation of PASS.

Benefits

1. Confidence to contribute

OPAL participants mentioned that a benefit of OPAL was the opportunity it allowed them to participate with confidence. This, they noted was largely associated with the 'anonymity' of OPAL; the fact they typically identified themselves to other participants with just their first name or a pseudonym. "I'm a generally shy person in person", one OPAL participant noted, "[but] I feel like I can just ask anything online."

2. Flexibility and convenience

A further benefit of OPAL noted in focus groups was that it mostly ran outside of office hours thereby allowing a degree of flexibility beyond PASS. OPAL enabled students to work from home at night—particularly important for one student who mentioned she did not like walking around campus at night for personal security reasons. OPAL was furthermore welcomed as offering opportunities for students who live far from campus to take part in peer learning.

3. Leader selection and training

OPAL leader selection, which drew upon the experience of the PASS supervisors in selecting PASS leaders, proved highly successful. OPAL leaders reported feeling well-prepared for their duties by means of the two day training program and the subsequent opportunities for development and support.

Drawbacks

1. Content coverage

All leaders reported that material took longer to address in OPAL than in PASS. While this could be partly related to software lag and connection difficulties, reduced progress was also experienced when these problems were minimal and groups were small. One participant noted that if a question was posed in PASS, students could readily indicate when they had an answer, while in OPAL students often waited to see other responses, particularly when those responses were required as text. The general lack of visual clues available in this online environment caused by the participants' invisibility to OPAL leaders is also likely to have contributed to this overall delay.

Additionally, or perhaps as a result of this, participants reported that OPAL sessions often ran over time. Other studies have noted similar issues in relation to the pace at which content can be addressed. Park and Bonk (2007a; 2007b) report that time pressures can sometimes lead to superficial interactions which can be exacerbated if some participants have language issues that may be associated with them being non-native speakers.

2. Opportunities for distraction

One participant observed that after discussing a question in PASS, students would "catch up on each other's lives [but] it's not like you can do that on OPAL because OPAL is so straightforward. If you want to side-track it's really hard." However, others reported that PASS offered a way to ensure study time was intensely used, and that being online, and for the most part unseen, in OPAL sessions allowed greater temptation towards distraction, whether that distraction involved email, social media or simply daydreaming.

Experiences with Adobe Connect

1. Ease of use

All OPAL leaders reported finding Adobe Connect intuitive to use. By employing some well-considered activities, they also found that participants quickly became adept at using the platform. One leader described the exercise for introducing students to the platform as follows:

"We did the beginning treasure hunt, as in the 'find this and find that'. And they can just adapt really quickly [...] Even if they don't know they'll ask 'Oh, how do I type?' and things like that. But it's really straightforward so there's definitely no problem."

OPAL leaders and participants reported being impressed by several elements of the software: the varied forums for communicating as well as for presenting content, the fact participants could access the internet when needed, the text-based records of contributions that were present during sessions, and the ease with which multiple-choice and long and short answer questions could be developed.

2. Technical issues

Occasional drop-outs were experienced which required participants to repeat the sign-in process. It is difficult to ascertain whether this was as a result of students' own connections and set-ups or problems with the platform itself. In either case, these kinds of problems are not uncommon, with others reporting similar issues (Devine & Jolly, 2011; Park & Bonk, 2007a). A typical recommendation is to ensure the availability of a technical support contact during sessions (Cappiccie & Desrosiers, 2011).

3. Software lag

The system suffered constant although variable lag. Effects ranged from voice-based conversations becoming stilted and awkward (common) to lag in text chatting. As a consequence, leaders tended to restrict voice use to themselves, and some leaders abandoned voice altogether. In the words of one leader, "a lot of [participants] were saying how it's a bit weird just to be chatting away [using text] rather than speaking, because it's so much quicker to speak. But it just wasn't, you know, practical to speak because the lag was [too bad]." Participants reported frustration at not being able to use voice chat themselves. Video was not used, although both leaders and participants reported that doing so would have made them uncomfortable.

4. Creation and sharing of varied resources

Despite participant satisfaction with several aspects of Adobe Connect, leaders found it was difficult to create spreadsheets, diagrams and tables using the online tools offered by Adobe Connect. Leaders reported that although it was possible to create impromptu diagrams and spreadsheets using the whiteboard function, they preferred not to. Instead, they tended to prepare slides, images or other files that could be imported and used. This avoided software-associated problems, but could affect the fluidity and spontaneity of the interactions.

OPAL as peer learning

"Is it possible to create a virtual sense of belonging?", Huijser, Kimmins and Evans ask, "And is this equally effective?" (2008. p.54.). This question is key as to whether OPAL can be as successful as the peer learning community available in PASS, and whether programs such as OPAL may risk becoming an online tutorial. OPAL participants and leaders had mixed views on the capacity for OPAL to support meaningful interaction and to support the development of an effective learning community. In the words of one leader, "For me the best part of OPAL would be…after some time the students trust you. You start to build that relationship with them even though you actually don't really see them". Another leader who had previously been a PASS participant compared OPAL favourably to PASS with reference to student participation, "With OPAL because it is a bit more anonymous, they are sort of a bit more forthcoming at the beginning. [In PASS] no one likes to be the first one to go up and write on the

board. Whereas with OPAL, you know they just type away, oh this is the answer or this is why the answer is… So that was good".

One view which was consistent among leaders and participants, however, was that the online version tended to diverge from the collaborative model upon which PASS is based. Although redirection was used and leaders were sensitive to the concept of reteaching[2], the collaborative nature of PASS can be more difficult to deploy in sessions featuring very small numbers, and large group discussions can be difficult to moderate on synchronous platforms, a finding also noted by other researchers (Park & Bonk, 2007a). While participants claimed they enjoyed the small size of OPAL sessions, to some degree this was due to the extra attention that they received in the small group sizes which may risk jeopardising the peer-learning principles upon which PASS is based.

Other researchers have noted the impact the following factors may have on interaction in online peer learning sessions that use synchronous communication platforms:

1. loss of secondary communication modes such as body language and tone of voice (Devine & Jolly, 2011; Park & Bonk, 2007a);
2. the effects of severe echoes that can occur when using some synchronous platforms (Park & Bonk, 2007a); and,
3. the impact interface design may have on the capacities of groups to work effectively together (Bower, 2007).

Each of these negatives may represent only a minor degradation in communication, but PASS, we contend, relies on highly nuanced and emotionally complex modes of communication. When one student explains something, the other shows interest and comprehension. If a student veers off-track, facial expressions, utterances and even postures of the leader or other students may offer subtle correction. Most importantly, discussion in PASS tends to move back and forth constantly. Online communication, whether text or video-based, can involve greater spaces between responses as participants wait to ensure that the entire 'message' is received and that participants are not speaking over one another.

Although a number of studies report the potential for synchronous platforms to support connections between peers and reduce academic isolation (Goldrick & O'Higgins Norman, 2012; Park & Bonk, 2007a), others note students preferring to communicate in face to face sessions rather than online, and find paper-based work on problems more beneficial than over the web (Devine & Jolly, 2011). "Students", Gerbich notes, "often demonstrate their uncertainty by not contributing to the discussions, thus indicating a disjunction between teachers' intentions and practice concerning online discussions and student perspectives of this medium and its value for learning" (2006, p.271). Certainly on the basis of our study, it appears that the dynamic learning communities that can be created through face to face PASS are more difficult to replicate online.

Uptake

The most striking problem with OPAL was the low student uptake, in both absolute terms and in comparison with uptake of the PASS sessions offered in both subjects. This low uptake was experienced in both faculties despite differences in how OPAL

[2] In the PASS community, 'reteaching' refers to the prohibited practice of a PASS leader presenting subject content rather than creating an opportunity for PASS participants to learn content through discussion with other participants or reference to other sources (eg. lecture notes or a text book). Reteaching can also include the direct answering of student questions or direct commenting on the accuracy of student input. 'Redirection' is an approach a PASS leader may employ to avoid reteaching; a leader may redirect a student question, by, for example, asking the student to consult other participants, written resources, or, outside of a session, their lecturer or tutor.

was marketed and presented. The feedback received from leaders and participants suggests that the following factors may have led to the poor uptake of OPAL in comparison with PASS sessions.

Factors suggested by focus groups

1. Impersonal nature of OPAL sessions

Students didn't feel a personal connection with their OPAL sessions, with one participant explaining that, "You're not actually meeting up with anyone. It's just a message on a computer." The sentiment that, having returned home at the end of the day, students were likely to skip OPAL was echoed by several students. The phrase "it's just a message on a computer" speaks to the relative absence of a personal connection to OPAL sessions that might have resulted in a stronger sense of responsibility regarding attendance. Students seemed to feel that if they didn't attend, no one would notice.

2. Impact of peers

PASS supervisors in the FBE noted that after the initial few weeks of semester many new attendees come to PASS together with a friend who was already attending a session. Although some OPAL participants indicated that they also asked friends to come along, the online nature of OPAL reduced the social aspect of sessions with students having no physical proximity, nor opportunity for casual personal conversation.

3. Campus access

One motivation for setting up OPAL was to enable students with limited access to the campus to more easily participate in peer learning. Participants in the focus groups mentioned that students living away from campus (especially with travel times of over an hour) might be more likely to take part in OPAL. However, the large proportion of students who showed an interest in OPAL noted they lived close to the university. These students reported spending large amounts of time on campus and as such had no access issues. The one student who reported living relatively far away also stated that he travelled to the campus on most days and tended to spend office hours on campus. It became clear that we had not targeted our intended demographic as effectively as intended and had perhaps overestimated its size.

PASS participants spoke of PASS as an effective way to use otherwise unscheduled time spent on campus to study with other students. In the words of one PASS participant, "I have my session on Mondays at one o'clock, so if I didn't have PASS, I'd end up with a four hour gap. And that's a bit sort of monotonous and just sort of too much time." Another noted, "[In PASS], I go and I can do an entire hour of work on Engineering that is actually, you know, directly what we've just done in lectures, which is exactly what I should be doing if I was studying on my own, but I wouldn't do."

Other factors

Several other factors may also reasonably be thought to have impacted on uptake.

1. Increasing workload of the subjects

The workload of both subjects increases significantly after the first few weeks. As such, students signed up while their workload was light but may have changed their priorities as assignment commitments increased.

2. Program awareness

Students could better envisage how a PASS session would function—they have experience working in person with other students. OPAL presented itself as a largely unknown experience. This uncertainty may have discouraged students from following up on their registrations.

3. PASS vs. OPAL

The bulk of the information gathered from our focus groups suggests that PASS is more appealing than OPAL as it was reported to be faster, more social and more enjoyable. One student summed up this sentiment with the statement, "PASS is definitely better than OPAL, but there's nothing wrong with OPAL". This suggests that running PASS and OPAL concurrently in a subject will typically result in OPAL losing participants to PASS.

4. Interests in technology and technology-based learning

Behind the rhetoric of the 'digital native' (Prensky, 2001), Kennedy, Judd, Churchward, Gray and Krause (2008) note, are a number of assumptions, namely that incoming students are a homogenous group, that they have more advanced technological skills than their teachers and that their skills in technology will lead to effective technology-based learning. However Kennedy et al. (2008) note that marked variation exists in the technological skills of incoming students and in their interests in technology-based learning further stating that, "much of the quantitative research has indicated that the average student is not a sophisticated user of technology" (Kennedy et al. 2010 p.333). Further to this, Kennedy et al. (2008) found that two thirds of the students who were the subject of their major study had never used 'more novel' communication technologies such as Voice Over IP and web conferencing and that only 38.5 of their respondents expressed desire to use web conferencing to assist them with their university studies.

On an anecdotal level, before, during and after our trial, FBE and Engineering students had expressed interest in participating in related online activities at university. However, our conversations with FBE and Engineering students about their interests in online peer learning opportunities proved an inadequate means to predict student attendance in OPAL. In the absence of a thorough cohort-based needs analysis, we found we had been unduly guided by assumptions about what our students may value, and had put too much stock in supposed generational and cohort enthusiasm for online learning, including the interests of engineering students studying programming.

RECOMMENDATIONS

The recommendations presented below are confined to two critical areas for the development of online peer learning programs: needs analysis and further research. We have omitted presenting recommendations on elements that may also affect the success of online peer learning programs but for which we feel there is insufficient indication in our evaluation. These include: the times at which sessions may run, promotion of programs, leader training and support and the capacity for specific peer learning activities to work well in an online capacity.

It is also important to note that the recommendations are qualified. Disentangling the large number of variables that may affect the success or failure of equivalent programs is complex, and our program was but one foray into the realm of online peer learning. Nonetheless, we believe our experience and research do permit the presentation of several recommendations for cohorts and subjects similar to those for which OPAL was trialled.

Needs analysis

Various means exist to support prediction of student need and, ultimately take-up for such a program. One of these is consideration of demographic factors including family obligations, employment status and time on campus. Furthermore, surveys and focus groups could be used in which students might be asked to rank their likelihood of attending on a 5-point Likert scale. Students may also be asked questions which try to gauge their likelihood of following through on their intentions— perhaps with reference to their past experiences. Where options represent aspirational choices that require significant time and commitment, scepticism is advised. Important too is familiarity with literature that addresses student preferences for online learning,

online versions of PASS, and use of synchronous communication platforms in higher education.

On the basis of our research, we contend that institutions offering predominantly online, distance education are the best candidates for a program like OPAL. Although OPAL was seen as a desirable and viable support system by all OPAL participants and leaders we spoke with, care must be taken in deciding whether to deploy an equivalent program in a traditional campus-based institution.

Further research

Much further research is needed on the viability and value of different versions of online PASS and related peer learning programs. Further case studies themselves are likely to offer much for those in the field. In addition, we believe that much may be gained by studies that:

1. employ quantitative analysis to investigate areas including: impact of participation on marks, failure rates, retention and perceptions of skill and community development in comparison with face-to-face PASS programs;
2. analyse the effectiveness of different models of leader training and development;
3. compare the use of different synchronous platforms which may support online versions of PASS and related peer learning programs;
4. explore online platforms that students use to discuss their studies together that are independent of formalised peer learning programs;
5. conduct discourse analyses of spoken and written interactions in online PASS in comparison with face-to-face PASS interactions with reference to features such as turn-taking, role assignment, intonation and conversational repair;
6. investigate opportunities that may exist for 'legitimate peripheral participation' (Lave & Wenger 1991) in online versions of PASS in comparison with face-to-face versions;
7. explore issues associated with online identities of leaders and participants;
8. conduct comparative analyses of interactions in online and face-to-face PASS with reference to areas that include gender, age, language background, academic discipline, subject and academic year.

CONCLUSION

Do the challenges we experienced adapting a well-established peer learning program for the online realm suggest that related ventures will experience similar fates? We believe not. Platforms which are available for such programs will improve, and literature on related programs will grow, thereby strengthening the foundations upon which successful online peer learning programs can be built. However, notwithstanding the potential that may exist for successful online peer learning, we believe that our experiences with the Online Peer Assisted Learning scheme sound important cautionary notes. The many strengths of face-to-face peer learning programs such as PASS are based on a complex array of factors, including, but not limited to: needs analysis, marketing, leader selection, leader training, professional development, program oversight and appropriate spaces for interaction. Online peer assisted learning programs can draw upon the many skills supervisors of peer learning programs are likely to develop through their management of face-to-face programs. However, a significant number of additional complexities must be considered carefully if online peer learning programs are to succeed to the extent of those based on the campus.

AUTHORS

Tim J. Beaumont, Aaron P. Mannion and Brice O. Shen
University of Melbourne, Australia

REFERENCES

Arthur, L., Beecher, B., Elliott, R. and Newman, L., (2006), E-learning: Do our students want it and do we care? *Proceedings of the 23rd annual Ascilite conference: Who's learning? Whose technology?* Accessed 14 April 2011 from http://www.ascilite.org.au/conferences/sydney06/proceeding/pdf_papers/p192.pdf

Australasian Centre for PASS, (2010), *Peer Assisted Study Session (PASS) – Guidelines for best practice*. Accessed 7 August 2012 from http://www.utas.edu.au/__data/assets/pdf_file/0006/129318/PASS-Guidelines-for-Best-Practice-Australasian-National-Centre-added-12.26-250511.pdf

Best, G., Hajzler, D., Pancini, G., and Tout, D., (2011), Being 'dumped' from Facebook: Negotiating issues of boundaries and identity in an online social networking space, *Journal of Peer Learning,* 4(1), 24-36. Accessed 4 April 2012 from http://ro.uow.edu.au/ajpl/vol4/iss1/5

Bower, M., (2007), Groupwork activities in synchronous online classroom spaces. SIGCSE Bulletin, 39(1), 91-95. Accessed 14 April 2011 from http://dx.doi.org/10.1145/1227310.1227345

Bowles, T., McCoy, A. and Bates, S., (2008), The effect of supplemental instruction on timely graduation, *College Student Journal,* 42(3), 853-859.

Cappiccie, A. and Desrosiers, P., (2011), Lessons Learned From Using Adobe Connect in the Social Work Classroom, *Journal of Technology in Human Services*. 29(4), 296-302.

Davies, I., (2004), E-xperience in E-learning: The Impact of a Peer Assisted Online Mentoring Scheme on an E-Learning Programme: A Case Study of E-College Wales. Accessed 14 April 2011 from http://www.shef.ac.uk/nlc2004/Proceedings/Individual_Papers/Davies.htm

Devine, J. and Jolly, L., (2011), Questions arising from the use of peer assisted learning as a technique to increase diverse participation in engineering education, *Developing Engineers for Social Justice: Community Involvement, Ethics & Sustainability,* 5-7 Dec 2011, Fremantle, Australia. Accessed 18 April 2011 from http://eprints.usq.edu.au/20429/

Ellis, R.A., Ginns, P., and Piggott, L., (2009), E-learning in higher education: Some key aspects and their relationship to approaches to study, *Higher Education Research and Development*, 28(3), 303-318.

Gerbich, P., (2006), Undergraduate student perceptions about participating in online discussions: To post or not to post. *Proceedings of the 23rd annual ascilite conference: Who's learning? Whose technology?* Accessed 16 August, 2012 from http://www.ascilite.org.au/conferences/sydney06/proceeding/pdf_papers/p124.pdf

Goldrick, M. and O'Higgins, Norman., (2012), Reducing academic isolation in favour of learning relationships through a virtual classroom, *Journal of Learning Development in Higher Education*, No. 4, Accessed 16 June 2012 from http://www.aldinhe.ac.uk/ojs/index.php?journal=jldhe&page=article&op=view&path%5B%5D=123

Hensen, K. A. and Shelley, M. C., (2003), The impact of supplemental instruction: Results from a large, public, midwestern university*, Journal of College Student Development,* 44(2), 250-259.

Huijser, H. and Kimmins, L., (2006), Developing a peer-assisted learning community through MSN Messenger: A pilot program of PALS online, OLT 2006 Conference: Learning on the Move, Brisbane, Australia, Accessed 14 April 2011 from http://eprints.usq.edu.au/1149/1/Huijser_OLT2006_paper.pdf

Huijser, H.; Kimmins, L. and Evans, P., (2008), Peer Assisted Learning in Fleximode: Developing an Online Learning Community, *Journal of Peer Learning,* 1(1), 51-60. Accessed 14 April 2011 from http://ro.uow.edu.au/ajpl/vol1/iss1/7

Karabulut, A. and Correia, A., (2008), Skype, Elluminate, Adobe Connect, Ivisit: A comparison of Web-Based Video Conferencing Systems for Learning and Teaching, K. McFerrin et al. (Eds.), *Proceedings of Society for Information Technology and Teacher Education International Conference* 2008 Chesapeake. 481-484. Accessed 8 June 2011 from http://www.editlib.org/p/27212.

Kennedy, G., Judd, T., Dalgarno, B. and Waycott, J. (2010), Beyond natives and immigrants: Exploring types of net generation students. Accessed 12 March 2011 from http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2729.2010.00371.x/abstract;jsessionid=A3C5B60E4B8C3E6CB2C58EBD6B39A92C.d03t02

Kennedy G. E., Judd T., Churchward A., Gray K. and Krause K. L., (2008), First year students' experiences with technology: Are they really digital natives? *Australasian Journal of Educational Technology*. 24(1), 108-122.

Kirkwood, K., (2010), The SNAP Platform: social networking for academic purposes, *Campus-Wide Information Systems*, 27(3), 118-12. Accessed 14 April 2012 from http://vuir.vu.edu.au/15797/1/Kirkwood-2010-SNAP__CWIS_vuir.pdf

Lave, J. and Wenger, E. C. (1991), *Situated Learning: Legitimate Peripheral Participation*, Cambridge University Press, New York.

Martin, D. and Arendale, D. (1993), Supplemental Instruction: Improving First-Year Student Success in High-Risk Courses, *The Freshman Year Experience: Monograph Series* (2nd ed., Vol. 7). Columbia, SC: National Resource Center for the First Year Experience and Students in Transition, University of South Carolina.

McCarthy, A., Smuts, B., and Cosser, M. (1997), Assessing the effectiveness of supplemental instruction: A critique and a case study, *Studies in Higher Education*, 22(2), 221-231.

McLoughlin, C. and Lee, M., (2007), Social software and participatory learning: pedagogical choices with technology affordances in the Web 2.0 era, Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) Annual Conference. Accessed 1 July, 2012 from http://www.darcynorman.net/2010/03/18/social-software-and-participatory-learning-pedagogical-choices-with-technology-affordances-in-the-web-2-0-era/

Park, Y. J. and Bonk, C. J. (2007a), Is online life a Breeze? Promoting a synchronous peer critique in a bended graduate course, *Journal of Online Learning and Teaching*, 3(3). Accessed 18 April, 2011 from http://jolt.merlot.org/vol3no3/park.pdf.

Park, Y. J. and Bonk, C. J. (2007b), Synchronous learning experiences: Distance and residential learners' perspectives in a blended graduate course, *Journal of Interactive Online Learning*, 6(3), 245-264.

Paulo N. M., Teixeira, J. M., Camacho, F, M., de Freitas Gouveia, R.H., (2011), Blended Peer assisted learning platform: Improving Learning Outcomes with a collaborative environment, *Sampaio Journal of Educational Technology Systems*, 39(4), 371-395.

Power, C., (2010), Peer Assisted Study Sessions (PASS): through a complexity lens, *Journal of Peer Learning*, 3(1), 1-11. Accessed 1 July 2012 from http://ro.uow.edu.au/ajpl/vol3/iss1/2

Prensky, M., (2001), Digital Natives, Digital Immigrants Part 1, *On the Horizon*, 9(5), 1–6.

Shi, S, Mishra, P. and Bonk, P. (2007), Facilitating Educational Synchronous Online Discussions, *Technology and Teacher Education,* Accessed 14 April 2011 from http://www.itdl.org/Journal/Oct_07/article01.htm

van der Meer, J. and Scott, C., (2012), Students' Experiences and Perceptions of Peer Assisted Study Sessions: Towards Ongoing Improvement, *Journal of Peer Learning,* 2(1), 3-22. Accessed 1 July 2012 from http://ro.uow.edu.au/ajpl/vol2/iss1/2