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Peer Assisted Learning in Fleximode: Developing an Online Learning Community

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ABSTRACT

Evidence suggests that peer-assisted learning schemes on campus help students establish social networks which can have a positive influence on their learning achievements. At the University of Southern Queensland (USQ), the majority of students are off campus, which raises the urgent question: how to harness the advantages of Meet-Up (formerly PALS: Peer Assisted Learning Strategy) in an online environment? Given that the potential problem of social isolation is even more acute in distance education, how do we develop a peer assisted learning program online which creates a sense of community for its participants? Since 2006, MSN Messenger has been used on a relatively small scale to facilitate this at USQ, with largely positive initial results. Based on evaluations of this initiative, this paper explores the potential of Wimba software, within an institution-wide Moodle learning management system, to extend peer assisted learning programs in a Web 2.0 context.

INTRODUCTION

The first year experience has become increasingly important to universities as a result of two major challenges that are perceived to have transformed the tertiary education environment over the last decade: student diversity and new technologies (Taylor, 2002). These challenges, in combination with severe financial pressures on universities, have resulted in various strategies and initiatives to provide a high quality service to 'clients' on the one hand, and to combat attrition rates on the other (McInnis 2001). Structured peer assisted learning is one initiative that is increasingly used to address first year transition issues, variously called PASS (Peer-Assisted Support Scheme), SI (Supplemental Instruction) or in USQ's case Meet-Up (formerly PALS: Peer Assisted Learning Strategy). These schemes are constructed around three elements of student need: engaging learning experiences, practical and timely support services, and a sense of belonging. In this paper, we discuss all three elements, with a specific focus on the use of technology and how this may affect the social aspects of the learning experience and by extension influence academic results and retention.

With regards to student diversity, research suggests that students are becoming increasingly selective in their approach to study (Abbott-Chapman and Edwards 1998; Krause, Hartley, James, and McInnis 2005; Kennedy, Judd, Churchward, Gray, and Krause 2008). For many students, studying is but one of a variety of activities that in many cases include part time or full time work (Huijser 2008), which affects the amount of time they can spend on campus. In short, university is no longer a

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way of life for the duration of the degree, which in turn significantly limits students' academic and social contact with university lecturers and peers. Despite the wide availability of student support mechanisms, both on campus and online, many students do not access these services, as they are perceived as 'additional' (Huijser 2008). Thus, within a context where many students are faced with the need to work and are time poor, they often struggle to find a balance between work and study. Peer assisted learning, when structured and embedded into courses, can overcome some of these concerns.

BENEFITS OF PEER-ASSISTED LEARNING

Measuring the success of peer-assisted learning support in a systematic and scientific way is notoriously difficult, as many of the perceived benefits are in fact intangible, not least the long term benefits of a sense of belonging. For example, it is easy to measure academic results of students who participate in a peer-assisted learning scheme, but it is much harder to identify the extent to which those results can be attributed to their participation in such a scheme. Thus quantitative research is generally limited with some notable exceptions (e.g., Lewis et al., 2005). However, qualitative studies consistently conclude that peer teaching has significant benefits, particularly with regards to first year transition issues. According to Packham and Miller (2000, p.57), such schemes aim to assist:

- students who are having difficulties with certain aspects of course material;
- in the improvement of grades and social development; and
- in increasing the overall graduation grade and subsequent employability of students

Expanding on Vygotsky's (1978) concept of 'spaces of influence', Ladyshewsky and Gardner (2008, p.243) cite Green (2005) who outlines five meta-spaces within this concept, which are worth quoting at length:

- spaces of action – where learners take control of their learning;
- spaces of explicit discourse – where learners engage in discourse practices that make critical elements of a learning context clearer;
- spaces of learning – where learners engage with content knowledge relevant to their practice;
- spaces of practice development – where learners share examples of practice and discuss variations of processes; and
- spaces of trust – where learners express vulnerability and take risks in learning because of a community of trust.

Peer assisted learning cuts across all these spaces, but for our purposes, there are two spheres that are particularly significant: relevance (spaces of learning) and spaces of trust. Indeed, the latter is central to what makes peer assisted learning effective, and the less threatening a learning environment is, the more trust can be built. As Ladyshewsky and Gardner (2008, p. 243) argue, "communications between peers are less threatening than those that involve supervisors or authorities. Hence, enhanced disclosure, discussion and deeper learning outcomes are possible". Ideally, peer-assisted learning schemes can be one step in developing effective peer learning networks that students can draw on for the duration of their degrees, and potentially beyond. Echoing the five meta-spaces framework above, Beer and Jones (2008, p. 67) list some advantages, from a student

perspective, of being part of an effective learning network: additional assistance with challenges, *especially from peers*; more perspectives on problems; access to expertise; more meaningful participation; and a stronger sense of identity within their chosen discipline and university life in general. Participation becomes more meaningful (as does learning) as a result of a loosely structured context in which information and learning materials gain meaning through the co-construction of knowledge (Greenfield 2008).

Overall then, peer-assisted learning schemes create an informal environment where potential intimidatory factors, such as highly structured lectures and tutorials run by perceived 'authority figures', are minimised because peer leaders are students themselves. In addition, the emphasis is on student-centred learning where students not only set the agenda, but also decide whether they want to participate, and how often. Within this context, peer-assisted learning has the broad potential to firstly play a positive part in addressing the difficulties students face in adjusting to university in first year, and secondly to enhance what Watson (2000, p.2) calls the "college socialisation process, with peers providing role models and instilling enthusiasm for learning". Students who study in a 'social vacuum' are less likely to have a positive view of university or to be successful learners (McInnes and James 1994; Tan and McWilliam 2008). Watson (2000, p.3) further notes that peer-assisted learning can be particularly beneficial where first-year students come from diverse cultural and educational backgrounds: "a peer assisted learning scheme can be valuable in supporting a multicultural student group while outwardly providing academic assistance". A 2005 DEST report (Krause, Hartley, James and McInnis, 2005) about the findings of a longitudinal study into the first year experience in Australia draws attention to this aspect. Although it finds that first-year students overall are more satisfied with the quality of teaching, there remains a substantial number who do not perceive staff to be accessible. Secondly, international students are significantly less satisfied than their domestic peers (Krause et al., 2005), and it is precisely in these areas that peer-assisted learning schemes can be valuable.

At the same time however, it is important to be cautious about the benefits, as these are in most studies *potential* benefits, and they are not always supported by hard data. Packham and Miller (2000, p.57) identify, for example, that demand for a peer learning scheme in their Welsh context is firstly assignment driven and secondly female dominated. Similarly, Lewis et al. (2005, p.1) note that "better or more able students may be more likely to attend PASS" (as it is most often called in the Australian context). This may indicate that the schemes do not necessarily benefit those who could potentially benefit most from them. However, for our purposes, we start from the assumption that peer-assisted learning schemes have major benefits, particularly social benefits, which may have a trickle down effect on academic results, which is supported by University of Wollongong research (Lewis et al, 2005). These social benefits are traditionally nurtured in a non-threatening context of face-to-face peer interaction. The next question then becomes: in a context where students spend less time on campus (which particularly applies to USQ), how can technology assist us in harnessing the potential benefits of peer-assisted learning schemes?

THE POTENTIAL OF NEW TECHNOLOGIES

Laurillard (2002) has rightly argued that the promise of e-learning will only be realised if we begin with an understanding of how students learn and design the use of learning technologies from this standpoint. This is an important recognition after the initial rush to get online, and the current hype surrounding web 2.0 technologies (Huijser 2008), and it allows for a pedagogically informed introduction of new technologies, rather than a technology for technology's sake approach. Kirkwood and Price (2005, p.257) reinforce this by arguing that "it is not technologies, but educational purposes and pedagogy, that must provide the lead, with students understanding not only *how* to work with ICTs, but why it is of benefit for them to do so".

This also means that in some contexts, face-to-face contact may be the best option if that proves to be the most beneficial from the learner's point of view, even if it is not the most attractive option for universities already squeezed by tight budgets. Mayes and De Freitas (2005, p.34) acknowledge this in their review of e-learning theories, frameworks and models when they identify what they call the real challenge for e-learning: "to offer a reasonable level of individual dialogue in a situation where there are too few tutors and too many learners. Can technology help to provide teaching and learning activities from which intended learning outcomes can be achieved without an unattainable level of support from human tutors?" At this stage the answer to this question appears to be yes, with the important proviso that it applies to the acquisition of knowledge and skills. Twigg (2000, p.43) notes for example that "any portion of a course that concentrates on skill acquisition can benefit from an IT format", and if we were to ignore the problematic generalisation here, this could potentially apply to peer-assisted learning schemes, as they are designed in part to teach students academic skills. But where does that leave the social benefits of a sense of belonging to a university community, which are mostly acquired through face-to-face contact? Is it possible to create a virtual sense of belonging? And is this equally effective? Some early examples of online peer-assisted learning schemes may provide some clues in this respect, and the insights gained can then be applied to the use of Wimba. From early 2008, USQ has adopted an enterprise wide approach to online collaboration tools through the adoption of the Wimba Collaboration suite, which includes three main applications: Wimba Classroom, Voice Tools, and Wimba Pronto Instant messenger. We will return to its application in a later section of this paper.

PEER-ASSISTED LEARNING ONLINE: THE CURRENT CONTEXT

Fully fledged peer-assisted learning schemes that are delivered online are currently largely unavailable (Huijser and Kimmins 2006). A notable exception to this is E-College Wales (University of Glamorgan) where in 2003 a peer-assisted online mentoring scheme called PAL-Online was introduced (Davies, 2004). Based on his evaluation of PAL-Online, Davies (2004) identifies the benefits as follows:

- provides feedback and a feeling of support;
- overcomes isolation;
- less intimidating (and therefore more inclined to ask 'stupid' questions);
- aids motivation by reassuring students; and
- flexible nature of response time.

Except perhaps for the last one, these benefits can be equally applied to offline peer-assisted learning schemes. In addition, limitations were identified in Davies' evaluation as: impersonal, limits to mentors' knowledge, difficulties in explaining problems, and lack of face-to-face contact. Particularly the last two factors are important for our purposes here, because they go straight to the core of the problem: is it possible in an online environment to go beyond content and skills support, and to create a virtual sense of belonging? This is highly relevant from a USQ point of view.

USQ is a large regional university which offers courses across five faculties in on-campus, distance education and online modes. It currently enrols approximately 20,000 students, 75% of whom study off campus from every state in Australia and internationally (Sankey, 2006). Many of the off-campus students live outside of the metropolitan centres as well and because of the distance, it is impossible for many students to have face-to-face contact. Given the benefits of various peer-assisted learning schemes as outlined above, it is urgent to find the best possible ways of introducing such a scheme online. At the same time however, it is important that an appropriate and equitable medium is used as not all distance students have access to the latest technology, and even if they do, their ability to participate in online forums is sometimes hampered by poor services in remote areas. Wimba promises to overcome some of these constraints, as we will discuss shortly.

Initially, we began a small pilot program of PALS Online in 2006, using MSN Messenger, firstly because it was already widely used by many students, and secondly because it is relatively easy to use for the uninitiated. Furthermore, MSN Messenger can be accessed from home with relatively slow connections, which makes it reasonably flexible. This was an important consideration, as many external students also have busy working lives and can often only access support from home after hours. From our point of view the primary focus was on building collaborations amongst learners who are geographically dispersed, so access to the pilot program was initially limited to external students. An evaluation of the pilot program has shown a number of benefits and areas for improvement (Huijser and Kimmins 2006).

The student responses were generally positive, particularly with regards to our main objective of fostering collaborations among learners. The positive feedback can be categorised into three main but interrelated strands: overcoming isolation, developing a deeper understanding of course content, and collaboration with other students, all of which fit neatly into the five meta spaces discussed above. Synchronous chat is particularly suited to confidence building, where it is often small 'stupid' questions and instant answers that provide students with the confidence to move forward. Similarly, group interaction provides a sense of community, and finding others who have similar questions can be a confidence booster, as well as provide fresh ways of looking at a particular issue or problem.

Despite the generally positive response, there were also useful critical notes that must be taken into account for future applications using Wimba. The critical feedback followed two major strands: the nature of MSN Messenger as a format, and the role of peer leaders. In terms of the former, some questions were raised about whether the sessions offered any added value. Some of the peer leaders felt inadequately prepared to moderate group discussions in a synchronous online

context, which tested our flawed assumption that the offline moderator skills of the peer leaders would be transferable to an online format in an unproblematic fashion. Dorman and McDonald stress that "when choosing online discussion forums as a learning strategy, it is important that course leaders and tutors are skilled moderators of online interaction in order to achieve the planned outcomes" (2005, p.112). While their emphasis is on asynchronous discussion forums, this could equally be applied to synchronous formats. Adequate training, specifically geared towards moderating online discussions will thus be incorporated into the program in the future. Finally, it was noted that rapport between students and peer leaders suffers in an online format, as there is "no opportunity for face to face interaction". Wimba offers exciting potential to overcome some of these initial drawbacks, especially with regard to the last point.

WIMBA AS A VEHICLE FOR PEER ASSISTED LEARNING IN A WEB 2.0 ENVIRONMENT

As noted above, USQ has adopted an institution-wide solution to online collaboration tools from the Wimba Collaboration suite in since early 2008 (Wimba Collaboration Suite, 2008), after also having done a trial of the Elluminate classroom. The Wimba Collaboration Suite consists of the Wimba Classroom, Voice Tools and Wimba Pronto Instant Messenger. While this includes a chat function similar to MSN Messenger, it also offers tools that are potentially highly suited to a peer-assisted learning context. Such a context should provide a framework or scaffold for supporting interactions between students. Wimba Classroom firstly allows for the establishment of 'breakout rooms' and flexibly moving people between these rooms. It also provides tools for managing larger sessions including hand raising, private messaging, and a shared whiteboard.

One of the most promising tools within Wimba Classroom is the document sharing function, which allows multiple people to work simultaneously on the same document (including Word documents or PowerPoints), while everyone 'in the room' can see in real time what changes are being made. The moderator can control who has modifying access to the document that is being worked on, so the moderator can decide to have sole access, give access to a limited number of students, give everyone access at the same time, or switch between these options at any given time. In addition to writing or talking about academic work it is particularly important in a peer-assisted learning context that students can view a shared screen while (co-)editing a document or navigating a web site or online database. An example of this would be people reviewing a document by looking at the screen while one person edited the document based on the group discussion. Wimba Classroom allows people to share their screen or part of their screen allowing others in the group to see their screen or part of their screen. In addition a person can give control to another person who is then able to type into a document, control the cursor or open menus and select options. The voice tool then allows for an aural explanation of what is happening at the same time. In a further approximation of a face-to-face classroom, Wimba Classroom allows for web searches that are visible to everyone in the room and the use of video or audio files within the virtual classroom. Although students without an internet connection or computer do not have visual access to the classroom, they can potentially still be part of its discussions, as Wimba Classroom allows for dial in access through a normal telephone connection.

Rather than restricting students to pre-booked peer-assisted learning sessions, Wimba Pronto provides students with tools to collaborate when they want to rather than only at a predetermined time. It allows students to see when their peers are online and available for peer discussion. Status indicators, queued text messaging, or instant text messaging allow students to start one-to-one or group interactions at times convenient to them. This creates the potential of extending the allocated structured times of peer-assisted learning sessions, and can stimulate students to access their community of peers in a more flexible manner. As noted before, this is particularly promising and important for geographically dispersed distance students.

Social capital and trust are fundamental to successful online communities, and especially peer-managed communities. Building trust and confidence can best be achieved through the use of both 'hard security', in the form of passwords and access controls, as well as 'soft security', in the form of online profiles and the establishment of group norms. In the online world this trust is based on building an online persona in which people can be confident of your identity and your place within the community. This is greatly aided if the online tool uses single sign on from the universities Learning Management System for which students have created an online profile. Access to both Wimba Classroom and Wimba Pronto is provided through the Moodle Course Management System allowing students to view the authenticated names of people they are interacting with and their profile, thus mirroring other Web 2.0 applications such as social networking sites, but at the same time providing a much safer environment.

Wimba Classroom provides multi-way audio and video tools that automatically switch to the active speaker, as well as emoticons. This approximates a face-to-face context to some extent, in that it potentially incorporates voice nuances, facial expressions and body language, all of which are important in building social networks of trust, but are lacking in chat contexts where the written word rules. Those students with access to a web cam can choose to be seen by others in the room whenever they take their speaking turn.

Finally, any environment that aims to increase participation and social networking needs to be easily accessible in the broadest sense. This includes reducing barriers faced by people with different physical abilities as well technical barriers related to access to computers and broadband connections. Wimba Classroom and Wimba Pronto have clearly defined accessibility features such as keyboard equivalents for control and navigation, voice activated video switching, supporting accessibility devices such as screen magnification or screen readers. Wimba Classroom also allows people who do not have an internet connection or a computer that supports audio, to participate via a phone connection, as mentioned above.

Overall then, the Wimba Collaboration suite appears to be well aligned with the pedagogical values and strategies that underlie peer-assisted learning strategies and environments, which is symbolically captured by Wimba's motto: 'people teach people'.

CONCLUSION

In a general sense, peer interaction is pivotal to student success and retention, and both the benefits of peer interaction and the feasibility of supporting such interaction have not diminished in the digital age, but have more likely increased. In response to increasing student diversity and large off campus student cohorts, the Meet-Up program at USQ aims to capitalise on new tools that allow for flexible ways to build peer-assisted learning communities. Because of this, it has as much relevance now and in the future as it did in the past. Stokes, Garrett-Harris and Hunt (2003, p.2) argue that "e-mentoring merges the approach of the traditional mentoring relationship with technology". And so the challenge from our point of view becomes one of making this merger as tight as possible, while not discounting any application of the available technology if it can provide us with the benefits we are seeking, particularly the important benefit of a sense of belonging. With Stokes et al. (2003, p.4) we can even ask an additional question: "can e-mentoring offer additional benefits which go beyond those offered by traditional mentoring?" As technology develops at an ever-increasing pace, new opportunities will keep presenting themselves to develop approaches to peer-assisted learning schemes that take this sense of belonging seriously, whether through virtual classrooms such as Wimba, or perhaps through wireless mobile technology in the near future. To reiterate, in conclusion, if we can harness these technologies, and apply them from a sound pedagogical basis, peer-assisted learning online has the potential to significantly enhance the learning experience for an increasingly diverse student population.

REFERENCES

Abbott-Chapman, J. and Edwards, J. (1998). *Student Support -Everyone's Business*. Paper presented at the 3rd National Equity and Access Conference, September, Yeppoon, Australia.

Beer, C. and Jones, D. (2008). Learning Networks: Harnessing the Power of Online Communities for Discipline and Lifelong Learning. In D. Orr, P. A. Danaher, G. Danaher, and Harreveld, R. E. (Eds.). *Lifelong Learning: Reflecting on Successes and Framing Futures, Keynote and Refereed Papers from the 5th International Lifelong Learning Conference* (pp. 66-71). Yeppoon: Central Queensland University.

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*. Retrieved 15 July, 2005, from http://www.shef.ac.uk/nlc2004/Proceedings/Individual_Papers/Davies.htm

Dorman, M. and McDonald, J. (2005). Engagement by Design: Marrying Pedagogy and Technology for Better Learning Conversations via Asynchronous Electronic Discussions. In J.B. Son and S. O'Neill (Eds.), *Enhancing Learning and Teaching: Pedagogy, Technology and Language* (pp.101-118). Flaxton: Post Pressed.

Greenfield, S. (2008). *Creating Creative Brains*. Paper presented at the *Creating Value: Between Commerce and Commons Conference*, June, Brisbane, Australia.

Huijser, H. and Kimmins, L. (2006). Developing a peer-assisted learning community through MSN Messenger: A pilot program of PALS online. In: *OLT 2006*

Conference: Learning on the Move, Brisbane, Australia. Retrieved 27 June, 2008, from http://eprints.usq.edu.au/1149/1/Huijser_OLT2006_paper.pdf

Huijser, H. (2008). Designing Learning Objects for Generic Web Sites. In L. Lockyer, S. Bennett and Harper, B. (Eds.), *Handbook of Research on Learning Design and Learning Objects: Issues, Applications and Technologies* (pp. 813-832). Hershey, PA: IGI Global.

Huijser, H. (2008). Exploring the Educational Potential of Social Networking Sites: The Fine Line between Exploiting Opportunities and Unwelcome Imposition. *Studies in Learning, Evaluation, Innovation and Development*, *5* (3).

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

Kirkwood, A. and Price, L. (2005). Learners and Learning in the Twenty-First Century: What Do We Know About Students' Attitudes Towards and Experiences of Information and Communication Technologies That Will Help Us Design Courses? *Studies in Higher Education*, *30* (3), 257-274.

Krause, K., Hartley, R., James, R. and McInnis, C. (2005). *The First Year Experience in Australian Universities: Findings from a Decade of National Studies*. Melbourne: University of Melbourne, Centre for the Study of Higher Education.

Ladyshewsky, R. K. and Gardner, P. (2008). Peer Assisted Learning and Blogging: A Strategy to Promote Reflective Practice during Clinical Fieldwork. *Australasian Journal of Educational Technology*, *24* (3), 241-257.

Laurillard, D. (2002). *Rethinking University Teaching: A Conversational Framework for the Effective Use of Learning Technologies* (2nd Ed). London and New York: Routledge.

Lewis, D., O'Brien, M., Rogan, S. and Shorten, B. (2005). Do Students Benefit From Supplemental Education? Evidence From a First-Year Statistics Subject in Economics and Business. *Economics Working Paper Series*, WP 05-21, University of Wollongong. Retrieved 5 July, 2006, from http://www.uow.edu.au/commerce/econ/wpapers.html

Mayes, T. and De Freitas, S. (2005). *Stage 2: Review of E-Learning Theories, Frameworks and Models*. Retrieved 15 June, 2005, from http://www.jisc.ac.uk/uploaded_documents/Stage%202%20Learning%20Models%20(Version%201).pdf.

McInnes, C. and James, R. (1994). *Gap or Gulf?: Student Perspectives on the Transition to University in Australia*. Paper presented at the Inaugural Pacific Rim – First Year Experience Conference, July, Brisbane, Australia.

McInnis, C. (2001). Researching the First Year Experience: Where to from Here? *Higher Education Research and Development*, *20* (2), 105-113.

Packham, G. and Miller, C. (2000). Peer-Assisted Student Support: A New Approach to Learning. *Journal of Further and Higher Education*, *24* (1), 55-65.

Sankey, M.D. (2006). A Neomillennial Learning Approach: Helping Non-traditional Learners Studying at a Distance. *International Journal of Education and Development using ICT*, *2* (4), 82-99.

Stokes, P. Garrett-Harris, R. and Hunt, K. (2003). *An Evaluation of Electronic Mentoring (E-Mentoring)*. Retrieved 15 June, 2005, from http://www.circle-quared.com/download/EMCC%20Mentoring%20V5%20No%20Logos.doc

Tan, J. and McWilliam, E. (2008) *Cognitive Playfulness, Creative Capacity and Generation 'C' Learners*. Paper presented at the Creating Value: Between Commerce and Commons Conference, June, Brisbane, Australia.

Taylor, J.A. (2002). The Evolution of Online Learning in Bridging Mathematics at a Distance: The Tension Between Learning Needs, Technological Innovation and Access Restrictions in an Australian Regional University. In M. Statham (Ed.), *'Crossing the Bridge', Proceedings of the 10th Australasian Bridging Mathematics Network* (pp.67-74). Auckland: Unitec.

Twigg, C.A. (2000). Course Readiness Criteria: Identifying Targets of Opportunity for Large-Scale Redesign. *Educause Review*, May/June, 41-49.

Watson, J. (2000). A Peer Assistance Support Scheme (PASS) For First Year Core Subjects. In *Proceedings of the 4th Pacific Rim First Year in Higher Education Conference: Creating Futures for a New Millenium.* Brisbane: QUT. Retrieved 25 July, 2008, from http://www.fyhe.qut.edu.au/past_papers/papers/WatsonPaper.doc

Wimba People Teach People (2008). Wimba People Teach People. Retrieved on July 1, 2008, from http://www.wimba.com/