BELONGING AND MATTERING THROUGH A TECHNOLOGICAL LENS – MEETING ONE CHALLENGE FOR OPEN AND DISTANCE LEARNING IN 21ST CENTURY

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The student experience for online and distance learners in Australia has generally been considered from the perspective of 'study-load' and separate from the personal, emotional and social context of the student's 'life-load'. The case study reported here contributes to the existing body of knowledge by examining the way in which engagement with students at a regional Australian tertiary institution can be developed and maintained by actively listening and responding to the voice of the student through a mixed suite of technological tools. What follows is not concerned with statistical analyses, nor is it focused on engagement and retention in relation to specific disciplines or courses. Instead, it presents one component of a larger study designed to develop a greater understanding of the nuances of the lived experience of student engagement. This work aims to understand the role that technology can play in the developing the emotional dimensions of belonging and mattering as experienced by students who are dislocated from their campus.

Unlike other universities within Australia, UNE is in the unique position of having 80% of the student body studying via distance. Historically this has presented the institution with the problem of how to engage students in such a way that they feel involved and a part of the University community. Early Alert has provided a solution to this challenge with benefits for both students and the University. Emotional connection, and its role in building a sense of belonging, has been explored through a range of theoretical perspectives including Belongingness (Baumeister & Leary, 1995; Dixon Rayle & Chung, 2007) and Mattering (Schlossberg, 1989; Schieman & Taylor, 2001). Existing evidence suggests that the need to belong is a powerful, fundamental, and extremely pervasive desire for students in higher education (Tinto, 1975; Baumeister & Leary, 1995; Bryson, 2011; Thomas, 2012) and belonging is a key concept closely aligned with both academic and social engagement. To be able to experience a sense of belonging, individuals need to have a clear sense of their own role, purpose and place within the defined environment (Bryson et al., 2009). The challenge for institutions with online and distance learners is the capacity to nurture supportive peer and staff–student relationships and to build strong self-concepts of studentship (Thomas, 2012) that are relevant to the diverse attributes of students who are geographically dispersed from each other and the institution. While student engagement and a sense of belonging may be considered fundamental to a positive student experience, the two concepts have generally

been developed and explored within the context of place and community. By their very nature, online and distance learners do not share a place-based context and this presents a significant challenge for institutions committed to enhancing the experience of these students.

Current work at the University of New England (UNE), Australia is based on a strong belief that self-concept is central to the engagement of online and distance learning students and that this self concept needs to be situated within the academic sphere as a compensation for the dislocated sense of place and community they experience. A typical UNE student is likely to be physically distanced from the campus and is likely to be balancing multi-dimensional life responsibilities along with their study. It is unlikely that he/she will ever have an on-campus experience and his/her capacity to create strong person to person relationships is hindered by this physical dislocation. It is therefore incumbent on the institution to find alternative ways to manage the relationships between students and staff and between student peers in ways that are aligned to the specific features and expectations of these populations. UNE, a regionally-based distance education provider, has always prided itself on a personalised approach to students and one advantage of its' on-line education model is the opportunity to leverage service and teaching delivery off emerging technologies.

The Site

UNE is situated inland of the east coast of Australia mid-way between the two capital cities of Brisbane and Sydney. The student population at UNE is defined by its regionality and distributed nature. More than 70% of UNE students study in off-campus mode, 40% of students overall come from rural and remote locations and 4% are from isolated areas. In total, more than 50% of UNE students identify as part of low socio-economic groups. The largest proportion of students (approximately 70%) is aged 25 or older. Many of these students combine the dual demands of work and study and their level of engagement with the University is sometimes hampered by the multi-dimensional nature of their lives. These factors contribute to a diverse and dispersed student community yet the University consistently rates well for educational experience and student satisfaction through national surveys.

Action and Research

The UNE Early Alert Program (EAP) forms the basis of an ongoing modified action research project. The cycle for each sequence is limited to the most current teaching period and enrolled students are participatory in each of the strategies deployed. In sequence, each teaching period's engagement activities are planned, implemented and reviewed for efficacy. The actions under scrutiny are evaluated through the voice of the student. The flexibility of this type of model ensures that student engagement activities are responsive to the emerging needs of the student population and the cyclic nature of the student experience means that outcomes are time specific and improvements are iterative. EAP is an innovative program which identifies and supports students, irrespective of where they study. It uses multiple data

sources to automatically highlight students who may be 'at risk' of disengagement and through case-management afford them every chance of success. A suite of wrap-around services, which are aligned to the student lifecycle, ensure that a consistent and cohesive model of support is centred on building pride in studentship, enhancing the sense of belonging and mattering of students, and providing students with instrumental resources which enable them to develop self management skills. Analytics perform a gatekeeper function, assessing, the impact of specific interventions on the student experience and determining if activities are retained or discarded according to the level of resonance with the student population. The project unpacks the issues of concern identified by individual students; the way in which these concerns are ameliorated and the impact this has on student progression into the next teaching period. Within these parameters, the dimensions of mattering and belonging are measured according to student feedback.

Early Alert

In initiating the Early Alert Program, two constructs were developed to examine the student experience and to establish a clear base from which to develop and measure the effectiveness of the technological tools used to engage with students. The first was the construct of *happiness*, adopted to describe the self reported state of satisfaction with the student experience and the second, *wellness,* used to describe the students' preparedness for study. These two constructs provide a holistic view of the student experience. *Happiness*, is identified through self-reports of students via site developed tools such as the *Emoticons* and *the Vibe*; *Wellness* through system identified triggers via the *Automated Wellness Engine*. As an outcome of the action research methodology, this program has been iteratively developed since 2008, both adding and deleting specific actions as appropriate. Each action is measured for student 'traction' and qualitative feedback is used to gauge efficacy from the students' own perspective.

The student-centred nature of this project is best described through the voice of the student and what follows is one typical student journey examined through the filter of Early Alert at UNE.

Mary[1] is Australian born, 35 years old and working part-time. She has three children of school age and she lives in a regional centre in eastern Australia. She completed secondary school but this is her first effort to undertake tertiary studies. She is time poor, balancing work, family, community and now study responsibilities. She is the first in her family to attempt a university degree. It is unlikely that she will attend the Armidale campus before she graduates. Most of Mary's transactions with UNE will be managed online and she will communicate with staff via multiple channels.

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[1] Mary is a constructed character, broadly representing a typical student. Her characterisation reflects a typical student demographic (female ; age 25 plus; studying by distance education)

When she first enrolled, Mary had no understanding of the processes of applying for study or enrolling. A telephone call or email to the University may have assisted by providing information and guidance in administrative processes but these remain largely impersonal if that is the only way for a student to communicate with the institution. Mary can however, access one of the YouTube videos created by the Early Alert Team (http://www.youtube.com/user/UNESupport) so the subject matter experts at the University can present (via video) the guidance she will need to complete most administrative processes. Mary can telephone, email, use online FAQs or live-chat to clarify the steps she needs to take and the YouTube tutorials help personalise this experience. Each transaction, recorded in the student relationship management system, is reviewed for student satisfaction and Mary is reassured that her opinions matter.

One week after on-line enrolment, Mary is surprised when she returns home from work to find a package from the University waiting on her doorstep. Guided by affective motivation approaches (Estell & Perdue, 2013) the commencement packs were introduced in 2013 to reinforce the high level of initial enthusiasm and motivation of new students to commence study; to demonstrate that at UNE each student matters; to build the message that we are here to support individual success; and to build a sense of belonging. As indicated below, students like Mary experience each of these affective responses to what is a simple set of artefacts of studentship.

> *Wow! What a great way to start my first official day of university with a parcel at my front door full of information and goodies. It was just the motivation I needed to get me excited and engaged in the new and challenging adventure I'm now embarking on.*

> *In particular, the "New Student Guide" is full of great information, handy hints and tips and contacts to help me through my time at university. I know the guide will be a very useful resource for me now and the whole way through my time at UNE (UNE, 2012, internal report).*

The practicalities of studying means that Mary needs to be able to balance her total set of responsibilities as well as her study expectations. Achieving this, in isolation from her peers however, can make a three or five year degree program, a very isolating experience. Mary is able to share her feelings with her peers through the *Vibe* word cloud. The *Vibe*, collates feedback from students; it updates instantly (when students respond to the question 'what's on your mind today?'); and allows Mary to see how her fellow students are feeling. This is incredibly powerful feedback for students and the EAP team is able to respond appropriately where issues are identified.

Figure 1. the Vibe Word cloud

At a macro level, the *Vibe* serves to visually normalise the variations in emotions which are experienced by students studying at a distance. At a micro level, expressing a need for support is accommodated through the use of a series of emoticons embedded in the student portal.

Mary uses the emoticon system as a fun and simple way to quickly and easily indicate her level of satisfaction with her study experience. She simply chooses an "emoticon" which indicates her feelings about the unit in which she is enrolled. Every student who reports an 'unhappy' or 'very unhappy' experience is contacted by the EAP team within 24 hours and this reassures Mary that there is someone 'looking out for her'. As one student commented,

> *Thank you for your concern and feedback. I now understand that if I am struggling that there will be someone looking out for me during the coming semesters (Student feedback, 2009).*

Figure 2. the Emoticons

Despite her choice to study from a distance, Mary still wants to engage and communicate with her peers and the wider university community. The *Insider's Guide to UNE* which is the current students' blog has been running for 5 years and is hugely popular with students across all ages, disciplines and levels of study. It provides information and advice relevant to the issues raised by students and it complements the *Vibe* and *Emoticons* by closing the student feedback loop. Mary can find out about key dates and study deliverables, ask questions of her peers and the institution, keep informed about activities being promoted both on-and off-campus and generally experience a sense of belonging to a neighbourhood of support. The use of these tools is voluntary and relies on individual students' own expressions of need. One student represented a common attitude when he posted to the blog,

> *Can I just say how much I love this blog? It really makes the university accessible for external studies (student feedback, 2012).*

But how do we know if Mary is struggling with her studies if she doesn't tell us? Living a multi-dimensional life may find Mary struggling to balance her employment and study commitments. Her children may become ill or her aging parents may be requiring additional support. As a consequence, Mary may be absent from the learning management system for a period of time. Luckily, the *Automated Wellness Engine (AWE)* identifies a change in Mary's interactions with her studies and a student support staff member contacts her to offer assistance. *AWE* was developed in 2010 to support the *Vibe*, *Emoticons* and the *Insider's Guide to UNE* blog. As represented by Figure 3 below, this tool calculates an 'at risk' (of disengagement) score for students through a comprehensive learning informatics approach. Identification of at-risk students is based on 34 factors derived from data contained in eight UNE corporate systems. The weighting of each factor can be adjusted, allowing the team to fine tune its approach. Factors measured include e-Motion data, the student's academic history, a lack of recent activity in the UNE LMS or library, information about units being studied (such as historic unit attrition rates), the number of assignment extensions sought and the non-submission of assignments. Current weightings and trigger points have been developed as a result of the past experience of the university staff in working with students and a data mining exercise based on a dataset from 2009-2012 have confirmed their relevance for the UNE population.

This approach enables the institution to capture the student experience of Mary and her peers in a manner not previously possible. The wellness/happiness reports produced by the *AWE* are condensed to identify the 200 most 'at risk' students each day and this forms the day's caseload for the centralised support teams who triage each student's situation and identify the immediate and longer term issues impacting on the individuals' engagement with their studies. Students like Mary, have commented,

> *Thank you for your help- if you had not contacted me having noticed I was getting behind I may well have simply given up (Student feedback, 2011).*
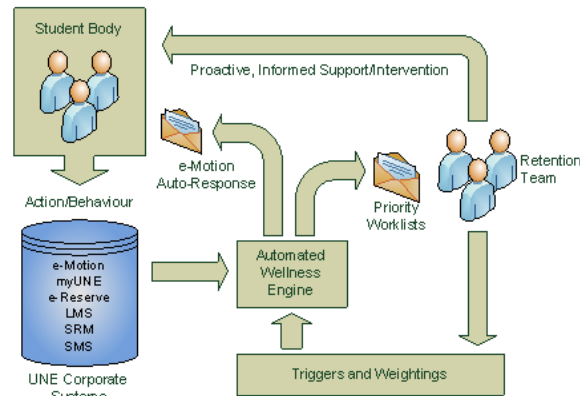
Figure 3. the AWE

The types of issues identified through the triage process include health, personal, administrative and academic concerns. Once presenting issues are clarified, students are referred to the most relevant support service for assistance. The common issues of the day are also addressed by items and tips on the *Insider's Guide to UNE, Facebook and Twitter*. For Mary, this system means that we will contact her throughout her studies when we detect that her circumstances are changing.

Mary's journey is indicative of the way in which the UNE approach takes advantage of technology to engage students in meaningful ways through:

- Just-in-time' and 'just-in-case' communication campaigns;
- Tools and opportunities for students' self-identification of need and self-determination of assistance;
- Targeted interventions for identified groups in need; and
- Personalised intervention and support for individuals.

Unpacking the issues

One major objective of this project is to better understand the emotional dimensions of student engagement and the data collected from student interactions with the student support model have presented a depth of understanding of the lived experience of UNE students, not previously possible. Students identified as being 'at risk' of disengagement through the *Emoticons, Vibe* or *AWE* are individually contacted to clarify the issues impacting on their studies. This demonstrates to the student that they matter to the institution and it builds the institutional understanding of the student experience. As represented by Table 1 below, administrative matters are most commonly cited by students as having a negative impact on their experience and these are generally associated with the logistics of the students' studies. Seeking waivers of rules, non-standard requests to vary their enrolment or general information to do with the process of enrolment or progression are most common. These are matters which can be easily remedied, thereby removing one impediment to a good student experience. Academic and personal matters each account for approximately one quarter of the

presenting issues in any given teaching period. When combined, these three categories represent the life-load and study-load demands of online and distance learners.

Table 1: Presenting Issues for Early Alert Participants- Trimester 1 2014

Issue Type	%
Academic	21.28
Administrative	53.68
Personal	25.04

Once the immediate issues of concern are clarified, students are referred to the most appropriate support service. During the period reported here, students were referred to student administration (17.91%) unit coordinators (16.57%) and in lesser numbers to a range of support services and organisations including academic skills; library; safety and security; counselling; disability support; examinations unit; and careers. This type of information alerts the institution to the support needs of students which if left unaddressed result in withdrawal from studies. In examining the reasons for student withdrawals, it emerges that students who were early alert participants were more likely than their peers who did not participate, to drop a unit if they were dissatisfied with their study experience (+2.42%) or if they experienced a health issue (+2.61%). These students were however less likely (7.18%) than their peers who had not participated in early alert to drop a unit of study due to employment or work conditions which may be attributed to the support they received to overcome a short term issue.

Table 2: Comparison of unit discontinuation reasons between EA participants and non-EA participants - Trimester 1 2014

Reason	Non EAP	EAP
Access or Technology Reasons	1.43	1.51
Dissatisfaction with Unit	3.74	6.16
Employment or Work Commitments	34.03	26.85
Financial Reasons	4.09	3.98
Health Reasons	13.14	15.75
Other Reasons	12.33	15.52
Personal or Family Reasons	31.24	31.23

Conclusion

The Early Alert Program is underpinned by four key technological approaches to identifying the individual needs of students. These are the self reported student happiness (or satisfaction reported through tools such as *Emoticons* and the *Vibe*); system reported wellness (or preparedness for study) reported through the *AWE* and a communication strategy which utilizes a range of media such as a blog, Facebook and twitter. Early Alert has established a distinctive process through which to identify students who may be at risk of disengagement, to intervene early, diagnose potential areas of concern and refer the student on to appropriate support services. This process supports the emotional dimensions of belonging and mattering of students and is consistent with the belief that a sense of belonging is 'more than simple

perceived liking or warmth, it also involves support and respect for personal autonomy and for the student as an individual' (Thomas, 2012 citing Goodenow 1993, p35).

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