"Initially, We Were Just Names on a Computer Screen": Designing Engagement in Online Teacher Education

Sharon M. Pittaway
University of Tasmania

Timothy Moss
Swinburne University of Technology

"Initially, We Were Just Names on a Computer Screen": Designing Engagement in Online Teacher Education.

Sharon M. Pittaway
University of Tasmania
Timothy Moss
Swinburne University of Technology

Abstract: This paper describes a research project that investigated the process of redesigning a fully-online unit, in order to enhance undergraduate Education students' engagement in their learning. This redesign was guided by the development of an Engagement Framework, which presents five elements of engagement that are distinct yet interrelated. The results of this redesigned unit indicate that this Engagement Framework has the potential to offer unit developers and instructors a strong pedagogical and theoretical foundation for enhancing engagement in online learning. This paper provides a description of the Engagement Framework, the processes undertaken in redesigning a fully-online unit, the findings, and several emerging understandings related to the Framework and student engagement more broadly.

Introduction

Despite some initial concerns about the efficacy of preparing teachers online (Moss & Pittaway, 2011), and in some instances an employer bias against online degrees in general (Carnevale, 2007), teacher education courses within Australia have embraced a move to fully-online delivery, with a growing number of institutions offering courses in this mode (Saltmarsh & Sutherland-Smith, 2010). This reality has led to new debate – not *whether* to prepare teachers online, rather *how best* to do this. Arising from this debate is an awareness of the relevance and significance of student engagement in the teaching and learning process.

Reasons why engagement is relevant and significant are variously described in the literature. For instance, Chen, Gonyea and Kuh (2008) claim that "by being engaged, students develop habits of the mind and heart that promise to stand them in good stead for a lifetime of continuous learning" (para. 2). Krause (2005) highlights this link between engagement and enhanced student learning, stating that "engagement refers to the time, energy and resources students devote to activities designed to enhance learning at university" (p. 3). This point is echoed by ACER (2011), which defines engagement as "students' involvement with activities and conditions likely to generate high-quality learning" (p. 3). Engaging students online poses a number of challenges (Moss & Pittaway, 2011), including challenges to pedagogy (how might we design and deliver our units to support student engagement in their learning?) and to the development of communities of learning. While there is a body of literature dealing with student engagement at a generic level, where students regularly attend campus-based classes (see, for example, Coates, 2006; Pittaway & Moss, 2006; Russell & Slater, 2011), there appears to have been little work to date that directly addresses this complexity in teacher education within the fully-online environment. This represents an important area for consideration as our understanding of the pedagogy of online (teacher) education and distance education more broadly continues to develop.

Within the Faculty of Education at the University of Tasmania, the move to online delivery began in 2007 with a relatively small group of staff (including the two authors). The Faculty continued to expand its online offerings to the extent that by 2010 the majority of degree courses were available in this mode. Since our initial foray into online learning and teaching, we have faced challenges to our pedagogy in relation to student engagement in the fully online environment. One such challenge is how to design units that will engage students holistically, and assist them to develop a sense of community as learners.

This paper describes how the authors designed for student engagement within the context described above. Fundamental to these design efforts was the use of an Engagement Framework (for a more detailed explanation of the Framework, please refer to Pittaway, 2012), which can be used as a foundation for a range of initiatives to enhance the engagement of students and staff in any educational setting. The paper's primary purpose, however, is to report on a research project which examined the explicit incorporation of the elements of the Engagement Framework in the design, delivery, and assessment of a fully-online undergraduate unit, and highlight the potential benefits of this approach for student learning and engagement. The research reported in this paper is not intended to be generalisable or replicable. Rather, it is intended to contribute to the ongoing discussion on the scholarship of teaching, and to offer possibilities for other teacher educators to consider the ways in which they design and teach for engagement in their own contexts.

The Engagement Framework

The Engagement Framework, which sought to address the question of *how* students engage, offers five distinctive, non-hierarchical dimensions of engagement that are fundamental to students' success at university. These dimensions are: personal, academic, intellectual, social, and professional. In what follows, we provide an initial discussion of the environment in which the Framework is situated, and then present a brief overview of each of the five dimensions of the Framework. The paper concludes with an example of the Framework in use in a final-year undergraduate unit.

Key Principles

Environmental principles underpin the Framework and play a significant role in shaping its dimensions as well as its implementation. These principles, which are significant in supporting unit design, teaching and support practices, are:

(1) Staff engagement is essential before students can engage (ACER, 2011; Middlecamp, 2005)
(2) Learning and teaching relationships must be supportive and respectful (Allodi, 2010)
(3) Students must be given, and actively take, responsibility for their own learning (Allen & Clarke, 2007; Scevak & Cantwell, 2007)
(4) Practices such as setting high standards and scaffolding students to achieve them lead to greater knowledge, understanding, skills, and capacities for students (Dunn & Rakes, 2011; Krause, 2005; University of Melbourne, 2007).

Literature regarding student engagement notes that engagement "plays out in different ways at different points of the educational cycle" (ACER, 2011, p. 1). As such, the intersections between the elements of the Framework and the non-hierarchical structure mean that one element (such as social) might be prominent for students at a one point in their studies, while

at other points, personal or intellectual engagement may be more significant. This Framework can be applied in a variety of ways, with regard to both staff and students. For example, unit developers may use the Framework when designing the learning outcomes, tasks, and assessment of a unit. Students, on the other hand, may use the Framework to make decisions about what, when, and how they will engage in their studies, and to take ownership of their learning. This flexibility in terms of the application of the Framework is intentional, and allows for individual preferences and needs of those involved in teaching, learning, and support.

Personal Engagement

The first element of the Engagement Framework is personal engagement. This encompasses ideas such as aspiration (Appadurai, 2004) and proposes the need for students to hold the personal belief that university is valuable and worthwhile. Students must actively decide to enrol in a university course, and to develop an identity as a student, and as a member of their discipline or profession (Moss & Pittaway, 2013). Personal engagement, which therefore begins before the student enrols, also requires students to hold a belief that they can succeed at this level, continue to learn and develop (Dweck, 2006), and have a degree of conative capacity – that is, a will to learn (Riggs & Gholar, 2009). Other attributes of this element include self-efficacy, goal-setting, awareness of intention, resilience, and persistence. Staff too must be personally engaged (see Key Principle 1) in their work with students and be aware of how their level of personal engagement plays out in their teaching and support of student learning and development.

Academic Engagement

Academic engagement includes identifying and managing student and staff expectations, both within the formal 'classroom' environment and outside of it. Success in the university context requires interdisciplinary knowledge and skills. This element encompasses the capacity for students to take "active control... by planning, monitoring and evaluating their learning" (Scevak & Cantwell, 2007, p. 37). This might include monitoring their development of such attributes as personal, computer, and information literacy, academic writing, referencing, note-taking, and time management (Brick, 2006; Clarke, 2008). Opportunities for such development must be provided over the course of a degree program, with more or less support depending on the context of the unit (stage within the degree, for example). Without attention to these skills and capacities at various points throughout their study, students are unlikely to be able to engage intellectually.

Intellectual Engagement

In enrolling at university, students make a choice to study a particular discipline and this element of the framework centres on those disciplinary contexts. Specifically, intellectual engagement refers to students' engagement with their discipline in terms of concepts and ideas, and the social, political, and ethical issues within this context (Bowen, 2005). This intellectual engagement is demonstrated through critical thinking, and through students taking an interest in current debates about their discipline, wide reading, discussion with others (peers and academic staff), and an awareness of their own values, beliefs and attitudes with regard to the disciplines to which they are exposed. Students must have the *personal*

and *academic* skills to engage intellectually; an example of the connections between different elements of the Framework. For academic staff, this element of the framework must be considered when designing unit learning outcomes, weekly tasks, and assessment.

Social Engagement

The importance of social engagement, particularly in light of engaging students intellectually, cannot be underestimated. Social engagement allows students to confront other ways of interpreting the world, and can deepen and extend their own perspectives and beliefs (Beachboard, Beachboard, Li & Adkison, 2011; Reason, Terenzini & Domingo, 2006). It has been argued that the social aspects of engagement are "equally as important as intellectual pursuits" (Krause, 2005, p. 9). This element is just as relevant when considering fully-online students. Leong (2011) cites Shea, Fredericksen and Pickett (2000), who "determined that the level of students' interaction with the instructor and classmates was significantly correlated with the level of satisfaction and perceived learning in online learning courses" (p. 6). It is widely claimed that effective online teaching promotes social interaction between students, and between students and teaching staff (see for example Edwards, Perry & Janzen, 2011). For students, then, the development of relationships with staff requires a degree of maturity, and requires students to be proactive in building their learning communities (online or face-to-face) (Stanford-Bowers, 2008). Students can also demonstrate social engagement outside of the formal learning environment, through organising student-led societies, which provide professional learning and networking opportunities. A range of technologies is available to students studying a fully-online course, and can be utilised in the establishment of such groups/societies.

Professional Engagement

The fifth dimension of the framework is professional engagement. This is particularly important for those courses preparing students for specific professions (such as teaching or nursing), but has implications across all degrees. This dimension of the framework relates to the connection between practice and theory, and the ways in which theoretical constructs can be applied and challenged in professional contexts such as work-integrated learning programs. Through sustained professional engagement, online university students apply, consolidate, and extend their knowledge, beliefs, and skills as learners and as developing professionals (Bowen, 2005). Examples of such engagement may include students attending professional learning opportunities outside of the university context, joining professional associations, and attending workshops and conferences. Again, academic staff play a key role in assisting students to identify and manage their involvement in such activities through the design of learning tasks and/or assessment within units. Although this element could be seen as a sub-section of social engagement, the key difference is one of emphasis, in that professional engagement looks forward to the contexts in which students will operate as graduates, and beyond their immediate cohorts and contexts. Through professional engagement, students can also form on-going communities of practice by networking and creating opportunities for lifelong learning.

Designing for Engagement

The literature on engagement has highlighted some important considerations in designing for

enhanced student engagement in an online environment. In setting out ten working principles for enhancing engagement, for example, Krause (2005) notes several that are of relevance for unit design, including the need to: create a stimulating intellectual environment; foster social connections; shape the student experience through assessment; and manage online learning experiences with care. Of particular emphasis is the importance of capitalising on the capacity to build communities online, through discussion forums and collaborative tasks. Others (for example, Lehman & Conceição, 2010; Leong, 2011) have also emphasised the importance of online community-building, and the vital role of the teacher in ensuring this is successful. However, much of this literature focuses on the role of the *instructor* in establishing this online community, rather than the elements of unit design that might promote this development. Leong (2011) does suggest that unit designers may manipulate several elements, including student enjoyment and student control, in order to enhance engagement, and claims that before cognitive engagement is possible, social presence must be developed. Beachboard et al. (2011) also contend that staff need to provide learning environments in which students will feel socially engaged, and that this engagement influences academic outcomes.

The Engagement Framework briefly described above, and the principles of designing for engagement articulated here, were used explicitly in the design of a fourth/final-year undergraduate unit as an attempt to more effectively engage students in their learning, their online community, and their thinking about their chosen profession/discipline.

Unit Redesign

The unit selected for this project was Schools in Society (SinS), a unit intended to develop students' understanding of educational aims, the implications of social change for schools, and the interaction between schools and society. Unlike the majority of other units students are enrolled in at this stage of their degree, SinS does not have a focus on specific classroom strategies, planning, or assessment, as it is more conceptual than practice-based. This has been identified as a barrier to engagement in earlier iterations of the unit, and as such, this unit seemed an ideal context within which to explore the application of the engagement framework. In earlier iterations of the unit, students' difficulty in engaging with the content was evident in a decline in student participation in activities across the course of the semester, and a lack of engagement with the ideas of other students. In redesigning this unit, our starting point was an intention to move beyond blaming students for a lack of engagement (Biggs, 2012), and to instead investigate how we might design engagement *into* the unit, in terms of tasks and assessment. The student cohort was relatively small (40 students), and no staff apart from the authors of the paper were involved in the design and delivery of the unit.

In designing for engagement, two key aspects of the unit were redeveloped: use of web conferencing, and the introduction of discussion groupings linked to an individual assessment task. Although web conferencing had been used in the unit in previous iterations, in the unit redesign, these were expanded to be offered fortnightly. The focus of these sessions also changed, from a direct discussion of assessment tasks, to a more open-ended conversation about issues of relevance to the unit. There was also a modelling function to these conferences, in terms of facilitating discussion in an online environment. These web conferences were intended to work towards students' *academic* and *social* engagement in the unit, creating a community of learners, and modelling the kinds of academic processes that they would be required to draw upon to achieve success.

The second, and perhaps most significant, change to the unit involved a revision of the assessment tasks and processes. One assessment task required students to engage in 'discussion groups' on a weekly basis. These groups were comprised of a smaller subset of the overall unit cohort (10 students), and were student-led. Each week, the groups nominated a discussion 'leader', who chose a topic from a defined list, and led a group discussion on this topic. In their initial post, each leader explored relevant literature, posed questions for the group to explore, and provided their own initial response to the issue. The group leader then facilitated the discussion across the week, and posted a summary and conclusion at the end of the week. Others in the group contributed to each discussion, commenting on the issue in light of their reading, unit activities, and their own professional and personal experiences. These discussion groups were not mediated by teaching staff within the unit; rather, the students took responsibility for the organisation and management of their group processes and contributions. Leaders were assessed at the end of their week, and each student was also assessed three times across the 10 weeks of this task on their contributions. After each assessment, students were sent formative feedback on their contributions, but were not provided with a summative grade for the task until the end of semester. This task represented 50% of the assessment weighting for the unit. The discussion group task aimed to address all elements of the Engagement Framework, and also to address the decline in the number and quality of online posts over time noted in earlier iterations of the unit.

Methods

In order to determine the effectiveness or otherwise of the revised SinS unit in engaging students, a research project ran alongside its delivery. This project documented the ways in which students engaged in SinS, examined how this engagement was influenced by the design and delivery of the unit materials, and identified the outcomes of this engagement for their participation and achievement in the unit. In so doing, the project also explored the potential application of the Engagement Framework in the design and evaluation of units.

Data Collection

In order to minimise potential interruptions to the delivery of the unit and to students' learning, data for the study were collected entirely through the collation of existing materials generated throughout the semester: what Hatch (2002) terms "unobtrusive data" (p. 116). The advantage of such an approach to data collection is that it provides insight into a phenomenon without "interfering with the enactment of that social phenomenon" (Hatch, 2002, p. 116). This project drew upon student data collected automatically through the University Learning Management System (known as MyLO), and additional sources of data related to students' participation and engagement. These data sources were:

(1) *Student discussion board posts.* These were any written comments posted by students in response to set tasks, which were visible to other enrolled students and teaching staff.
(2) *MyLO tracking data.* These data were collected automatically by the LMS, and included details such as amount of time students spent online, how often they logged in, and the number of discussion posts they made.
(3) *MyLO interaction data.* The software tool SNAPP ('Social Networks Adapting Pedagogical Practice') was used to track student-to-student and student-to-teacher

interactions within discussion boards, and to produce visual representations of this interaction.

(4) *Student assignment submissions*. Student assignments were also collected and analysed, for evidence of higher order thinking and connection to the unit content.

(5) *Other unit-related correspondence*. Also included in the project analysis were other forms of written correspondence from students in relation to their engagement in the unit and the outcomes of this engagement. Sources of such correspondence included unsolicited student emails, and student posts from web conference sessions.

(6) *Student evaluation results*. The unit was also evaluated using the formal University Student Evaluation of Teaching and Learning (SETL) process, and both qualitative and quantitative components were analysed for the purposes of evaluating students' engagement in the unit and their perceptions of the success or otherwise of design and delivery.

It is important to note that in order to minimise any potential conflict of interest, the research project did not formally commence until the completion of delivery and assessment of the unit, and all students were invited, but not required, to participate. The project was granted approval by the relevant Human Research Ethics Committee (University of Tasmania Approval H12231).

Data Analysis

The data collected from the sources described above were analysed for evidence of student engagement in the unit, and the quality of such engagement. Engagement was evidenced through time spent in the unit, the frequency and quality of interactions with other students and staff, and the content and effectiveness of online posts. Student references to their own perceptions of engagement were also considered, as these were indicated through their comments to other students, feedback on SETL, and direct interactions with teaching staff. The theoretical framework scaffolding this analysis was the Engagement Framework, and as such, analysis focused on evidence of students' engagement primarily in relation to the five elements described earlier.

Limitations

One aspect of this project that could be identified as a limitation is that the staff designing and delivering the unit were also the researchers, potentially influencing students' contributions to the project. We have minimised this by commencing the project at the completion of the semester, and by focusing on collection of unobtrusive data. Along with these steps, we support the statement of Edwards et al. (2011), that qualitative studies "are not intended to be objective" (p. 106). We have endeavoured to make clear our own position in relation to the unit being researched, the project aims and methods, and the students who were invited to participate in the project.

Given the relatively small size of the cohort involved in the study (40 students), and the fact that this research project focused on one unit, there are clear limitations in terms of the extent to which the findings of this project may be more widely applicable. However, as with many other qualitative studies, this does not render the findings meaningless; instead, we encourage readers to consider the *generativity* (Barone & Eisner, 2012, p. 148) of our findings, in terms of their potential usefulness in enabling others to consider similar elements in the design, delivery, and assessment of units to enhance student engagement.

Findings

Analysis of available data regarding students' participation and engagement in SinS revealed that the unit had been largely successful in maintaining student participation, and in engaging students across the elements of the Engagement Framework. Further, student evaluations showed that the revised unit had been highly successful in providing students with a positive and challenging learning experience. In the following sections, findings related to student participation in the unit, and their engagement across each element of the framework, are presented and discussed.

Student Participation

In order to examine students' participation, with a particular focus on their participation in the discussion group task, comparisons were made between SNAPP data mapping student interaction in a 'standard' discussion board (in this case, a whole-of-cohort discussion topic from week 2 of semester) as shown in Figure 1, and the map of student interaction within one week of the discussion group task as shown in Figure 2.
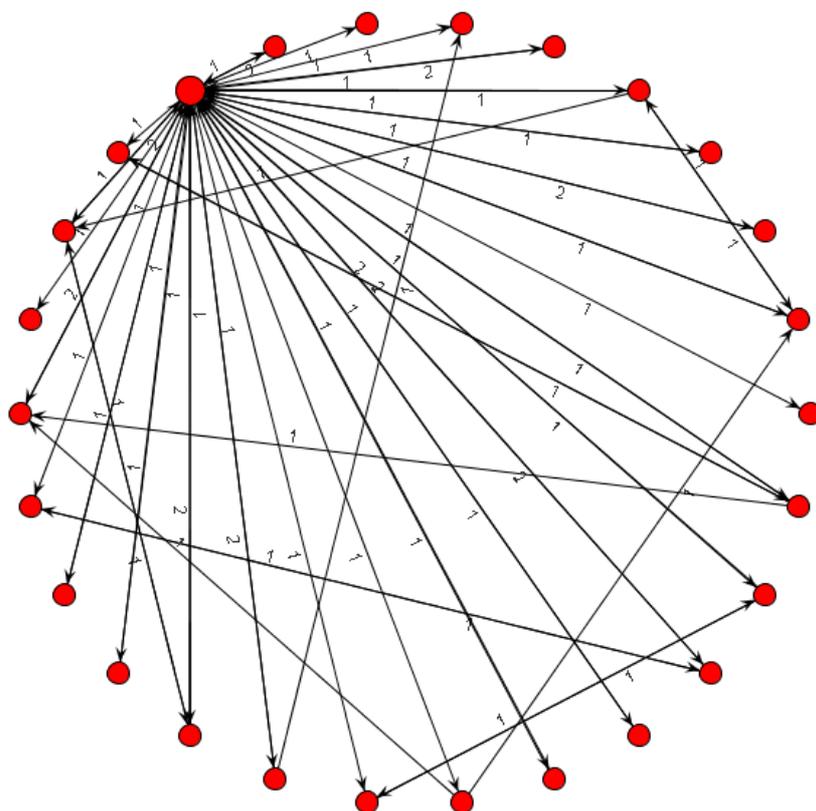

Figure 1: Student interaction (whole class) – standard discussion board
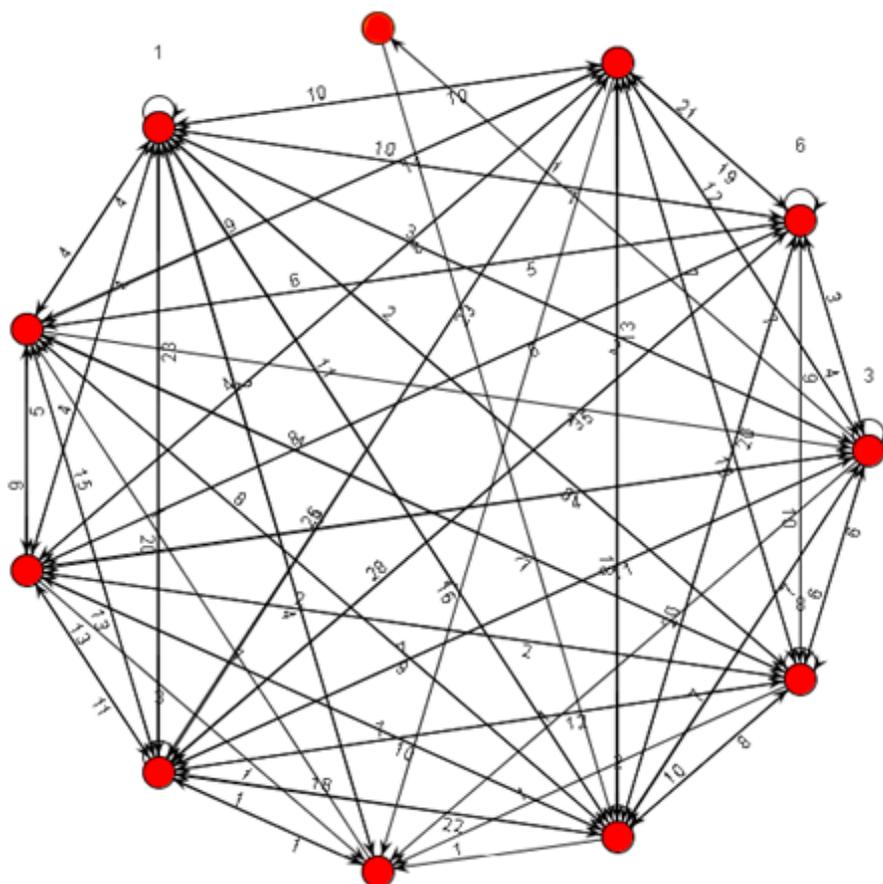
Figure 2: Student interaction (discussion group 3) – group discussion task

As these Figures reveal, there was a marked difference in the nature of interaction within the discussion group. While the overall number of students participating in the whole-class discussion (Figure 1) was reasonably high, it is immediately clear who was 'leading' this discussion, as the majority of lines of interaction converge on this person (the member of teaching staff contributing to this topic). Further, the number of posts by individual students was quite low, with very few students posting more than two times to this board (representing an initial post as prescribed in the weekly task, and then a response to the teacher). There are few 'cross-posts', where students are actually engaging in conversation with each other. Patterns of interaction here are consistent with those observed in previous iterations of the unit, and are usually accompanied by a gradual decline in the number of students participating across the semester.

When analysing the map of interactions in the discussion group (Figure 2), there is no longer a clearly-defined central person; instead, there are connections between every individual in the group. The number of connections between participants is also considerably higher, with exchanges of up to 28 posts being present. Discussion maps from other weeks of this task were extremely similar, as were the maps from the other three discussion groups. Further, as Table 1 shows, students' participation in this task was generally sustained across the semester.

Week	Posts: Group 1	Posts: Group 2	Posts: Group 3	Posts: Group 4
1	41	45	76	26

2	38	43	67	35
3	33	38	67	41
4	34	32	88	37
5	53	30	144	36
6	56	51	127	52
7	57	40	109	60
8	55	31	89	31
9	75	36	110	31
10	N/A	N/A	89	30

Table 1: Student participation in discussion groups over time

This suggests that this task was largely successful in maintaining student participation and interaction across the semester. This interaction was significant in terms of students' engagement across all of the elements of the Engagement Framework.

Personal Engagement

Some of the key attributes related to personal engagement are belief, self-efficacy, will to study, and persistence (Pittaway, 2012). Data related to the SinS unit indicated that students were indeed drawing upon and developing these attributes through their work in the unit. One of the key aspects that appeared to lead to this personal engagement was the degree of freedom and therefore responsibility provided by the role of discussion leader. For example, one student wrote: "*To be honest I did not think I had it in me to be a discussion leader. I honestly believe that this assignment is a fantastic idea. It allows individuals to not only share their ideas and experiences but extend on them*" (student email). In this sense, the task was challenging students to take responsibility, and allowing them to develop awareness of their own capacities.

Another student linked this task explicitly to enhanced learning and motivation: "*Task 1 for this subject is an excellent way of learning collaboratively and I have found that I am intrinsically motivated to remain engaged in the task*" (student email). This type of student-directed task requires the teacher to release some of the control of their unit, and so is potentially challenging not only to the student, but also to the teacher.

Academic Engagement

In considering students' academic engagement in the unit, it is important to reiterate that the unit is a final-year, final-semester subject; as such, it is reasonable to expect students to have developed a sound grasp of many of the academic skills required for success at university.

Given this, it might be assumed that academic engagement would have less prominence or importance in the unit. However, taking into account that these skills are developmental, more careful consideration of the opportunities to further engage students in this element was required. Analysis of the data gathered from the unit indicated that students did engage academically, and continued to develop skills as a result. This engagement was centred around students' participation in discussion groups, with students noticing a direct development of their skills as a result of their contributions. As one student noted: "*This unit improved my writing as I had to constantly think, read, write and reflect on my own beliefs, my peers' beliefs, scholarly writers and stakeholders' views of the aims of education*" (MyLO post). Another student gave a very detailed account of her academic engagement in the task through the role of discussion participant:

> *I want to be and have been challenged and I will challenge and try to extend the thinking of others. The choice of words is important... I enjoy, am engaged, interested, and thinking about the topic from multiple perspectives. I am a deep and critical thinker. I also feel that occasionally if group members do not pose a question(s) it becomes a closed post. I am encouraging feedback and challenging thinking by keeping it open with question(s)* (student email).

In part, students' awareness of their academic engagement in the task related to the more 'public' nature of the assessment task: students were aware that their contributions were available to all in their discussion group, and this meant they were more conscious of doing their best work: "*I really valued the experience of running the group. It is certainly different to writing an essay which you can read and re-read until you have it right*" (student email).

Another aspect of this more 'public' approach to assignment work was that students were able to read a range of ways of responding through the work of their peers, and in some instances students were exposed to responses that they felt were of a very high standard. One student commented: "*I am finding this task a daunting one; some students are so articulate and I find this intimidating at times*" (student email). This was not necessarily a limitation of the task; rather, this offered an incentive to improve and match their peers' level.

Intellectual Engagement

This element of engagement was in essence the focus of the unit: this is a unit about 'big ideas', and did not require students to consider practice-based resources and strategies. Throughout the unit, students explicitly commented on their growing intellectual engagement with these ideas, and noted that in part, this engagement was a result of the opportunity to discuss and explore multiple perspectives: "*What I am liking about this task is that I feel I am instantly growing and developing my knowledge and understanding as a result of the continuous conversations/discussions with other students*" (web conference comment). However, students' intellectual engagement is also evident from the content of their contributions. For example, in summarising the week's discussion, one student wrote an extensive post that included detailed analysis and synthesis of material, such as in the following paragraph:

> *To sum up, many of you provided additional dimensions to the work of a classroom teacher to the definitions I provided in my initial post, acknowledging that teachers' work is quite exhaustive. As teachers' work is quite exhaustive, the main focus of this week's discussion was the role of the teacher in the classroom, and I have chosen those aspects which were common in your views, including planning, preparation, critical*

> *reflection, guiding learning, fostering interpersonal relationships, and creating the learning environment... initially I thought to discuss one aspect at a time but found it quite difficult because one aspect could not be discussed without mentioning the other. Hence, aspects of teachers' work in the classroom are interrelated and intertwined, as was evident as our discussion unfolded. Reading through each post, I found that we share a view that teachers have both moral and professionally obligatory roles, that differ between what teachers are hired to do, and what stakeholders expect them to do.* (MyLO post)

Another student, in her summary post for the week, wrote over 3,000 words and drew on 31 different academic sources. This indicates the degree of intellectual rigour, questioning, and critical thinking promoted through the task.

Social Engagement

An important aspect of social engagement is the provision of spaces and opportunities to interact with peers and with teaching staff. This unit was designed to provide multiple opportunities for such engagement to take place, including web conferencing and group discussions. Of these, the discussion group assessment was most frequently identified by students as contributing to their sense of community within the unit. As a result of working in a small group, with a task that specifically called for them to draw upon personal and professional experiences, students were actually learning more about each other. One student, for example, made the following comment to a peer: "*I have really enjoyed your postings this week. It's not often that we get such an insight into a culture other than our own. It is amazing that initially we were just names on a computer screen, and through this task we are learning about each other, and different cultures*" (MyLO discussion post).

As well as learning more about each other's culture and personal experiences, this task required students to respond to a range of perspectives on each topic, including those that were different from their own. As a result of this engagement, students were learning to reconsider their own perspective in light of this additional information. For example, one student wrote: "*We all perceive things in different ways, and can therefore enhance learning experiences for each other. When I began reading everyone's responses I realised my ideas were slightly different, my interpretation was different. I was able to see the question in a different manner*" (MyLO discussion post). Such comments show a developing awareness and maturity on the part of students: that multiple viewpoints can exist in relation to issues without the need for 'right' or 'wrong' answers. Such thinking occurred in this context due to the foregrounding of social interaction as fundamental for learning and engagement.

As well as the discussion tasks, a second design element that aimed to foreground social interaction and engagement was fortnightly web conferences. These were also highly successful in engaging students in the content and the formation of their learning community. For example, one student wrote of the web conferences: "*they are what have made this unit one of the more enjoyable and well supported units that I have ever studied!*" (web conference comment).

Professional Engagement

While this unit did not require students to develop practice-based resources or skills, it did require them to consider issues such as the role of the teacher, and how teachers work with parents and the community. As such, it sought to engage students professionally in the ideas

surrounding the immediate classroom context as well as schooling more broadly. As all students enrolled in this degree are required to maintain contact with the professional context for at least one day a week in a paid or voluntary capacity they are, in a sense, already professionally engaged. This unit leveraged this engagement through an explicit instruction to reflect on professional experiences to 'make sense' of each discussion topic. This enabled students to find connections with their professional contexts, beliefs, and values, and consider their experiences in new ways. One student wrote of this connection: "*Something I have found with this unit in particular is that I am having more conversations at school with the teaching staff (discussing this fantastic unit and our discussions) than I have had with most other units*" (web conference comment). Another student explicitly identified the role of her professional engagement in the unit in enabling her to achieve the learning outcomes more broadly:

> *I have achieved all of the goals set out for us. I believe that our weekly group discussions contributed to me being able to achieve these outcomes because we all brought our previous experience of education and our knowledge each week. Each week, I was able to gain a deeper understanding of issues within our schools... through our group discussions, I have a deeper and more knowledgeable way of viewing students, their individual learning needs and abilities.* (MyLO post)

As such, the unit was highly successful for this student, in terms of engaging her professionally, socially, and intellectually. SETL results indicate that other students found similar connections to their professional practice, with a mean score of 4.86 (where 1 = Strongly Disagree and 5 = Strongly Agree) in response to the item 'I have learned the relevance of this subject to my future profession'.

Based on the evidence collected for this research project, it is clear that the redesigned unit was effective in promoting student engagement across all elements of the Framework.

Emerging Understandings

In determining how the redesigned SinS unit engaged students across the elements of the Framework, several key understandings about designing for engagement emerged. The first significant point to note is the degree to which the different elements of the Framework are interrelated in practice. Although there are differences in terms of the skills and knowledge involved in personal engagement as opposed to social engagement, for example, it is clear that these skills and knowledge were complementary for the students in this unit. Students reported feeling more motivated to participate (personal engagement) *because* they were getting to know each other better through structured, scaffolded learning and assessment opportunities. As one student wrote: "*I have found that I am intrinsically motivated to remain engaged in the task due to the support and encouragement of fellow group members*" (student email). There were similar links between students' academic engagement and their social engagement; seeing the work of their peers encouraged them to increase their own skills to participate fully in the discussions.

Such an understanding has implications for future unit designs. This task was effective in engaging students as it was public (meaning that students could access each other's assessment work), social (directing students explicitly to engage with each other and to share their own experiences and beliefs), and student-directed. This provides further evidence of the importance of releasing responsibility and ownership of learning to students, and supports Leong's (2011) proposal that student engagement can be enhanced through

providing students with greater degrees of control over the learning process. There appears to be great benefit in seeking to develop tasks that will enable students to engage professionally, personally, and socially, as well as the more traditional intellectual and academic engagement.

The second key understanding that emerged from this project was the importance of developing a learning community in supporting student engagement. In this unit, this learning community largely centred on the discussion group assessment task, and again, the deliberate effort to engage students beyond the traditional intellectual aspect of a task appeared to play a key role in the effectiveness of this learning community. Such learning communities do not simply engage students socially, either; in this unit, students reported that they needed to have the requisite communication skills to engage in the task (academic), the motivation to participate (personal), a clear link to the profession to 'ground' their discussions (professional), and meaningful content to explore (intellectual). Through this broader engagement, students came to know each other's beliefs, experiences, and context, and even reflect on their own in a new light. This is further support for the importance of forming learning communities in successful online teaching and learning (Beachboard et al., 2011; Lehman & Conceição, 2010; Leong, 2011), and offers some key insights into how such communities might be established, around the elements described above. In developing fully-online units, it is important to note that such learning communities do not simply emerge; rather, they must be designed for and scaffolded, through teaching and assessment activities (Krause, 2005), such as those explored in this unit. Results from this study suggest that staff and students can participate in such communities by establishing and maintaining an intellectual, academic, social, personal, and professional presence in the online environment.

Conclusion

This study aimed to document the ways in which students engaged in the unit SinS, and to explore the potential application of the Engagement Framework in unit design, delivery, and assessment. Based on students' participation in this unit, it is reasonable to state that they did indeed engage with the redesigned unit, and that their engagement was personal, academic, intellectual, social, and professional. Further, students' overall participation in the unit was maintained across the semester as a whole, and represented a higher degree and quality of interaction with peers than in previous iterations. Fundamental to the success of the revised unit was the introduction of a small-group, student-directed discussion task for assessment, as this task enabled students to take responsibility for their own learning, explore their own and others' viewpoints, draw on personal and professional experiences, and contribute actively to the development of a learning community. Other activities within the unit, such as web conferencing, also provided support for this engagement.

Based on the outcomes reported in this paper, the Engagement Framework offers a great deal to those who are seeking to enhance students' engagement and the formation of learning communities in fully-online units. Attending to this Framework in unit design enables a focus on students' overall experience of a unit, beyond thinking only about how students will engage intellectually or academically with the work. Taking seriously the challenge to engage students personally and socially was fundamental to the success of this unit, and led to deep learning for students. The Engagement Framework was also useful as a way of implementing more effective teaching and assessment within the unit, as a wider range of students' skills and knowledge were considered.

Of course, there is still much to be done in terms of understanding and measuring the potential of the Engagement Framework as a tool for unit design and delivery. How might

specific elements of this Framework be used in other disciplines? Would an element such as professional engagement have such prominence as it does in the practice-based discipline of teaching? How might the results obtained here with a relatively small and experienced cohort of students translate to larger units, or units with students who are newer to their university studies?

Despite these questions, we believe that these preliminary results do speak to the applicability of the Framework as a way of understanding, and consciously planning for, student engagement in their university studies. It would also appear that attending to student engagement may have benefits in terms of the overall quality of teaching and learning within a unit; as one student wrote in the formal SETL for this unit: "*I found all aspects of this unit to be engaging, well supported, and I have learnt so much. One of the most productive units I have done*". As online courses in teacher education (and beyond) become more prevalent, such a Framework has the potential to offer unit developers and teachers a foundation in effective pedagogy that is applicable well beyond SinS.

References

ACER. (2011). Dropout DNA, and the genetics of effective support. Research briefing, *Australasian Survey of Student Engagement, 11,* 1-18. Retrieved from http://www.acer.edu.au

Allen, J., & Clarke, K. (2007). Nurturing supportive learning environments in higher education through the teaching of study skills: To embed or not to embed? *International Journal of Teaching and Learning in Higher Education, 19*, 64-76. Retrieved from: http://www.isetl.org/ijtlhe/articleView.cfm?id=164

Allodi, M. (2010). The meaning of social climate in learning environments: Some reasons why we do not care enough about it. *Learning Environments Research, 13*, 89-104. http://dx.doi.org/10.1007/s10984-010-9072-9

Appadurai, A. (2004). The Capacity to Aspire: Culture and the Terms of Recognition. In V. Rao & M. Walton (eds.), *Culture and public action* pp. 59-84. Palo Alto, CA: Stanford University Press.

Barone, T., & Eisner, E. (2012). *Arts based research.* Thousand Oaks: Sage.

Beachboard, M., Beachboard, J., Li, W., & Adkison, S. (2011). Cohorts and relatedness: Self-determination theory as an explanation of how learning communities affect educational outcomes. *Research in Higher Education, 52*, 853-874. http://dx.doi.org/10.1007/s11162-011-9221-8

Biggs, J. (2012). What the student does: Teaching for enhanced learning. *Higher Education Research & Development, 31*(1), 39-55. http://dx.doi.org/10.1080/07294360.2012.642839

Bowen, S. (2005). Engaged learning: Are we all on the same page? *Peer Review, 7*(2), 4-7.

Brick, J. (2006). *Academic culture: A student's guide to studying at university*. Sydney, NSW: Macquarie University.

Carnevale, D. (2007). Employers often distrust online degrees. *Chronicle of Higher Education, 53*(18), A28-A30.

Chen, P., Gonyea, R., & Kuh, G. (2008). Learning at a distance: Engaged or not? *Innovate, 4*(3). Retrieved from http://www.innovateonline.info

Clarke, A. (2008). *e-Learning skills* (2nd ed.). Hampshire, UK: Palgrave Macmillan.

Coates, H. (2006). *Student engagement in campus-based and online education*. London: Routledge.

Dunn, K., & Rakes, G. (2011). Teaching teachers: An investigation of beliefs in teacher education students. *Learning Environments Research, 14*, 39-58. http://dx.doi.org/10.1007/s10984-011-9083-1

Dweck, C. (2006). *Mindset: The new psychology of success.* New York: Random House.

Edwards, M., Perry, B., & Janzen, K. (2011). The making of an exemplary online educator. *Distance Education, 32*(1), 101-118. http://dx.doi.org/10.1080/01587919.2011.565499

Hatch, J. (2002). *Doing qualitative research in education settings*. New York: SUNY Press.

Krause, K. (2005). *Understanding and promoting student engagement in university learning communities*. Centre for the Study of Higher Education. Retrieved from http://www.cshe.unimelb.edu.au/resources_teach/teaching_in_practice

Lehman, R., & Conceição, S. (2010). *Creating a sense of presence in online teaching*. San Francisco: Jossey-Bass.

Leong, P. (2011). Role of social presence and cognitive absorption in online learning environments. *Distance Education, 32*(1), 5-28. http://dx.doi.org/10.1080/01587919.2011.565495

Middlecamp, C. (2005). The art of engagement. *Peer Review, 7,* 17-20.

Moss, T., & Pittaway, S. (2013). Student identity construction in online teacher education: A narrative life history approach. *International Journal of Qualitative Studies in Education, 26*(8), 1004-1018. http://dx.doi.org/10.1080/09518398.2012.725139

Moss, T., & Pittaway, S. (2011). Moving online: Troubling (and transforming?) the pedagogy of teacher education. Paper presented at the AARE Conference, Hobart, Tasmania.

Pittaway, S. (2012). Staff and student engagement: Developing an engagement framework in a Faculty of Education. *Australian Journal of Teacher Education, 37*(4), 37-45. http://dx.doi.org/10.14221/ajte.2012v37n4.8

Pittaway, S., & Moss, T. (2006). Contextualising student engagement: Orientation and beyond in teacher education. Paper presented at the 9th Pacific Rim First Year in Higher Education Conference, Engaging Students, Griffith University, Gold Coast Campus, Australia. 12-14 July.

Reason, R., Terenzini, P., & Domingo, R. (2006). First things first: Developing academic competence in the first year of college. *Research in Higher Education, 47*(2), 149-175. http://dx.doi.org/10.1007/s11162-005-8884-4

Riggs, E., & Gholar, C. (2009). *Strategies that promote student engagement*: *Unleashing the desire to learn* (2nd ed.). Thousand Oaks, CA: Corwin Press.

Russell, B., & Slater, G. (2011). Factors that encourage student engagement: Insights from a case study of 'first time' students in a New Zealand University. *Journal of University Teaching & Learning Practice, 8*(1), 1-15. Retrieved from: http://ro.uow.edu.au/jutlp/vol8/iss1/7

Saltmarsh, S., & Sutherland-Smith, W. (2010). S(t)imulating learning: Pedagogy, subjectivity and teacher education in online environments. *London Review of Education, 8*(1), 15-24. http://dx.doi.org/10.1080/14748460903557613

Scevak, J., & Cantwell, R. (2007). *Stepping stones: A guide for mature-aged students at university*. Camberwell, VIC: ACER Press.

Stanford-Bowers, D. (2008). Persistence in online classes: A study of perceptions among community college stakeholders. *Journal of Online Learning and Teaching, 4,* 37-50.

University of Melbourne. (2007). Nine principles guiding teaching and learning: The framework for a first-class university teaching and learning environment. Retrieved from: http://www.unimelb.com.au