Engaging pre-tertiary students with low English literacy using online technologies

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Abstract

UTAS has for a number of years offered people without adequate tertiary entry requirements a preparatory program (called UPP, or University Preparation Program) that facilitates entry into a number of undergraduate courses. A large proportion of students participating in UPP come from a family background where study at university is not the norm. On the north-west coast of Tasmania, where UPP was first offered in 1996, the proportion of people with tertiary qualifications is about half the national average and this is reflected in low year 12 retention levels. More recently, in the south of the State, a number of students entering UPP come from refugee backgrounds where English is spoken as another language (typically third or fourth). Both cohorts of students when confronted with distance learning face many challenges as they struggle to come to terms with academic culture. Once they are engaged in their learning, they tend to continue on and complete. If they fail to engage early on in their UPP studies, they tend to drop out fairly quickly. While there have been many success stories from UPP, the critics point to high attrition rates—typically in the order of 50 per cent.

Many students are attracted by the flexibility—among a number of reasons—inherent in online course delivery. For this group of students though, engagement processes must be intentional, supportive and understanding of their individual (sometimes traumatic) backgrounds. For engagement to occur, teaching and learning resources and practices must be of a high standard. The authors of this paper pose the question: ‘Is an improvement in online teaching and learning resources and strategies linked to increased engagement, and does this then lead to improved retention?’ The paper reports on findings of a trial conducted in 2009, designed to test a number of online teaching and learning approaches as a response to these questions.

The results of the trial suggest that carefully chosen resources will work to engage low English literacy students. However, the resources must be backed up with flexible, responsive and understandable support as well as teaching and learning strategies designed to connect students with each other and with tutors so that the learning is both interactive and human. The findings suggest that there is a need for a more intentional online teaching and learning strategy and the need for built in evaluation to gather evidence about what works best. The project team in UPP have developed an implementation plan to further extend the trial to other units within UPP. An evaluation framework has also been developed. The intent of the team is to increase the quality of the online learning experience for all students but, significantly for the group of students who struggle the most, deliver teaching and learning in an environment that encourages success.

The paper describes the trial and its findings and goes on to discuss the learnings that have emerged. It considers implications for UPP and UTAS more generally, as it attempts to attract, engage and more importantly retain students from culturally diverse and low English literacy backgrounds.
Introduction

The University of Tasmania (UTAS) University Preparation Program (UPP) acts as a bridging program for students who either do not meet the requirements for entry into undergraduate programs at the university or who are exploring options for university study and are trying to find out whether they are capable of doing this. A large number of the students come from non-English speaking backgrounds (NESB), many as migrants or refugees from non-English speaking countries. Others’ experiences of learning at secondary school were not enjoyable. Many struggle with English language, literacy and numeracy. Many are mature age learners who have not engaged in formal education for an extended period of time. Students are sometimes offered UPP as an option after not being accepted into undergraduate programs. While many students do go on to succeed with undergraduate (and in some cases post-graduate) studies, attrition rates are typically in the order of 50 per cent. Those who drop out early often fail to engage with the learning resources or with lecturers. While all units are offered in attending mode (usually at the Cradle Coast or Hobart campuses of the University) a majority of students enrol in non-attending or distance mode. It is this cohort which is of most concern to UPP lecturers.

The authors of this paper pose the question: ‘Is an improvement in online teaching and learning resources and strategies linked to increased engagement, and does this then lead to improved retention?’ Responses to this question are based on a trial conducted during Semester 2 of 2009 to determine how lecturers can better engage learners in an online learning environment and to find out which among a range of resources available to University of Tasmania (UTAS) teaching staff could prove useful in engaging students in the cohorts described above. The trial was conducted in a range of units including: a) a general introduction to tertiary studies called Study Skills; b) an introduction to communication, critical thinking and group work skills called Communication Skills; c) a pre-tertiary numeracy program called Bridging Maths; and d) an academic writing unit called Written Communication Skills.

Literature

Rationale for e-learning

One of the key reasons that students choose to use e-learning as a means of formal study is because of the flexibility it offers: students can use online resources when they want, where they want and at times that they choose (Brennan 2003; Choy et al. 2003; Misko et al. 2005). Learners who enjoy the flexibility of the online learning environment may also have a predisposition to being self-directed and self-managed. Learners must be ‘comfortable with e-learning’ in the sense that they must be ready to access materials on the Internet and be prepared to collaborate online (Smith et al. 2003). However, flexibility does not equate to quality. Of critical importance to the learning process is active engagement of learners. Ivanovich et al. (2009:199), citing a number of researchers, assert: ‘learning is more effective and retention is higher if learners (students) are actively engaged in the process rather than being passive listeners’. Based on a sample of more than 300 Australian university students, Smith (2005) suggests that:

‘willingness to engage with others through electronic communication and a preference towards self-managed learning represent at least two important learner dispositional characteristics that may predict success’ with collaborative online learning’. (p. 5)

If it is true that students who engage with each other and with their lecturers in an online learning environment are more likely to achieve successful outcomes then an important factor contributing to successful outcomes for students will be the ability of the learning environment to facilitate engagement. If there is nothing for students to engage with, then they will surely not engage. The embedded assumption in this of course is that it is the lecturer’s responsibility ‘to organize online interactions that are sufficiently structured to benefit students’ learning’ (Tallent-Runnels et al. 2006:101).
Use of e-learning in universities

Universities are increasingly reliant on online delivery methods among a mix of teaching and learning strategies—sometimes referred to as ‘multi-modal’ (see Table 1). Higher education data produced by the Department of Education, Employment and Workplace Relations (DEEWR) support a view that increases in multiple modes are increasing ‘largely as a result of the adoption of on-line teaching methods’ (Smith et al. 2006:79).

Table 1. Modes of delivery for students in Australian Universities 2004-2008

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>754,828</td>
<td>761,969</td>
<td>786,697</td>
<td>828,183</td>
<td>857,510</td>
<td>13.6%</td>
</tr>
<tr>
<td>External</td>
<td>137,465</td>
<td>133,697</td>
<td>132,413</td>
<td>130,277</td>
<td>132,300</td>
<td>-3.8%</td>
</tr>
<tr>
<td>Multi-modal</td>
<td>52,684</td>
<td>61,510</td>
<td>64,951</td>
<td>71,386</td>
<td>76,285</td>
<td>44.8%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>944,977</td>
<td>957,176</td>
<td>984,061</td>
<td>1,029,846</td>
<td>1,066,095</td>
<td>12.8%</td>
</tr>
</tbody>
</table>

Source: Department of Education Science and Training 2006; Department Education Employment and Workplace Relations 2008; Department of Education Employment and Workplace Relations 2009 (selected higher education statistics)

While the data presented here points to an increasing uptake of online learning by students and universities, questions still remain about whether these technologies are producing better outcomes for students (Hosie et al. 2005).

Quality, content and learning communities

Herrington et al. (2001) explain that resources should be organised in ways that make them accessible; their age should be appropriate for the subject matter; they should represent a rich variety of perspectives; they should be suitable for the intended purpose; and they should demonstrate social, cultural and gender inclusivity. Using this framework Hosie et al. (2005) suggest that ‘inclusion of quality online resources ensures that material content is current and accessible to a wide range of online learners’ (p. 545). Routine external evaluation should guide the ongoing development of quality online teaching and learning practice, including the ability of the learning management system to be able to satisfy the learning needs of students and the teaching needs of lecturers. According to Palloff and Pratt (2009), a focus of such evaluation should be formative as well as summative so that ‘instructors can receive ongoing answers... as the course is in session and can adjust as necessary to ensure outcome achievement, rather than finding out at the end that activities were not as successful as hoped’ (p. 50).

In his discussion of the theory of online learning Anderson (2008) points to a number of factors that could be seen as quality attributes of an online learning environment. These include a range of attributes related to content, such as assessments, but also a mix of flexible learning spaces that offer the possibility of engagement through a ‘learning community’. He states:

The challenge of online learning is to provide very high quantity and quality of assessment, while maintaining student interest and commitment—something that is often best done by developing a learning community... (p. 51)

He acknowledges however, that the idea of learning community—whether built around synchronous or asynchronous technology—impinges on students primary motivation for distance learning, that of flexibility. Other studies suggest similarly that for some students the interaction offered by a virtual learning community does not parallel or satisfy the need for face to face contact between lecturers and students (LaPointe and Reisetter 2008).
Support

Support, in the context of student learners is sometimes interpreted as lecturer support rather than support from a centralised help desk. That is, students are looking for responsive feedback and help from their lecturers. Kilpatrick and Bound (2003:191) comment that ‘Support of student learning involves far more than supporting students through difficulties in overcoming hardware or the operation of software’. The online learning environment creates an expectation of immediate response akin to the idea of ‘24/7’ online support that might be available at some commercial sites. Cashion and Palmieri (2003:75) comment on this issue: ‘[Students] are disappointed if they do not receive responses when they need help, and they have no concept of waiting their turn as they would in class’. In another study, Choy et al. (2003:114) found that ‘[t]eachers were expected to provide advice, directions and feedback on a regular basis’. This does not suggest that there is not a need for ‘IT help desk’ support, but after ironing out basic problems, students have an expectation that their lecturer will be there to support them.

UPP context

Analysis of data from UPP courses from Semester 1 and 2 show withdrawal and failure rates of as much as 54 per cent (see Table 2). The table understates the extent of withdrawals and failures as a number of students will withdraw post census date.

Table 2. UPP student fails and withdrawals 2009, selected units.

<table>
<thead>
<tr>
<th>Students 2009 to August 13</th>
<th>Study Skills</th>
<th>Communication Skills</th>
<th>Bridging Maths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolled</td>
<td>113</td>
<td>62</td>
<td>151</td>
</tr>
<tr>
<td>Withdrawn/failed</td>
<td>61</td>
<td>18</td>
<td>72</td>
</tr>
<tr>
<td>Per cent withdrawn/failed</td>
<td>54.0%</td>
<td>29.0%</td>
<td>47.7%</td>
</tr>
</tbody>
</table>

Findings

Findings from resource trials

A number of online learning resources were trialled during semester 2 of 2009—some in the context of the learning environment. Other tools were tested by staff separate from the online learning environment. This section briefly describes the resources that were trialled. Reference is made to ‘MyLO’, the University’s electronic Learning Management System, which is built on a Blackboard web interface.

Online journals

As a way of encouraging engagement in critical reflection using an online medium, students in Study Skills were tasked to make regular entries into the MyLO based journal as part of their assessable work.

Online calendars

One of the important aspects of the UPP program is the development of personal organisation and time management skills. In the past students in Study Skills have been tasked to prepare hand-written diaries for assessment. During 2009, use of the MyLO calendar feature was trialled as an alternative to hand-written diaries. The reasoning behind this was that by students needing to use the calendar within the online learning environment they should then be able to engage with other elements of MyLO (such as discussions and other electronic resources).

Video and audio resources

Students in Study Skills and Communication Skills were provided with one to two minute weekly downloadable topic video introductions by their lecturer. The purpose of these introductions
was to put a human face to the otherwise impersonal set of resources and to encourage contact with the lecturer.

Students in Bridging Maths were offered audio recordings of lectures to supplement web based and text-based resources. The purpose of these resources was to offer students who prefer auditory learning styles a supplement to resources otherwise available.

_Elluminate Live!

Lecturers involved in the online project held regular meetings using Elluminate Live! to test features and to ascertain whether the web-based collaboration tool was sufficiently accessible for students and lecturers. The Elluminate trials were conducted on campus and home-based computers. Some of the features proved difficult to use on campus-based computers owing to University restrictions.

_Pebblepad/e-portfolios

The use of e-portfolios as a way of gathering and storing evidence of work is encouraged in Study Skills. Documents prepared for an e-portfolio are far more flexible than hard-copy documents and can incorporate a range of multimedia resources. For students with English literacy difficulties, electronic portfolios offered a way of presenting their knowledge without the need for high levels of written language skills.

_Findings from teaching and learning trials

Within the teaching and learning environment, attempts were made to test out different approaches to improving engagement between students and staff in the online learning environment. These are outlined below.

_Group work assessment tasks

An important part of any learning environment is the interaction that occurs between students. While this interaction has typically been a part of attending mode classroom settings, in UPP at least, it has not been a feature of the e-learning environment. A new feature of Communication Skills was the introduction of group tasks and assessments including a debate and a tutorial presentation. While there was some trial and error in implementing these, it proved valuable from an engagement point of view. Students reported that the online interaction was useful and that it gave them reason to connect with other students.

_Interactive real time text based tutorials

An emphasis on group work and negotiated learning requires a reasonably responsive and flexible online tutorial arrangement. What we found was that participation in online tutorials is fairly limited if it is not assessed. In Semester 1, 2010 we again trialled the use of the MyLO web chat facility. Some students found this difficult to access because of missing plugins and others found it difficult to follow the thread of a conversation when many people were actively contributing to the discussion—which poses a particular problem for those who have limited English literacy. However, we believe that, as a tool for engaging students in the online environment, the tool did work well.

_Discussion groups

Discussion boards have for some time been used as a means of engaging students in an online environment. UPP students do not tend to engage in online discussions (especially attending mode students), if they are not required to. Discussion boards have also tended to be based around individual work tasks. One of the trials in Communication Skills centred on group tasks (a debate), where distance students were allocated a group and then were asked to negotiate within that group using the discussion board about who was going to engage in the for or against team. They were
then able to present their debate using a sequenced set of postings (for-against-for-against etc.). A similar strategy was used for the equivalent of a group presentation as an alternative to a class-based tutorial presentation.

Electronic presentations

Class-based presentations are a feature of many UPP units. Offering ways for distance students to present electronically has been difficult, which is in part why Elluminate was trialled. However, modelled on the examples of introductory videos offered by lecturers, distance students are now asking about different ways in which they can present electronically. One student from New South Wales presented a DVD video presentation in Study Skills, which was shown to an attending mode class group and critiqued in much the same way as an in-class presentation. Other electronic media are being promoted (such as real-time Skype-based video conferences and YouTube presentations).

Online availability of staff for student consultations

Staff have in the past typically been allocated time for student consultation during office hours. As noted in the literature, flexibility is a key reason for students to learn by distance. They certainly do not have the time to attend campus-based consultations and sometimes are not able to call a lecturer during office hours. For this reason, students in Communication Skills and Study Skills were offered individual consultations by appointment outside office hours, either by phone or some other electronic medium such as Skype/MSN messenger or other internet-based tool. Students were also encouraged to ask for call-backs from their lecturers using text messaging. Several students took up these offers for flexible consultations.

Learnings

Overcoming technology barriers prior to engagement

What we find with UPP students is that a high proportion will have limited technology abilities. Further, their access to technology in terms of computer hardware, software and internet is a major constraint to their ability to engage in an online learning environment. Therefore it is imperative that technology barriers are overcome early in their learning experience. Some of these barriers are systemic and relate to the online learning environment. Other barriers relate to teaching and learning practice. For example, what appears to be a common sense instruction and taken for granted by the technology savvy student may be totally foreign to a student with low levels of English literacy or for that matter low levels of information technology literacy. Whatever the cause, if these barriers remain, they will confound students in their attempt to engage. We recognise that pursing rich media content in teaching and learning practice can alienate some students—potentially causing them to disengage.

Engagement: lecturers and students

On entry into the program, UPP students are often unsure of their abilities and whether they have the capacity to succeed at university. We have found that having contact with lecturers at the start of semester makes the experience less daunting and is instrumental in empowering students to seek help when they need it. Typically the students who attended orientation sessions, or who had individual contact with lecturers (in person or by telephone) in the first couple of weeks of semester, have a much higher rate of ongoing online engagement. These students not only regularly access online resources, they attend online tutorials and have regular online contact with lecturers. They are also more likely to engage with other students using the discussion boards and text based chat rooms and form the online communities advocated by Anderson (2008), but our experience suggests that the significant factor in successfully engaging students in online activities is ensuring that there is some form of human contact at the beginning of their studies.
Text-based technology constraints

One of the benefits of conducting text-based online tutorials is that once the system is accessed, it is a relatively straightforward interface for inputting text and it has the advantage of mirroring a number of other text-based technologies which students may already be familiar with, such as SMS and MSN. Unfortunately, being text reliant also creates a number of difficulties. Few UPP students have touch-typing skills and many are unfamiliar with keyboard layout. It then takes a considerable amount of time for them to type in messages in text based learning environments and while they are focused on typing, they may miss other comments and questions. This can lead to a disjointed thread, with frequent repetitions and a lack of authentic conversational flow. Students suggest that this makes it difficult to keep up and one student, for example commented on the complicated nature of text based chat and the difficulty of understanding what was going on. This is a significant issue given that one of our primary goals was to provide appropriate support for students with low literacy levels.

One solution is to use software that does not require the students to type such as the Elluminate Live! software previous trialled by lecturers. The software allows both voice and video communication, but due to the technical difficulties experienced by lecturers when accessing Elluminate Live! on campus and because UPP has a cohort of students with varying levels of computer literacy, we felt that it would not be suitable to rely on it as a primary method of online communication. However, ongoing improvements with both the software and level of support available, have enabled us to begin trials with a group of volunteer students in semester 1 2010, with the aim of developing the necessary support material for students to use the software with confidence.

NESB students

The NESB students enrolled in UPP are from varied cultural backgrounds and age groups, including a number who have participated in the Tasmanian secondary school system. We found that while there is no significant difference in their levels of technology usage from those of UPP students who speak English as a first language, they are much more likely to engage in asynchronous online activities such as the discussion boards than they are in synchronous ones such as the text-based chat sessions.

Where high levels of engagement were demonstrated there was also some form of face-to-face contact. For example, on-campus study groups were formed specifically to participate in the discussion board debate activity previously mentioned, and students electing to give presentations to peers in tutorials rather than presenting the information online. These choices are likely to be influenced by culture as much as by language, but they demonstrate that face-to-face contact is required as a necessary component for NESB students.

Multimedia as a ‘way in’ to learning for low literacy students

Our experiences with multimedia in the trial showed a degree of acceptance among UPP students—at least those who were able to access the resources. Some students have reported that watching a video is a simple way of coming to grips with the learning resources that they are to access for the week. Others suggest that multimedia presentations involving audio and/or video can be a useful adjunct to their learning experience. Further, in terms of engagement, they enjoy ‘seeing’ the person they would otherwise have contact with only by phone or email. It makes them see the lecturer as a real person and therefore increases their propensity to engage in their learning. We also recognise that an over-reliance on multimedia presentations will ultimately disengage students.

Online teaching takes time and requires flexibility on the part of staff

The trial re-affirmed to us that online teaching is not a shortcut way to teach and it does not save time compared to face to face delivery. In our real-time online engagement with students we
deliberately set up sessions that are out of usual class time—typically on a Saturday morning or a week night after 7:30 p.m. We respond to emails and phone calls whenever we reasonably can. This is not time we save elsewhere—rather it is an added impost. However we recognise that if we want to engage distance students then we must be flexible in our response to them. The literature discussed earlier (see for example Choy et al. 2003; Anderson 2008), confirms the need for a flexible response to student expectations.

This flexibility however, has implications for resourcing. Not all lecturers are willing to spend their Saturday mornings or Thursday evenings attending to students in a web chat—especially when they are not remunerated for this additional effort. Remuneration is only one part of the resourcing issue. In order for staff to work this way it may require that resources are made available to staff (such as laptops, internet access, web cams and a host of other office resources that would normally be made available at the institutional office). This could be costly and many institutions would baulk at this as unnecessary expenditure. However, the reality is that—and this is based on our experience—if we are to do online teaching well, we must offer at least a component of flexible teaching time.

Quality assurance and engagement

One of the unanticipated problems we observed with feedback from students related to the issue of quality and consistency. Students noted that other units did not have the same range of learning resources and engagement opportunities. This has created an expectation that all units should be upgraded to at least an equivalent standard. And while (as we note below) it is our intention to raise the bar of quality within UPP we cannot guarantee quality across the whole University.

Principles for practice

Notwithstanding the above discussion, we recognise that if UPP is to stand out as a program of excellence, supporting an alternative university entry pathway for low literacy students, it will require the adoption of a range of quality teaching and learning practices. To this end it is envisaged that by 2011, all UPP teaching staff will be able to adopt principles underpinning good practice for engagement of learners in an online learning environment. These principles include:

1. The resources must be readily accessible to students and staff (in terms of information technology literacy) with minimal or no cost/time burdens to either;

2. The resources and practices must enhance engagement in learning with a view to reducing attrition and increasing retention of students;

3. Where possible the resources should encourage students to strive for better academic learning outcomes with a view to being better prepared for tertiary study;

4. Where possible, teaching and learning strategies should be applied within the MyLO learning environment;

5. New resources should be used by staff with appropriate levels of expertise to teach in online learning environments; and

6. Effective use of resources and teaching and learning strategies will not aim to result in increased efficiencies of staff time.
Ongoing evaluation

One of the outputs of the trial conducted in 2009 was a draft evaluation framework document, which among other things identified expected outcomes from the implementation and development of strategies trialled. The evaluation framework suggests a mixed methods approach with formative and summative elements that respond to three evaluation questions:

1. What elements of online delivery are demonstrated to work effectively for students and why?

2. What are the implications of adopting the proposed online learning strategies for course design?

3. What are the implications for teaching and learning practice?

Embedded within these questions is an assumption that evaluation tools should measure a) student perceptions of quality; b) student retention; c) student engagement; and d) quality in teaching and learning practice.

Conclusions

Having considered the findings of the UPP trial we now return to the question we posed in the Introduction. ‘Is an improvement in online teaching and learning resources and strategies linked to increased engagement, and does this then lead to improved retention?’ In terms of the first part of the question we can categorically say that our experiments with a range of teaching and learning resources has indeed increased engagement with distance students—including those with low levels of English literacy. This has to some extent been mediated by an expanded and more focused use of technology in teaching and learning practice. However, it is perhaps more the product of adapting good practice in teaching and learning to the online environment. For those students from NESB backgrounds use of visual multimedia made a difference to their ability to access the learning resources. On the other hand, the requirement to contribute to online learning environments that incorporated text-based responses somewhat inhibited their ability to engage. To a large extent however, these issues were ameliorated by face-to-face contact with UPP tutors and lecturers.

The second part of the question is yet to be determined. Ongoing evaluation of the 2010 cohort will shed light on this question. While we are confident that teaching and learning practice has improved we are acutely aware of the range of factors that contribute to student retention. Many students who come to UPP with good intentions of completing are forced to withdraw because of the complexities of the lives they lead—we acknowledge that for many students coming to university involves a degree of self-sacrifice. We note that sometimes bridging the gap into university is an unrealistic expectation, regardless of the attempts we make as lecturers to support and engage them in their studies. We who are lecturers in UPP are, however, committed to making that transition as easy as we can by providing a learning environment that is rich and engaging.

References


