# A clue, a quest and a blog - experimenting with engagement in orientation

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*In 2007 the University of South Australia moved its orientation processes from a centralised, transmissive approach to a devolved school-based approach. This revolution in orientation was a response to emerging concerns mirrored throughout the Higher Education sector related to retention, success and quality of the First Year Experience. Schools within the Information, Technology, Engineering and the Environment Division of the University were encouraged to develop orientation activities that engaged students at social, academic and institutional levels. The aim was to engender deep and enjoyable student learning in the transition between high school and university. This paper looks at an orientation experiment in one school in 2007- its theoretical basis, design and apparent success in engaging students in transition to university.*

## *Introduction*

The massification of higher education, increased diversity of the student cohort and the changing social circumstances of our first year students have not, until recently, seen commensurate changes in the ways in which we introduce our students to their social, learning and institutional environments at university. With the spotlight now on the retention and success of students (which, in turn, filters into funding arrangements) the Higher Education sector has had much cause for introspection about the ways in which it addresses the life-cycle of its students - especially given the equally urgent imperative of research (Krause, 2005).

Pitkethly and Prosser (2001) echo the concern expressed by McInnis, James and Hartley (2000) that one third of all university students consider withdrawing in their first year of study. The work of McInnis and colleagues is regarded as seminal but is still relevant as the first year student, according to Krause (2005), pivots between three sometimes competing tensions. These are program relevancy, ‘student as client' (from the marketing and service dimensions of the institution) and 'disciplinary and academic integrity' standards required by academics.

Orientation programs for students prior to commencing their studies are used to prepare them for the demands of studying at university. Prior to 2007, incoming undergraduate students at the University of South Australia (UniSA) were given program information sessions and a series of workshops by the teaching and learning service (Learning Connection) about the university structures, how university learning was different to year twelve or secondary school learning and time management. These workshops (or lectures) were delivered by individuals to large groups of students who often came from a range of programs.

Biggs (1987 pp. 14 - 15) purports that such transmissive - 'sage on the stage' - modes of delivery do not engender the deep processing of information required for learning. Biggs, in drawing on the work of Schmeck, provides a list of requisite approaches which engender deep learning at university level. These include student interest and enjoyment; the necessity for meaning in a task; relevance to the individual and wider world and the ability to theorise or form an hypothesis. There is also recognition that the teaching and learning issues specific to program-related cohorts of students need to be determined not by teaching and learning development units, but at the school and faculty level (Smith, 2006; Pitkethly & Prosser, 2001).

Therefore, in 2007, a university-wide change in orientation was mandated with schools being individually responsible for organising program or school-specific orientation. Different 'experiments' in orientation were conducted in each of UniSA's four Divisions. In the Division of Information, Technology, Engineering and the Environment (ITEE), staff were required to integrate academic orientation with social and institutional orientation. They were asked to take a more problem based approach in their orientation and bring their students into the social 'fold' of their schools. This paper describes one experiment with the School of Computer and Information Science (CIS) which involved collaboration with Learning Connection and the UniSA Library. This experiment became known as the CIS Quest and early evaluations suggest a promising enhancement in the ways in which students (and staff) have engaged with orientation.

*What is engagement?*

It is generally agreed that without engagement, a learner fails to connect with learning and institution (Wlodowski 1999, Ramsden 2003, Pitkethly & Prosser, 2001). In higher and adult education literature, 'challenge' is referred to as an important means by which to engender engagement. Wlodowski (1999, p. 210), for example, explains how knowledge is constructed when learners are engaged through a series of 'challenging questions thoughts and actions'. Once the learner immerses themselves in the process - or flow - of the challenge, they experience a feeling of personal reward - if not joy. Also dominant in the literature are the notions of 'choice' and 'inquiry'.

Ramsden (2003) explains how 'choice' over subject matter and 'control' over the aspects of focus enable a level of understanding which results in engagement. Citing Bruner, Ramsden (2003, p. 97), highlights how 'good teaching helps students to understand the essence of scholarship'. This is achieved by providing opportunities for students to 'learn and practise the art of inquiry'. Ramsden takes the process of engagement a step further where the learner has scope for creativity in individual expression and freedom to choose the time and method of learning. 'Diversity' is also an important part of engagement - both in the range of activities offered and also in recognition that our students are diverse. Bonk and Zhang (2006) argue that building a range of activities (reading, reflection, displaying, doing) ensures that the full range of students in our diverse classrooms are engaged in their learning.

At university, it can be argued that there are three clearly defined points with which students must be able to experience these levels of engagement in order to stay and succeed. Krause (2005), who gives us a starting point for defining these three levels, found:

> Australian undergraduates who were engaged with peers, academics and the institution as a whole were also most likely to: express satisfaction with their experience; report higher levels of achievement than their less engaged peers; and indicate clear plans to persist with their study at university.

For the purposes of this paper, we would like to propose that these three levels be viewed as interconnected organisational 'cogs' which are the *social*, the *academic* and the *institutional* (Figure 1). We also propose that these cogs are concomitant and inseparable – one driving the other in perpetual motion. The student starting at university must be provided with orientation to all aspects in order to be able to engage fully.


**Figure 1: Organisational cogs for first year engagement**

Engaging with the three cogs

In 'The First Year Experience' literature, student engagement with the social, academic and institutional cogs is described in depth. Although different authors place a different emphasis on each, it is widely acknowledged that students must have quality engagement with all three in order to succeed and prosper in the tertiary education setting.

For the purposes of this paper, the 'social' describes interpersonal relationships formed at university. These relationships may be peer-to-peer or teacher to student. Briefly, they are the relationships which manifest in study and group work as well as the friendships on campus which can yield important emotional support.

The work of Wilcox, Winn and Fyvie-Gauld (2005) places a greater emphasis on the social than the academic or institutional cogs, seeing engagement of students with their social environments as a key factor in retention and success. They highlight the importance of 'making compatible friends' early on to provide emotional support during term time. In addition, they highlight the quality of relationships between staff and students. They describe a 'relative paucity of analysis of the concepts of social integration and social support in the retention literature' (p. 709) particularly in relation to the informal rather than academic social networks.

Krause (2005) joins others in promulgating the 'social', pointing out that not only do students *need* social connectedness, they are *used* to it and that the most successful orientation programs are those which 'enable students to build on sustained links with academic staff and each other through peer collaboration and peer mentoring' (p. 7). One of the benefits of this approach, according to Krause, is that it increases the likelihood of students seeking support from peers (or staff) when they face difficulties in a subject.

The ‘academic’ describes the learning culture of a university. This is about adapting to discipline-specific ways of thinking, speaking and writing which are usually quite different to those encountered at school (Ballard and Clanchy, 1988). Students find that they are also expected to operate as independent adult learners in the new environment. Lowe and Cooke (2003), while acknowledging the importance of the social, underline these essential cultural adjustments. The authors found over one third (in a study of 691 students) reported difficulties in keeping up with the academic demands of their courses including workload and ‘academic pace’ (p. 63). Almost a third (31%) also reported difficulty with the more independent style of learning required at university. They link this to the focus of content over skills development in university teaching (p. 53). Their findings link to a later study by Byrne and Flood (2005) who found that 25% of 129 accounting students ‘did not feel confident in their ability to handle the course content or to pass all their examinations on the first attempt’(p. 121).

The formal structures of the university are the ‘institutional’ cog– the campus layout, the facilities and administrative systems. These are cultural as well because they are linked to centuries-old traditions of faculty, hierarchies and ‘ways of doing’ which are quintessentially ‘university’. Duff and Quinn (2006) also point to more recent institutional imperatives in some universities for engagement with online environments, another demand on new students. The recognition of the integral and important nature of the three cogs to first year success and retention underpinned the CIS Quest experiment at UniSA in February 2007.

*Engaging first year students in Computer and Information Science*

The refocussing of student orientation at UniSA builds on a 2006 First Year Experience project involving two ITEE schools, Computer and Information Science (CIS) and Electrical and Information Engineering (EIE). At the end of 2006, the Dean Teaching and Learning encouraged the schools to adopt a problem-based learning activity as part of their orientation (inspired by Curtin's (2004) *How much does a building weigh?* activity for new engineering students). This was seen as a means to immerse new students in an activity related to their chosen field, shedding transmissive approaches to orientation and improving student satisfaction and retention. A reference group of CIS academic and professional staff, Learning Connection and the library chose a variation on this problem solving theme. A series of activities were developed involving program-based groups of students who were led by second and third year student mentors. They visited important campus sites, participated in activities, collected clues and shared their travels in a group-designed Weblog (blog). Collectively the activities became known as the CIS Quest.

It is also important, at this stage, to acknowledge the work of Jarkey (2005) at Sydney University who reports a similar approach to the social, institutional and academic orientation of commencing students in the Faculty of Arts. Jarkey’s approach required students to photographically document their orientation journey and provided a similarly mentor-led induction to faculty staff and systems.

The CIS Quest had to engage students in authentic activities relevant to academic, social and institutional life. It was essential the activities were developed by first year teaching staff. The agreed approach was designed to prompt questioning skills and provide opportunities for students to collaboratively reflect on their answers. They would, for example, be required to participate in an online discussion in a first year course homepage (*Communication for*

*Information Systems and Technologies*) in which some of the Quest clues were hidden. They would also be required to engage with Java in another (and traditionally demanding) first year course *Programming in Java.* To introduce students to Java, a course coordinator wrote a Java-based program to enable students to crack a code for prizes. The Quest could not be completed without student awareness of the resources and services that underpin their academic program.

*Key elements of the Quest*

The CIS Quest took place over three days but students were only required to attend on two days (with a day in-between to work on their group blog). The Quest was complex in its design, but simple in its execution. It was made so through six key elements which were designed to be social, academic and institutional and also fun. The six key elements in the CIS were the group work, mentors, Quest booklet, online discussion, Java 'code cracker' and the blog.

Group work

Central to fostering feelings of social engagement was organising the 79 first year CIS students into their program groups. These groups would move around amorphously so that students were no longer heterogeneous isolates moving around from orientation workshop to orientation workshop. By week one, they would know the names of between six and ten other students in their program groups. The value of the groups was reflected in the ways in which they named their blogs. These included the *Koalas on Bicycles* group or *Baked Beans on Toast* group. The groups had a clear social as well as academic function and – led by mentors – the incoming students experienced the recognised benefits of peer support listed by Bandura (1997 p. 173).

The CIS mentors

From its inception, the use of well-trained volunteer mentors was integral to the CIS Quest. Training was provided by Counselling staff at Learning Connection, focusing on what would be required during the Quest, as well as the skills required to be a successful mentor. As a result, they were awarded a certificate of completion of training and participation. Mentors were assigned to lead groups of six to 10 commencing students in Quest. Their role included explaining terms (eg 'Computer Pools') and presenting relevant information in a way would be meaningful to the students. They provided the new students with a further immersion in the social. The mentors offered effective and enthusiastic models of thinking and behaviour and social learning (Bandura 1997 p. 173).

The Quest booklet

A CIS Quest booklet provided the locus for a series of questions which orbited around the three cogs of engagement. This was where the students would engage mostly with the 'academic' and the 'institution'. For example, one of the questions required students to do the following task:

> Using a computer in the **library** or **computer pools** go to your **myUniSA** to find out what you need to do in your **first assignment** in one of the courses you will be doing in study period 2.

This question took the students to institutional and learning entities (the library and/or the computer pools); introduced them to their institutionally unique online student portal, *MyUniSA*, and required them to analyse one of their first (and authentic) academic tasks. This was one of 15 similarly challenging tasks - where mentor guidance made a big difference.

### Online discussion

As online discussions are a feature of learning in first year of CIS programs, the Quest used this tool to get students working online quickly and productively. The course electronic discussion board for *Communication for Information Systems and Technology* provided an online location which provided a course coordinator welcome to the students, linked to a sample blog, a blogging tool, more Quest questions and the intriguing Java code cracker.

### The Java code cracker

The Java-based code cracker provided the Quest with a sense of intrigue. Java features in one of the first year foundation courses *Programming in Java*. There are no pre-requisites for this course and as such many students come in without any programming knowledge, skill and in some cases even awareness of what a Java program is. Inclusion of this activity reinforced the academic aspect of the Quest.

Students were introduced to the concept of cryptography with a Help link on the discussion board page to whet their appetites for this interesting aspect of computer science. Students were given an added incentive to visit the campus locations outlined in the Quest booklet by knowing that there would be four pairs of numbers displayed at various sites around campus (including one pair situated in the course online discussion). Up to 24 combinations of the pairs were entered but only one of the combinations would provide the key to cracking the code. (When the code was cracked, the program displayed a voucher to go into a draw for a team lunch.) This exercise required students to visit important sites such as the Library and CIS research labs. As undergraduates often do not know what research is conducted in CIS, visiting the labs served the joint function of advertising the school's research programs and inspiring students with the possibility of a future research career.

In addition to the code cracker, an academic within the school constructed a Java-based selection program that was able to randomly choose the name of one of the new students. This program was projected in a lecture hall on the final day after the presentation of the blogs. The staff member initiated the program, which with high suspense gradually flicked through the names of the participants eventually stopping on one lucky student who took home a MP3 player. The academic then demonstrated the back end of the program and explained by the end of the first study period, the students would be writing their own Java programs. This event demonstrated the use of a professionally-relevant skill and expectations of learning.

### The blogs

If the Java code cracker provided the intrigue, the blog was the creative 'jewel in the crown' which enabled students to explore all facets of the CIS Quest with humour, creativity and candour. Students were asked to bring along their phone or digital cameras and were also supplied with a folder of graphics from the marketing arm of CIS. Reflected in the blogs was strong evidence of group cohesion through photographs; accounts of their journeys through the Quest booklets and some 'blue sky' suggestions about the future of mobile phones. Some

blogs were short, some were long and all were comprehensive and distinctive. For some students it was their first time blogging, while others were 'old hands' (Figure 2).

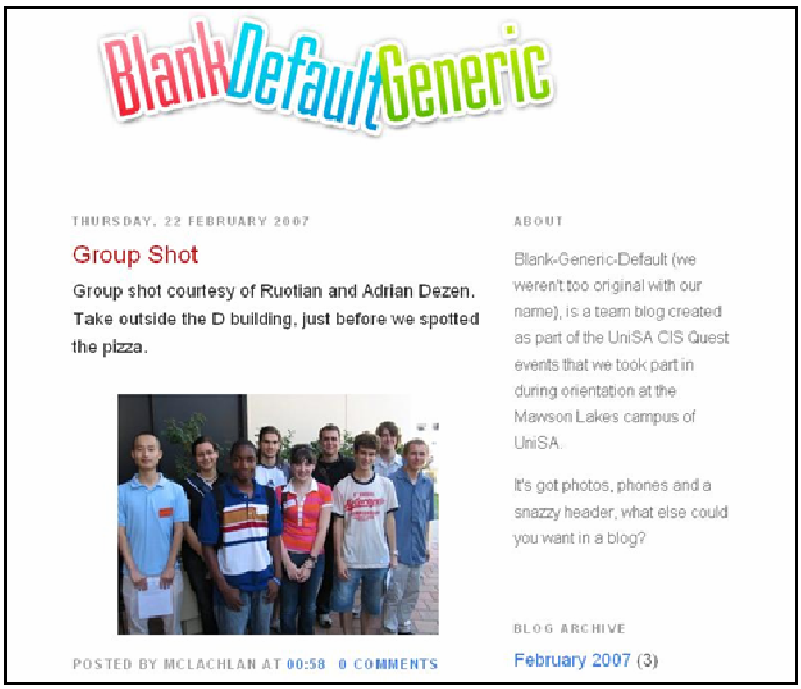


**Figure 2: Image from winning blog – *Blank Default Generic***

Once again, prizes for the blogs were group prizes - lunch for one winning team of eight and theatre tickets for the other.

*Discussion and Conclusion*

With the rethinking of orientation to align it more with student programs, we were provided a unique opportunity to experiment with new and deep methodologies to engage a large cohort of incoming students – namely computer science students. The CIS Quest aimed to engage students with the three cogs of university life – the social, the academic and the institution. Socially, the Quest aimed to have students making friends and forming networks at the very start of their studies. Academically, it aimed to familiarise students with a selection of teaching and learning aspects which would get them off to a flying start with their first assessments. Institutionally, the Quest aimed to give a good impression about the School, its activities and research in order to develop trust and help students to feel they had made the right choice. Figure 3 offers an elaboration of the three cogs presented in their most basic form in Figure 1. It shows where the elements of the Quest sat in terms of the institutional cogs. It is hoped that through directly addressing these, students will achieve better outcomes.

As this was seen to be a pilot and potential model for other ITEE orientation programs a multi-faceted approach was taken to evaluation. The CIS experiment was evaluated through anonymous surveys of students, assessment of the quality, creativity and collaboration evident in the student blogs and review of the retention rates of students within the school to census date over the last five years.

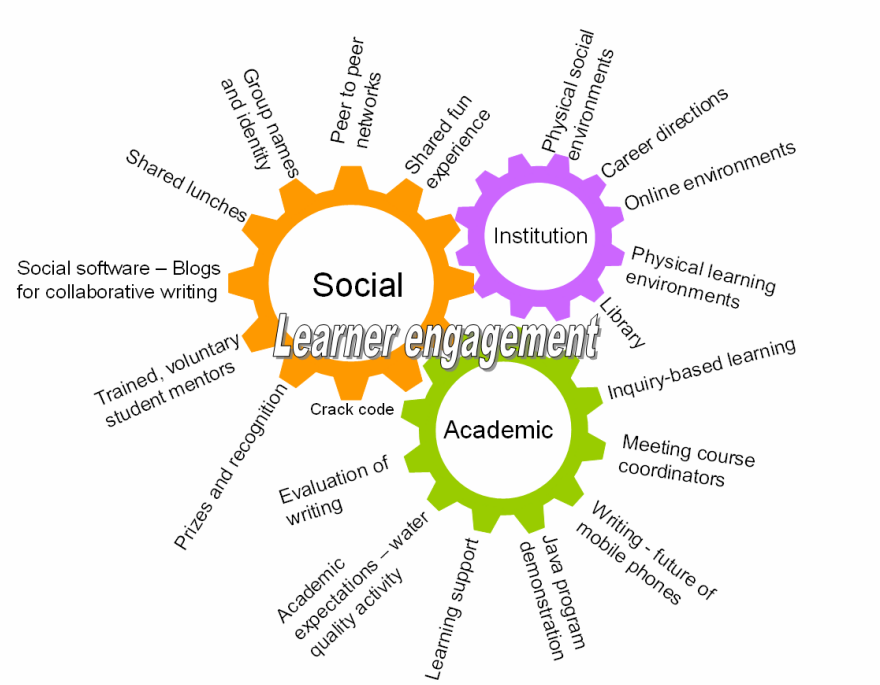


**Figure 3: The CIS quest activities aligned with the three cogs of learner engagement**

From a social perspective, the Quest was a way to foster the vital and productive connections described by Wilcox and colleagues (2005) between the students and their teachers, school, resources and careers. Fostering the social networks as a primary part of student induction may mean students can more readily support each other academically and socially because they have already established peer-to-peer working relationships. We will be looking closely at measures such as positive shifts in grade profiles and overall success of this cohort.

In anonymous surveys 99% of respondents (n=53) to the CIS Quest evaluation agreed 'the CIS Quest gave me the opportunity to meet other students and staff members'. This means students were able to form social networks before starting. The social dimension was reinforced through the use of the mentors with most respondents (77%, n=53) agreeing they 'found mentors provided useful insights into commencing at UniSA'.

From an academic perspective, only 66% of students indicated the CIS Quest gave them an 'opportunity to learn what University-style learning is about'. However a further 30% were 'neutral'. This perhaps reflected that the students had not, to date, any benchmarks with which to compare the Quest or what university learning actually entailed.

The fact that 100% of the students participated in the blogging exercise was rewarding to all the CIS Quest team. The students approached their blogs with enthusiasm, making use of the graphics supplied by CIS Marketing, providing comprehensive academic discussions about ‘the Future of Mobile Phones’ (complete with annotations and photos) and entertaining narratives about their journey through the Quest. In the blogs, they referred to their mentors by name and reflected on their blogging experience.

In the blogs and other facets of the Quest, we saw the embedding of the qualities of engagement proffered by Wlodowski (1999), Ramsden (2003) and Bonk and Zhang (2006). The students were challenged by having to complete a multitude of tasks (group work, the

Quest) but which became evident in the blog. The activities were diverse and students had choice over the order in which they were undertaken and the creative form of their blogs.

A preliminary measure of success is related to retention rates. Retention rates of commencing first year undergraduate students have been problematic in the school of CIS for several years. In 2006/7 a University teaching and learning grant was used to address this through researching retention issues, developing program-specific support for commencing students, academic and professional staff development and, most recently, improving engagement of students in orientation. Figure 4 shows the change in retention rate of commencing undergraduate CIS students. The data presented for 2007 is preliminary and likely to decrease over the coming year so a proper comparison cannot be made just yet. However, given the data was taken at the Census Date (March 31, 2007) the indications are very promising.

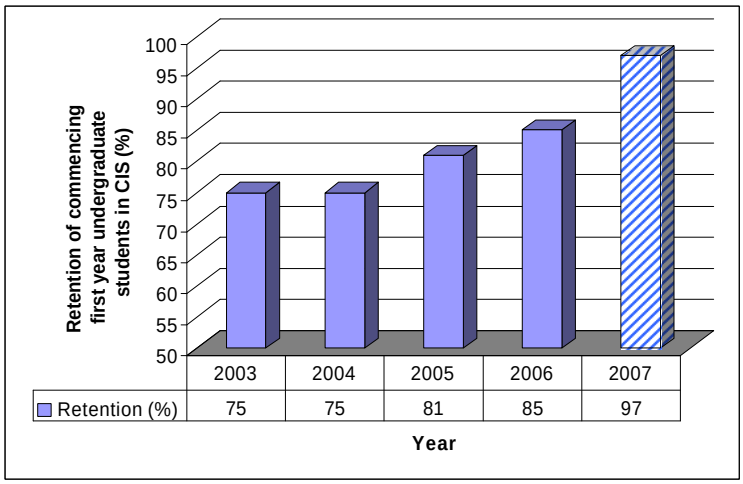


**Figure 4: Retention rates of commencing undergraduate CIS first year students.**
(Note: The data for 2007 is preliminary as at the census date, March 31, 2007).

The implications of this approach for UniSA are that it can be embedded into other schools and programs - tailored to the social, academic and institutional distinctiveness of each School. Pitkethly and Prosser (2001 p.186) highlight how the specificity of the university campus or school, which requires 'action appropriate to its own situation'. While the Quest concept – with its questions and intrigue - could be applied in any discipline, the specificity of the activities would need to be tailored to the different professional areas. For example, journalism students might be required to interview staff and produce a news story and video blogs; business students might be required to collect information to help solve a case study.

While the 'passion, enthusiasm and excitement of small groups of...student support staff or coordinators of large first year courses is one thing' (Krause, 2003), the ultimate measure of the CIS Quest will be its absorption into the orientation infrastructure of the institution. This is supported by Pitkethly and Prosser (2001, p. 186) who conclude a coordinated…university-wide response to transition…will improve the learning experiences of all first year students'. This process must be collaborative and result in all three cogs working together – social, academic and institutional. This will achieve student engagement, retention and success.

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