



University of
Western Sydney
Bringing knowledge to life

Student Learning Unit

BIENNIAL REPORT

2009/2010

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About SLU

Celebrating 20 years of student learning development at UWS

In 1990, the Department of Employment, Education and Training's landmark study¹ *A fair chance for all: higher education that's within everyone's reach* ushered in an era of access and equity in higher education based on principles of social justice. One of the key issues that was identified for these new students was a lack of study skills and Australian universities responded by employing learning development support staff to help acculturate these new students to the university environment. In this climate, the Learning Units at the three network members of UWS (Nepean, Macarthur, Hawkesbury) initiated programs which were to become fairly standard fare in the language and learning community. These included the very successful pre-entry enabling programs such as UniStart and MacStart, study skills workshop programs and individual consultations.

In 1992, a NSW Special Interest Group of tertiary language and learning advisors was formed. Over the next decade, discussions shifted towards new understandings about the acquisition of tertiary level language, and the need to work more collaboratively with discipline lecturers, a debate driven as much by economic efficiency as by access and equity.

In 1994, the annual Language and Academic Skills conference entitled 'Integrating the Teaching of Academic Discourse into Courses in the Disciplines' bore testament to the growing recognition that learning language is inextricably tied to disciplinary discourses. At UWS, learning advisers were already working collaboratively with programs in which students were identified as being 'at risk', including Nursing, Engineering, and the Early Childhood TAFE entry program.

¹ Department of Employment, Education and Training (1990). *A fair chance for all: higher education that's within everyone's reach*. Canberra: Author.

During the 1990's, UWS learning development staff made some notable contributions to the national scene by:

- organising one of the first Australian training opportunities for supplemental instruction (Peer Mentoring);
- establishing the LISTSERVE (electronic discussion list) 'Unilearn' for the national professional association;
- beginning the now internationally recognised work in supporting higher degree research writing;
- expanding the provision of mathematics support.

During the first decade of the 21st century, UWS learning development staff saw a time of change and in some ways turmoil, as numerous reviews sought ways to deal with an expanded access agenda in times of economic constraint. Nevertheless, the Student Learning Unit continued to deliver responsive and high quality programs, and achieved national recognition through three ALTC citations for:

- Higher degree research writing
- Numeracy for nurses
- UniStep transition program.

Currently, the unit is jointly leading an ALTC Priority Project to examine the experiences of students entering UWS on the basis of a VET qualification. The unit's Peer Assisted Study Session (PASS) program, which achieved a commendation in the VC's excellence awards, is undergoing an extensive scale up across the university as part of the First Year Experience initiatives.

Over the past few years, evidence has been emerging that suggests that the widening participation agenda has, as yet, made little inroad into providing access to university for students of low socio-economic backgrounds. The Bradley Review of Higher Education (2008) has again brought issues of access and equity to the forefront of the Higher Education agenda. For the Student Learning Unit this has resonated with two decades of contribution and achievement.

Are these two decades to end on the same note as they began? Perhaps not. One important change from the work of the 1990's is that back then universities were working to 'fix' students who had been admitted to higher education. Now we are working to change universities so that they may be better able to respond to the condition of universal education.

Dr Janice Catterall
Director, Student Learning Unit

Overview

The Student Learning Unit (SLU) consists of a small group of academics who work with each of the Colleges to develop student learning across UWS in academic literacy, mathematics and learning skills. Its services include:

- The PASS program
- Transition programs
- Collaborative teaching partnerships with Colleges and Schools
- Workshop programs
- Higher degree research writing development
- Online resource development

To inform their practice, SLU staff members are committed to developing their theoretical knowledge and making evidence-based decisions through institutional research and professional development.

Goals

Working within the UWS mission of achievement through scholarship, teaching, learning and research, the goals of the Student Learning Unit are to:

- i. Contribute to improved student outcomes in targeted courses including in performance, progression, retention and satisfaction;
- ii. Provide quality teaching experiences that target the learning needs of a diverse range of students;
- iii. Research the interface between the learning needs of UWS students and appropriate pedagogies, and engage in evidence-based practice;
- iv. Contribute to UWS policy development in areas related to teaching and learning, transition, retention, academic literacy and mathematics;
- v. Promote Student Learning Unit services, outcomes, achievements and research through presentations, publications and grant applications.

SLU staffing and activities

The Student Learning Unit comprises 13 staff that equate to 12 full-time equivalents (FTEs). Eight (including Director) specialise in academic literacy, three (or two FTEs) in mathematics, and two in administration. This structure is depicted in **Figure 1** (on next page), which represents the organisation, position and staffing of the Student Learning Unit as of 2010.

The work of the unit is divided into three main areas:

1. Collaborative engagement with College programs (4.2 FTEs, including Head);
2. Direct delivery to students (4.8 FTEs);
3. Institutional research and development (1FTE).

A detailed account of this work can be found in the subsequent sections of the report.

The Learning and Teaching section (page 7) presents highlights of the Student Learning Unit's collaborative and direct delivery programs within the report's focus areas of first year experience, mathematics and academic literacy.

The Scholarly Involvements section (pages 41-49) contains selected contributions to the language and learning community, and a list of awards, publications and presentations that SLU staff have either attained or contributed to. These represent the research into issues that affect learning and teaching in higher education – an important role that SLU performs in the academy.

Organisational chart



Figure 1: The organisation, position and staffing of the Student Learning Unit – 2010

Learning & Teaching

In 2009 and 2010, the Student Learning Unit was involved in a number of learning and teaching partnerships with Colleges and Schools, as well as delivery direct to students and online learning. Highlights from such work are presented in the following sections:

- First year experience
- Mathematics
- Academic literacy.

First year experience

The Student Learning Unit makes a significant contribution to the UWS Strategy and Plan 2010-15: Making the Difference initiative by providing a number of first year experience (FYE) programs aimed at improving student retention and success. These programs are open to all students, and their promotion is targeted towards students who have been underrepresented in higher education, and who are enrolled in programs with high failure rates.

Specifically, these contributions include such FYE initiatives as:

- The PASS program
- Transition programs
- The FYE program pilot
- The Assessment Renewal project.

The PASS program

The PASS program, which is conducted collaboratively between the Student Learning Unit and UWS Schools, runs in units that students tend to find challenging. SLU is responsible for the coordination of the overall PASS program, and the training and monitoring of PASS facilitators. Students who have successfully completed a unit in which PASS is running are trained as PASS facilitators. These facilitators provide academic and social support in one-hour, non-compulsory study sessions that are run weekly throughout the semester for students currently enrolled in the unit.

PASS is open to all students studying in the unit who want to improve their understanding of course material and their academic performance. The PASS facilitator creates a collaborative learning environment in which students work together to address both study strategies and understanding and consolidation of course content. Although the PASS facilitator guides the session, the attendees determine its weekly focus. Attendance at PASS does not replace tutorials or lectures, but rather it supplements them by providing the opportunity for students to review, consolidate and clarify the course content.

The PASS program has become an integral element of many students' experiences at UWS. It has continued to expand each semester, increasing from five units in Autumn Session 2007 to 29 units in Autumn Session 2010 with a presence in most Schools. **Table 1** below shows this development over the past four years.

Table 1: Scale up of the PASS program 2007 – 2010

SESSION	CAMPUSES	SCHOOLS	UNITS	FACILITATORS	ATTENDANCE*
Autumn 2007	4	4	5	13	214
Spring 2007	6	5	8	19	294
Autumn 2008	6	6	12	27	757
Spring 2008	6	8	14	28	696
Autumn 2009	6	9	19	31	1161
Spring 2009**	5	9	21	34	1345
Autumn 2010	5	11	27	48	1984
Spring 2010	5	12	29	48	1609

* Attendance refers to the numbers of individual students who attended PASS. It does not include students who attended PASS more than once per week

** Since 2009, PASS has consolidated to five main campuses.

Many of the new PASS facilitators are students who have benefitted from attending PASS themselves and who are keen to contribute to enhancing other students' experiences at UWS. Where possible, most facilitators continue in their role for the rest of their degree and many attest to the benefits of the role for enhancing their career opportunities.

"Being a PASS facilitator has certainly done wonders! I can say for certain that I can confidently speak in front of a very large crowd. In terms of time management and organising skills it is also a benefit. Also for team / group work and communication skills.

These are all important aspects for any career, and PASS backs you up in these claims in the resumé. My job prospects have substantially improved, with praise from current managers at work and many offers elsewhere."

PASS facilitator

Supporting UWS strategic directions

The PASS program has become a significant engagement and progression strategy at a number of Australian universities. Research has shown that participation in the program contributes to both student retention and success rates. In the UWS context, the PASS program is an important initiative that clearly supports two of the UWS strategic goals by:

- i. providing a high quality, student-centred experience at UWS to improve student success and graduation rates (see **Table 2** on next page)
- ii. ensuring that UWS students 'learn to learn' and graduate with the ability to participate actively and responsibly in a changing world.

These two UWS strategic goals, therefore, are in complete alignment with the aims of the PASS program, which include:

- Improving student outcomes in units which are perceived as difficult by students.
- Enabling collaborative learning, which focuses on students 'learning how to learn' in their discipline areas, and which is facilitated by students for students.

Table 2 shows the average marks that students attained in an Autumn 2010 PASS facilitated unit – Principles of Economics. Typically, the percentages were higher when students attended PASS than when they did not.

Table 2: Average marks attained in Principles of Economics Autumn 2010

ALL STUDENTS	ATTENDED NO SESSIONS	ATTENDED LESS THAN 4 SESSIONS	ATTENDED MORE THAN 4 SESSIONS
52.23%	51.67%	54.77%	59.22%

"Students do clearly benefit. Results suggest that PASS attendance has a statistically significant and positive effect on a student's grades...it's quite clear that PASS helps students get higher marks."

Unit Coordinator, Principles of Economics

Transition programs

Transition programs are designed to help prepare commencing students to gain and develop the necessary academic skills for their university studies. The Student Learning Unit offers a range of such programs, and they include:

- Academic Preparation programs
- UniStep enabling programs – literacy & mathematics.

Academic Preparation programs

Academic Preparation (AcPrep) programs aim to provide students with an opportunity to acclimatise to a new environment, to meet other students and to gain some understanding of expectations at UWS. They are offered to commencing students in different formats:

- Two-day
- Part-time
- International
- Postgraduate.

In 2009 and 2010, all programs were offered in Orientation Week, and focused on developing confidence in adjustment to the UWS environment, by exploring such topic areas as academic literacy, study skills and career advice. Similar programs were also offered to the mid-year intake. The Student Learning Unit coordinated each of the programs, and collaborated with the Counselling Unit and Careers and Cooperative Programs in presenting each of the programs.

Table 3 (on next page) shows that the overall program attendance figures were higher in 2009 compared with those in 2010. The lower numbers for the 2010 Two-day program can be attributed to promotional issues. Whereas, for the Postgraduate program, these may be as a result of the newly established online alternative – *Academic Preparation for Postgraduate Coursework Students*. The higher numbers for the 2010 International program, however, are directly linked to a well-targeted promotional drive.

Table 3: Academic Preparation program attendances 2009 / 2010

	NUMBER OF STUDENTS	
	2009	2010
ACADEMIC PREPARATION COURSES		
Two-day	226	201
Part-time	25	25
International	88	102
Postgraduate	41	28
Total AcPrep Attendances	380	356

UniStep enabling program – Academic literacy

The UniStep Academic Literacy program is a core component of the SLU first year teaching plan designed to help UWS students develop the necessary academic writing skills for a smooth and successful transition into university. Its aim is not only to introduce students to the different types of writing they will encounter during their studies at the level expected for university, but also to build their confidence before the session start, since many are either first in family or mature-aged students returning to study after a long period away.

"As a mature age student I had quite a bit of concern about my ability to write an essay, but after having done this course I now go confidently on my way."

On completion of the unit, students would have:

- attempted to write several academic genres;
- received immediate feedback on any written work produced;
- developed oral and participation skills for group / tutorial presentations;
- familiarised themselves with using UWS IT facilities and the e-learning technology (UWS) that underpins their academic coursework;
- received guidance from the UWS counselling service on time management in order to survive the pressures of university life;
- understood discipline issues related to sustainability.

UniStep literacy 2009 / 2010

In 2009 and 2010, UniStep was offered in both February and July. In February, nine classes – seven daytime (eight-day, 40-hour program) and two evening (seven-evening + one Saturday program), ran on four campuses:

- Bankstown (2 daytime)
- Campbelltown (1 daytime)
- Parramatta (2 daytime and 2 evening)
- Penrith (2 daytime)

In July, a reduced daytime class (five-day, 25-hour) was offered at Parramatta campus only.

Although open to all UWS students, the 2009 and 2010 UniStep sessions targeted mature-aged students, those with low ATARs, articulating from VET or TAFE, or entering via work experience through various promotional means to publicise the program. This targeted promotion saw an increase in student registrations for the program from 240 in 2008, to 349 in 2009 and 364 in 2010. Furthermore, students' overall satisfaction levels for the revised UniStep program increased from 92% in 2008 to 98% in 2010.

UniStep enabling program – Mathematics & statistics

The UniStep mathematics and statistics program is designed to give new and continuing students at UWS the opportunity to address and overcome the limitations they have in their preparedness for undertaking mathematics and statistics at the tertiary level. The program's aim is to develop in students the assumed mathematical knowledge and skills required for the unit/s of their degree course. Further, it aims to build a perception and confidence in students that they have the capacity and ability to learn, understand and master complex mathematical and statistical concepts. As such, the program provides an excellent opportunity for students to facilitate their successful transition into their first unit of mathematics or statistics.

The program targets the increasing proportion of students who have studied school mathematics at the HSC general level or who have a low level of achievement in HSC mathematics. It also targets students with no recent involvement in studying mathematics or statistics. The program runs in late January and February before the commencement of the Autumn session.

UniStep students are given the opportunity to construct an individualised program of mathematics and/or statistics preparation by selecting from a suite of bridging courses in algebra, statistics, trigonometry and calculus. Students select from this suite based on, firstly, their previous level of mathematical achievement and, secondly, the required mathematical knowledge for their Level 1 units in mathematics or statistics at UWS.

UniStep mathematics and statistics 2009 / 2010

In 2009 and 2010, the program consisted of the following six courses (with approximate allocated hours for each course given in brackets):

- Algebra 1 (16 hours)
- Algebra 2 (8 hours)
- Trigonometry (6 hours)
- Calculus (9 hours)
- Engineering Maths (23 hours)
- Statistics (16 hours).

The Algebra 1 and Statistics courses were taught in a workshop format with about 25 students per class, while the other courses were taught in lecture / tutorial mode. Except for the Statistics course, all courses had streamed classes and lectures to ensure students could learn at their ideal pace.

The three SLU mathematics staff co-ordinate and teach these courses along with up to ten casual teaching staff who have extensive mathematics teaching experience in the upper secondary, TAFE and university sectors. The attendance figures for all courses and campuses in 2009 and 2010 are presented in **Tables 4 and 5** (below). Although exact numbers are difficult to compute overall because students usually attend more than one bridging course in the program, it is estimated that at least 300 students attended in both years.

When comparing the UniStep mathematics and statistics program attendances at Parramatta campus with those at Penrith, **Tables 4 and 5** show that there was an increase in numbers from 2009 to 2010 at Parramatta campus but a decrease at Penrith. This decrease may have been due to promotional strategies for the program; namely, a lack of a mail out to School of Engineering's new students.

Table 4: UniStep program attendances for 2009 / 2010 Parramatta evening classes

	NUMBER OF STUDENTS	
	2009	2010
UNISTEP MATHEMATICS COURSES		
Statistics	116	148
Algebra 1	79	138
Total Attendances	195	286

Table 5: UniStep program attendances for 2009 / 2010 Penrith day classes

	NUMBER OF STUDENTS	
	2009	2010
UNISTEP MATHEMATICS COURSES		
Algebra 1	89	60
Algebra 2	85	35
Trigonometry	75	19
Calculus	25	24
Engineering Maths	123	73
Total Attendances	397	211

Furthermore, when comparing student attendances at a trial run of two mathematics courses at Campbelltown in 2010, although Algebra 1 had a poor turnout (17), Statistics produced a more promising one (53).

In the 2009 and 2010 student evaluations of the program, **Tables 7 and 8** show a high level of student satisfaction in the overall learning experience category. Of the six courses, five provided a learning experience that was above or equal to the UWS average rating.

Table 7: Course evaluations 2009: Overall learning experience (Likert Scale out of 5)

2009		
	Course average	UWS average
UNISTEP MATHEMATICS COURSES		
Statistics	4.4	4.1
Algebra 1	4.3	4.1
Engineering Maths	4.1	4.1

Table 8: Course evaluations 2010: Overall learning experience (Likert Scale out of 5)

2010		
	Course average	UWS average
UNISTEP MATHEMATICS COURSES		
Statistics	4.1	4.2
Algebra 1	4.4	4.2
Engineering Maths	4.2	4.2

Qualitatively, students in the Statistics course particularly valued the group work and practical activities. This suggests a validation of the course's 'learning through doing' design. The teaching and the resultant learning were also valued by many students. Students found that through the interactive approach to the course, it had practical application and facilitated team-building skills, which in turn led to intensive learning through group communication.

Students in the Algebra 1 course judged the quality of the teaching and course materials and the satisfactory pacing of the content to be the best aspects of the course. This indicates that streaming of the workshop groups combined with a well-designed curriculum and experienced teachers is working well for students.

Students in the Engineering Maths course judged the teaching and support offered in tutorials to be the best along with the subsequent learning and understanding gained.

". . . the tutors actually sit and help
their students with their
mathematics problem until the
problem is resolved."

Overall, the courses offered in the UniStep mathematics and statistics program are of considerable merit in the benefits they provided to students. Provision of a daytime program at Parramatta campus would be welcomed by its large cohort of day students but would require a significant investment in new permanent and casual staff. Provision of an ongoing daytime program at Campbelltown similarly would be welcomed but would also involve a significant investment in staffing.

The FYE program pilot

The First Year Experience (FYE) program pilot was established in 2009 in response to recommendations from a UWS strategic initiative – the UWS Students At Risk program. The Students At Risk program, which was co-sponsored by the Office of the Pro Vice Chancellor (Learning and Teaching) and the Student Support Services, was established following a 2006 Australian Universities Quality Agency (AUQA) audit. The program was an important initiative within the ‘Create a superior and engaged learning experience’ focus area of the UWS Strategy and Plan 2010 – 2015: Making the difference, and clearly aligned with one of its goals by “[creating] a first year experience that optimizes retention and success.”

The FYE program aimed to facilitate and strengthen student teacher interaction, and to enhance feedback by making it responsive to each individual student. These aims were achieved by:

- selecting units in which retention and success were poor;
- embedding and piloting two initiatives – the Student Initial Experience Survey program and the First Assessment First Feedback (FAFF) program.

The units targeted by the program were selected by Heads of School (HOS), First Year Advisors (FYA) and Deans Academic on the basis of low retention, high failure rates, and low student satisfaction. Between 2009 and 2010, the following units were selected for the pilot program:

- Engineering Computing (2009 & 2010)
- Fundamentals of Mathematics (2009)
- Physics and Materials (2009)
- Sustainable Design: Materials Technology (2009)
- Programming Fundamentals (2010)
- Introduction to Law (2010)
- Financial Accounting Application (2010).

The FAFF program – a key intervention

The FYE project had three principal interventions, and the most significant of these was the First Assessment First Feedback program (FAFF). The First Assessment First Feedback (FAFF) program offered students who failed an early assessment item a one-hour feedback session with their academic tutor. During the individual one-hour session, students who failed an early assessment item worked with their tutor to complete a self reflective exercise, to analyse assignment feedback and to set up a plan of action or a way forward with further study.

FAFF program findings

Findings from the FAFF program both aligned with and impacted on key areas of the 2009 – 2011 Learning and Teaching Plan. This impact was seen in an improved understanding of, firstly, how students engaged with learning in selective programs and, secondly, how UWS staff developed the capacity for high quality teaching in a first year program. The key findings of this program included:

- i. At risk students participating in the FAFF program were more likely to persist through the semester than non-participating at risk students.
- ii. Improved pass rates were evident in most cases, although gains in some cases were modest. In mathematics and physics, however, the program did not lead to improved persistence or pass rates. When investigating the previous school background data for the FAFF Physics and Materials cohort, less than one per cent had attempted at school the subjects considered requisite for success in this program at university.
- iii. FAFF student evaluations suggested that participation was a positive experience which greatly helped students with motivation, understanding of academic standards required, and in seeking help.

Overall evaluation of the FYE program

The overall outcomes of the FYE program pilot were positive, because the program:

- Highlighted the degree to which the first year experience was not one of sameness – that different cohorts required different levels of individual guidance from their academic staff and results suggested that multiple solutions were needed in most contexts.
- Developed a School's response to first year student experiences, in that Schools consider the first year as a legitimate and separate part of a student lifecycle which requires resurrecting.
- Aligned closely with external expert advice. The FYE program pilot provided insights into local adaptation needed to go forward with improvements for first year students at UWS and, therefore, made a vital contribution to future FYE work.

The Assessment Renewal project

In 2009, the Assessment Renewal Task Force of the College of Health and Science (CHS) adopted a new strategy to support School course teams to implement criteria and standards based assessment. A range of generic rubrics for commonly used forms of assessment were developed to provide unit coordinators with a starting template from which to develop more specific criteria and standards for their assessment tasks. As this project formed part of the CHS first year student transition strategy, the Student Learning Unit was invited to contribute expertise in academic language and literacy to the development of the generic rubrics. The SLU contributions included:

- The development of generic rubrics for written assessment genres that other members of the Task Force were not expert in teaching explicitly (Analytical Essay, Critical Review of Academic Article, Newspaper Report);
- The development of annotated models or exemplars for the written assessment genres that explicitly align with and demonstrate their corresponding criteria and standards;
- Advice on phrasing and calibrating all the generic criteria and standards to support the developmental scaffolding of academic learning and research skills at different levels of student autonomy, and particularly to support the transition to higher education;
- Suggestions for using the generic rubrics and annotated models in class to explicitly scaffold the academic literacy learning students may require to meet certain standards for written assessment.

In Spring 2010, the CHS initiated the second phase of this strategy – the Assessment and Feedback Improvement Project. The purpose of this project was to implement the generic rubrics and associated feedback practices in a selection of relevant assessment tasks in Schools across the College, and then evaluate the effectiveness of the changes from the point of view of both students and staff. The extensive data gathered from this project is presently being analysed.

Mathematics

The UWS Learning and Teaching Plan 2009-2011 highlights the importance of building the development of mathematics within university programs through:

- Mathematics Expert Advisory Group
- Undergraduate mathematics support

Mathematics Expert Advisory Group

In March 2010, a representative from Student Learning Unit was invited to join a newly formed expert advisory group to develop strategies that support student learning in mathematics. The Mathematics Expert Advisory Group (EAG), a sub group of the UWS Academic Senate Education Committee, has a membership of 17 academics who represent various stakeholders both within and outside UWS, and who meet approximately every two months.

The resulting EAG discussions found that the issues in mathematics education faced by the university were a complex interaction between the intersecting cycles of School, TAFE and UWS. It also found that a significant number of students arrived at university with insufficient mathematics for their intended course. Accordingly, the Group proposed that a Mathematics Education and Support Hub (MESH) be established to oversee the implementation of the suggested strategies, with recommendations in three main areas:

1. More direct engagement with secondary schools;
2. Further provision of support for students with insufficient mathematical preparation;
3. Curriculum modifications not only to provide alternate pathways for students with insufficient mathematics, but also to ensure sufficient mathematics to challenge the more advanced mathematical students.

(Note that the second and third of these recommendations are closely aligned with work presently carried out by SLU mathematics staff.)

In October 2010, the strategies put forward by the Expert Advisory Group were endorsed by Senate.

Undergraduate mathematics support

Undergraduate mathematics support in 2009 and 2010 included:

- Mathematical reasoning
- Nursing numeracy program 2009 / 2010
- Unit-specific mathematics and statistics workshops
- Online mathematics support .

Mathematical Reasoning

Mathematical Reasoning is designed to provide new students with an opportunity to acquire mathematical skills that they do not have but are assumed by the courses in which they are enrolled. In addition to the mathematical content of the unit, students are exposed to strategies that will help them to learn to study mathematics effectively and to lessen their anxiety about mathematics.

In 2009 and 2010, Mathematical Reasoning was offered to new students enrolling in the Bachelor of Business course. Student enrolment into this unit was linked to two other Business units – Statistics for Business and Introduction to Economic Methods.

Mathematical Reasoning was taught at Campbelltown and Parramatta campuses in both Autumn and Spring Sessions.

Nursing numeracy program 2009 / 2010

In 2009 / 2010, the Student Learning Unit mathematics lecturers worked collaboratively with several School of Nursing and Midwifery lecturers to improve Nursing students' competency in numeracy and medication calculations across the Bachelor of Nursing program. The learning and teaching strategies used to improve students' numerical competency were delivered in two modes:

1. Online – such as online diagnostic testing, online numeracy skills development, online practice assessments in medication calculations.
2. Face-to-face – such as unit specific medication calculations workshops, development of assessment items in medication calculations.

Whether the delivery was online or face-to-face, these strategies better reflected the clinical context and hence the strategies' effectiveness.

Online strategies

In 2009 and 2010, all first year nursing students undertaking the autumn session unit Nursing for Health and Wellbeing (400745) took an online diagnostic quiz and survey to establish their entrance level of numeracy skills. Students who achieved below 90% were offered the opportunity to attend a three-day Numeracy for Nurses winter workshop designed to develop the numerical skills required for understanding and performing medication calculations.

In addition, first year and third year nursing students undertaking the units Nursing and Health Breakdown (400749) and Family Health Care: Older Adult Nursing (400767) respectively had access to use a range of online practice assessments in medication calculations. These assessments were designed and developed for UWS collaboratively by SLU and School of Nursing and Midwifery staff.

In 2009 and 2010, all Bachelor of Nursing students had access to a range of numeracy resources via the *Improve your nursing numeracy* UWS site. These nursing-focused resources, such as quizzes, videos, self directed booklets, provided students with the opportunity to review and develop their knowledge and understanding of fractions, decimals, measurement concepts, metric conversion, as well as to practice medication calculations.

Face-to-face strategies

In 2009 and 2010, two winter workshop programs – Numeracy for Nurses and Medical Calculations – ran on the three Nursing campuses Campbelltown, Hawkesbury and Parramatta for first year nursing students whose entrance level of numeracy needed development. Student attendances at these workshops are presented in **Table 9** below.

Numeracy for Nurses aimed to develop the skills and understanding required for calculating drug dosages and intravenous drip rates necessary for the various Bachelor of Nursing units. These skills and concepts were developed through a range of practical activities strongly grounded in the clinical context.

In the future, students would benefit further from the Numeracy workshops if nursing lecturers could team-teach on this highly regarded program.

Table 9: Numeracy for Nurses winter workshop attendance figures, July 2009 / 2010

	NUMBER OF STUDENTS	
	2009	2010
CAMPUS		
Campbelltown	34	37
Hawkesbury	22	44
Parramatta	31	40
Total Numeracy for Nurses attendances	87	121

The Medication Calculations series of workshops, usually two or three per academic session on each campus for each unit being supported, aimed to improve Nursing students' application of their numerical skills and reasoning to medication calculations. The type and complexity of medication calculations covered in these workshops aligned directly with outcomes of the particular Nursing unit. Workshop content and scheduling, therefore, were closely coordinated with Nursing lecturers of the units being supported.

In the future, students' learning of medication calculations would benefit further if these workshops could be co-ordinated to take place in the Nursing School's clinical laboratories rather than in general teaching rooms.

Total workshop attendances for various units are presented in **Table 10**.

Table 10: Medication Calculations workshop attendances July 2009 / 2010

	NUMBER OF STUDENTS	
	2009	2010
BACHELOR OF NURSING UNIT		
Nursing and Health Breakdown (400749)	-	95
Medical Surgical Nursing 1 (400753)	-	98
Medical Surgical Nursing 2 (400757)	106	141
Family Health Care: Older Adult Nursing (400767)	-	250
Total Medical Calculation attendances	106	584

At the end of 2010, ethics-approved research into this collaborative numeracy program aims to evaluate the effectiveness of the above teaching, learning, and assessment strategies through an analysis of the research data.

Unit-specific mathematics and statistics workshops

The mathematics lecturers at the Student Learning Unit provide regular unit-specific and topic-specific support workshops for various mathematics and statistics subjects during the Autumn and Spring Sessions across most campuses.

Since the workshops are attended by students who wish to develop their knowledge and skills in algebra, statistics, trigonometry or calculus in order to have a deeper understanding of the mathematical content they encounter in their degree courses, the aim is to develop students' confidence, independence, learning skills as well as mathematical understanding and concepts for the mathematically based unit(s) in which they are enrolled.

During 2009 and 2010, eleven mathematics and statistics subjects were supported through regular workshops that attracted more than 1,800 student attendances (see **Table 11** on next page for a breakdown of this figure). In most cases, the mathematics or statistics unit for which students sought support was their first such unit undertaken at a university level.

Although support workshops were linked to specific units, they ran adjunct to the units' time-tables, hence students often found it hard to attend them. As a result attendances at some workshops were patchy leading to a poor use of SLU mathematics lecturers' time. In the future, therefore, new strategies for the programming and staffing of these diverse range of workshops may need to be considered.

Table 11: Unit-specific mathematics and statistics workshop attendances

	NUMBER OF STUDENTS	
	2009	2010
UNIT-SPECIFIC MATHEMATICS WORKSHOPS		
Discrete Mathematics (200025)	-	2
Fundamentals of Mathematics (200191)	213	239
Introduction to Economic Methods (200052)	80	-
Mathematical Reasoning (300691)	29	20
Mathematics for Engineers Preliminary (300743)	-	63
Mathematics for Engineers 1 (200237)	70	90
Mathematics for Engineers 2 (200238)	25	-
Quantitative Techniques (200182)	12	-
Sub-total	429	414
UNIT-SPECIFIC STATISTICS WORKSHOPS		
Quantitative Research (400148)	-	46
Statistics for Biometry (200263)	45	64
Statistics for Business (200032)	194	70
STATISTICS WORKSHOPS		
Statistics Topic	118	105
Statistics General, Test & Exam Review	190	138
Sub-total	547	423
Total mathematics & statistics attendances	976	837

Online mathematics support

In addition to the face-to-face workshop support for various units and topics, SLU mathematics lecturers provided online mathematics support materials for some units in 2009 and 2010. This online learning support developed from the two following UWS websites:

- Improve Your Maths
- Improve Your Nursing Numeracy

Improve Your Maths website

Improve Your Maths is an online learning website on UWS. It has a range of mathematics and statistics resources (such as quizzes, booklets and workshop notes) that offer students the opportunity to gain many of the assumed skills and knowledge required for the study of mathematics and statistics at UWS. The site not only contains resources designed by SLU lecturers, but it also draws on selected resources (such as videos and online tests) from other university websites to further extend the range of preparatory mathematics and statistics topics for students at UWS.

Data from the website's tracking tools over a twelve month period (from 1/2/2010 to 31/1/2011) showed that student usage was significant. Forty one students spent between ten and sixty-five hours in total studying on the site, while another 75 students spent between five and ten hours in total using the site. Overall, 600 students spent at least one hour on the site. For these 600 students, their median usage of the site over the 12 month period was between two to three hours.

The tracking tools also showed that students were spending typically thirty to sixty minutes working step by step through one of the many resources on the site. This methodical working through activities by students was the intended aim of how the site should be used, and so the data suggests sustained mathematical learning is occurring.

In 2010, the Improve Your Maths website was given a major re-structuring: firstly, to allow students better navigation around the major mathematical topic areas on the site; secondly, to allow new learning resources to be added more easily to the topic areas without causing an overcrowded look to the many pages on the site.

Improve Your Nursing Numeracy website

Improve Your Nursing Numeracy is a vUWS website designed and developed by SLU staff specifically for Nursing students at UWS. Through its resources (such as quizzes and booklets), the site aims to help students refresh and develop the numerical skills needed for medical calculations.

During 2010, additions to the site included:

- A range of sample assessments, jointly designed by SLU and School lecturers, for various types of medication calculations;
- Embedded web links to selected resources (such as videos and online tests) from other university web sites to further extend the range of online numerical skills content to Nursing students at UWS.

Data from the website's tracking tools over a 12 month period (from 1/2/2010 to 31/1/2011) showed that student usage was steady. While 103 students spent at least two hours on the site, a further 294 students spent between half an hour and two hours occupied with the site's online learning activities. On average, these 397 students spent 1.84 hours in total on the site over this period.

Data from the tracking tools also showed that students tended to access the embedded web links and the quizzes. Moreover, students who worked through a quiz (such as fractions or measurement) used the glossary tool often during the quiz to check meanings of various mathematical terms – an indication that intensive learning was taking place during their online sessions.

Academic literacy

The UWS Learning and Teaching Plan 2009-2011 highlights the importance of building the development of academic writing into core units. Accordingly, the central thrust of Student Learning Unit strategies in academic literacy is through:

- The Academic English Literacies Expert Advisory Group
- Undergraduate academic literacy support
- Advanced graduate academic literacy support
- Higher degree research writing support.

Academic English Literacies Expert Advisory Group

In March 2010, the Director of the Student Learning Unit was invited to chair an expert advisory group to facilitate a UWS wide strategy to develop student academic literacies. This group, the Academic English Literacies Expert Advisory Group (AELEAG), was established in response to a number of higher education sector imperatives in including widening participation, retention and the 2009 release of the 'Good Practice Principles for English Language Proficiency for International Students.'

One of the first tasks undertaken by the AELEAG was to conduct an audit to identify areas of existing good practice and to prioritise areas of action in the 2011-2013 period. One hundred and six staff responded to the audit and significant areas of good practice were identified in each of the three Colleges, in Badanami and in the Student Learning Unit. In a number of examples, good academic literacy practices were the result of long term, collaborative teaching partnerships between the SLU and discipline staff. Successful approaches were identified which included the use of learning guides, early diagnostic tasks and collaboration with the SLU staff. Staff nominated a range of ongoing challenges including insufficient learning and teaching resources, lack of appropriately trained staff, and the difficulty of addressing language development from sentence level through to higher order, writing skills. The Advisory Group is now planning an audit of postgraduate academic literacies practices.

Priorities for 2011-2013 have been endorsed by UWS Education Committee. The plan seeks to extend the development of academic literacies across programs by building on the excellent work occurring in a number of core, first year units in each of the Colleges. Other planned activities include the trial of a Writing Mentor program, a flexible version of the pre-entry enabling program, Unistep, and a more coherent approach to supporting higher degree research writing.

Undergraduate academic literacy support

The Student Learning Unit provides quality academic literacy support that targets the learning needs of a diverse range of students at undergraduate level through:

- Unit-specific academic literacy interventions that involve collaborative teaching partnerships with School staff. These collaborations are viewed as best practice in the field of academic language and learning development in higher education because they allow student writing to be developed in the context of particular disciplines.
- Academic literacy program of generic workshops that students can self-select via an online registration system.

Unit-specific academic literacy interventions

In response to requests from School staff, 2009 and 2010 saw Student Learning Unit developing a range of unit-specific academic literacy interventions in undergraduate courses. These interventions involved SLU not only developing School staff capacity to teach language and literacy in their units, but also producing unit-specific resources that focused on academic literacy components relating to particular assessment tasks. SLU staff have worked with lecturers across a wide range of units; highlights of these include the following two core first year units:

- Becoming a Nurse
- Business Academic Skills.

Becoming a Nurse

Becoming a Nurse (BAN), a core first year unit in the Bachelor of Nursing degree course, aims primarily to introduce students to the basic constructs that form professional nursing and nursing practice. A combination of comparatively low entrance requirements, high representation of non-English speaking background students, and rigorous English proficiency requirements for professional registration provided a strong rationale for the targeting of Student Learning Unit academic literacy resources to this cohort.

In 2010, Student Learning Unit staff collaborated with BAN academics to deliver a comprehensive program of diagnostic testing, development and delivery of academic literacy resources. The program's objectives were to "optimise retention and success" in this first year unit by embedding the necessary academic writing and study skills in with tutorial content, and to "develop staff capacity" within the unit "for high quality teaching"² in language and literacy.

STREAMING MODEL

Following the recommendations from a School of Nursing and Midwifery literacy support situational analysis, the practice of early literacy screening was introduced in BAN in Autumn 2010. As a result, the tutorial groups were streamed into literacy and non-literacy cohorts using a literacy screening task. Of the 955 students enrolled, 237 students (about 25%) were identified as requiring support with academic writing.

² UWS Strategy and Plan 2010 – 2015: Making the Difference

SLU ACADEMIC LITERACY INPUT

Based on sound pedagogical practices and relevant educational theory, SLU teaching staff supported student learning by developing:

1. Academic literacy workshops that were delivered in timetabled tutorial mode. These workshops were team-taught with SLU and BAN lecturers in five streamed groups over nine weeks. The literacy component of the workshops gave students practice in particular elements of the essay writing process that were relevant to the unit's assessment task. These elements included:
 - Question analysis and the writing process
 - Paraphrasing and referencing
 - Essay and paragraph structure and planning
 - Critical thinking, constructing an argument and integrating evidence
 - Academic writing style
 - Genres in academic writing and responding to feedback.

The workshops also gave students the opportunity for feedback on writing produced either in class or at home.

2. Additional academic literacy resources, such as:
 - The co-authored SLU / BAN *Literacy workbook: Reading and writing at university*. This workbook was an assessable component that all BAN students were required to complete. Its aim was to help these students tackle written university assignments during the course of their studies. Although the content was relevant to all writing undertaken at university, most chapters included tasks that were specific to the essay they were to write for this unit.
 - Online literacy modules modified from the integrated workshop materials for online delivery, and pod casts of these same literacy elements. These resources were developed to aid consolidation of content covered in the literacy stream and were made available for all BAN students to access via vUWS.
3. Additional writing workshops delivered in adjunct mode (see page 31 for a full report).

EVIDENCE OF IMPROVED STUDENT OUTCOMES AND SATISFACTION

Table 12 shows the average mark attained by students in the streamed groups for their final written task is significantly higher than in the non-streamed ones. Furthermore, in an independent evaluation of the unit's literacy component conducted by SLU teaching staff, the data revealed a broad satisfaction with this literacy initiative.

Table 12: Average mark comparison between BAN's 2010 streamed and non-streamed groups

	STREAMED GROUPS	NON-STREAMED GROUPS
Average mark out of a total of 40	21.67 / 40 (54%)	17 / 40 (42.5%)

FUTURE DIRECTIONS FOR BAN / SLU COLLABORATION

Despite the above literacy initiative, the capacity of Nursing students to acquire appropriate levels of academic literacy and professional communication skills requires ongoing support. At the invitation of BAN's unit coordinator, Autumn Session 2011 will see SLU staff contributing to curriculum review and development, and planning to deliver an enhanced collaborative program of embedded academic literacy components.

"The information was so useful that we [could] apply what we learnt in essays in all the subjects. Also to mention the general confidence as it was our first time in university and we didn't know exactly what to do.

However, after these sessions everything was just clear and university writing was made easy."

Becoming a Nurse student, 2010

BAN additional writing workshops

Due to an identified need for certain students from the 2010 Autumn Session of Becoming a Nurse to further their understanding about writing expectations in Nursing, a series of three, three-hour workshops were developed to provide them with an opportunity to help consolidate this understanding. Choices about the content for these workshops evolved from an analysis of assessed student writing – a selection of mostly failed essays drawn from the streamed classes at Parramatta campus. From this analysis, it became apparent that student writing problems typically related to:

- Construction of argument
- Essay structure
- Critical thinking
- Academic conventions, such as referencing and paraphrasing.

Accordingly, these elements of essay writing formed the starting point from which the workshops were developed.

ATTENDANCES

Although attendances for this series of writing workshops were low, student numbers were consistent over the three-day program. That is, of the thirteen attendees, twelve came to at least two, and nine came to all three. Not all students were from the streamed classes, and accordingly, their reasons for attending were varied. Despite these differences, all were keen to develop their academic writing to improve their marks – for some, to get at least a pass from a major fail (these students were strongly advised by their lecturers to attend); for others, to get a distinction / high distinction from a credit or a pass.

EVALUATION

Student comments (unsolicited) about their learning experiences in these workshops were encouraging. That is, they expressed notions about preparedness and confidence at being able to adopt strategies to better communicate their ideas logically, coherently and appropriately.

In order to assess the extent to which this literacy intervention has contributed to the students' control over literacy learning is not easy to determine. However, an important outcome of these workshops in terms of student learning can be attributed to the development of a critical awareness about their own work. That is, during the course of these workshops, many students indicated that after reviewing their BAN essays, they were able to identify, firstly, what was weak about their writing, and secondly, how they could improve upon it.

Overall then, this series of literacy workshops appears to have provided an opportunity for this group of motivated students to develop as writers. That is, they understand that they can make choices about how they write at university, and in so doing, they take responsibility for their own writing.

Business Academic Skills

Business Academic Skills, a foundation unit currently within the School of Marketing, was introduced in the Autumn Session of 2008. Its primary objective was to develop first year Business and Commerce students' skills in communication, critical thinking and ethics. Throughout 2009 and 2010, the Student Learning Unit has been involved with the continuing development of the Business Academic Skills (BAS) program in order to meet these objectives.

In 2009, SLU staff worked collaboratively with the BAS unit coordinators to develop not only a new formative assessment task which aligned better with the unit's objectives, but also learning resources that supported this assessment task. During this time, SLU's role extended to that of capacity building of teaching staff through the collaborative development of standardised marking criteria for all assessment tasks.

In 2010, this continued partnership saw SLU providing additional academic literacy workshops for those students who were identified as being in need of additional support. These workshops were targeted to address the students' particular literacy needs, including:

- Essay structure
- Academic language
- Referencing.

In addition, students who had been identified as being at-risk in the program were offered the opportunity to attend writing consultation sessions with SLU staff in order to receive one-on-one support.

Student feedback surveys for the end of 2010 saw Business Academic Skills' highest rate yet of student satisfaction across all areas, including assessment feedback and guidelines, learning resources, development of critical thinking and communications skills and satisfactory learning experience. The Student Learning Unit will continue to work with Business Academic Skills in 2011 by providing academic literacy workshops targeted to meet the learning needs of these students.

Academic literacy program of generic workshops

In 2009 and 2010, the Student Learning Unit continued to offer a program of generic academic literacy workshops across the five UWS campuses. These workshops provided students with an introduction to expectations about writing at university and different assessment genres.

Table 13 presents the total number of attendances for the generic workshops across all campuses during 2009 and 2010. In 2010, the lower attendance rates can be attributed to budget reductions and less staff availability. In an analysis of the 2009 attendances by School, this showed that students from the Schools of Nursing (N=205), Education (N=167) and Humanities and Languages (N=128) were most likely to attend these workshops.

Table 13: Generic academic literacy workshop attendances for 2009 / 2010

	NUMBER OF STUDENTS	
	2009	2010
GENERIC ACADEMIC LITERACY WORKSHOPS		
Introduction to Essay Writing	326	248
Introduction to Paraphrasing, Summarising & Quoting	154	160
Introduction to Critical Analysis	154	67
Introduction to Academic Writing Style	99	96
Introduction to Assignment Preparation	105	87
Introduction to Essay Structure	92	66
Develop Your Writing	113	33
Spoken English	39	-
Introduction to Tutorial Presentations	4	32
Constructing Your Major Essay	-	33
Advancing Academic Writing	-	31
Introduction to Report Writing	16	-
Total workshop attendances	1,102	853

Although student perceptions about the usefulness of the workshops were generally positive, responses to the SLU student satisfaction surveys for the full day Introduction to Essay Writing workshop in 2009 indicated that 91% of the respondents rated the workshop as useful to very useful. Despite this high level of satisfaction, 72% of these students indicated that they needed more support to develop their reading and referencing skills, and academic writing style.

Advanced graduate academic literacy support

The Student Learning Unit has been engaged in a wide variety of collaborative teaching partnerships with School staff at advanced graduate level. Highlights from these partnerships are presented in the following section.

Unit-specific and discipline-specific collaborations

In 2009 and 2010, Student Learning Unit developed a range of unit-specific and discipline specific academic literacy interventions in advanced graduate level courses. Such interventions involved SLU not only developing School staff capacity to teach language and literacy in their units, but also producing unit-specific resources that focused on academic literacy components relating to particular assessment tasks. Examples of SLU working closely with School staff in their disciplines and units include:

- Classrooms Without Borders
- Professional Experience: Classroom Communication
- Writing for College of Health and Science Honours students.

Classrooms Without Borders

Classrooms Without Borders (CWB) – a core first year unit in a Master of Teaching (Primary) program – aims to develop a student's professional teaching skills by raising their awareness of socio-cultural differences through engagement with service learning agencies that focus on minority and disadvantaged communities in the Greater Western Sydney region. It also seeks to promote active and responsible citizenship, and an awareness of social justice and equity principles that are essential for both teaching and learning.

COHORT

UWS postgraduate and undergraduate students enrolled in the unit includes students pursuing degrees in:

- Master of Teaching (Primary). These students have completed an undergraduate Bachelor of Education at UWS and are in their first year of postgraduate studies.
- Bachelor of Arts (Pathway to Teaching Primary). These students are in their second or third year of undergraduate studies at UWS.

RATIONALE FOR ACADEMIC LITERACY SUPPORT

The Unit Coordinator identified a need for academic literacy support in this unit because the greater part of these enrolled students were either unable to reach the required mastery levels of the essay writing task or had difficulties in reaching this level. Owing to the kinds of literacy issues identified, many of which can be directly attributed to the students' approach to writing in that they failed to view writing as a process and that this process takes time, the aim of the academic literacy interventions was to make writing expectations at postgraduate levels clearer to students in order to ensure that they achieve the highest possible academic standards for both their academic and professional careers.

ACADEMIC LITERACY INTERVENTIONS

In 2010, the Student Learning Unit was invited to develop strategies not only to make writing expectations clear to CWB students, but also to address the identified literacy issues. Working closely with the unit coordinator, the following interventions aimed to make expectations clear to students:

- Re-write the essay question for clarity
- Align the marking criteria with literacy elements covered in lectures / writing sessions
- Write standards descriptions

To address the identified academic literacy issues, the interventions were in three stages:

Stage 1 – A 3-hour lecture (timetabled and compulsory, so fully attended – 200 students) on assignment preparation that covered the following topics:

- Writing as a process
- Question analysis
- Essay structure
- Reading effectively and critically
- Developing an essay plan

Stage 2 – Three 2-hour writing circle workshops (adjunct and voluntary, so poorly attended – 25) that allowed students to work together in small groups to analyse and give feedback on their writing. Although these workshops were poorly attended, the intimate setting (compared to lecture mode) and peer review approach proved to be useful in terms of learning outcomes, according to student feedback.

Stage 3 – Individual / small group consultations for which two days were set aside to work closely with students on near final drafts of their essays at an appointed time. In addition to these two pre-submission slots, a further two days of consultation time was given to certain students who did not reach mastery levels and were required to re-submit their work.

Although Stage 3 proved to be the most successful of the three interventions according to the essay results and the improvements seen when comparing students' near final drafts with their final submitted or re-submitted ones, it was quite demanding on SLU time as a resource. Therefore, strategies for the 2011 Autumn Session include a focus on accessibility to greater numbers of the cohort, which would involve developing staff capacity to deliver academic literacy support within timetabled tutorials.

Professional Experience: Classroom Communication

In 2010, SLU offered a series of workshops / seminars for Master of Teaching (Secondary) students enrolled in the unit Professional Experience: Classroom Communication. These workshops were designed around students' evaluated communication skills in teaching practice sessions. These workshops, designed around both the content and the students' evaluated communication skills during their teaching practice sessions, included:

- Clarity of explanations and giving instructions and directions (homework)
- Ability to explain the focus of the lessons to students
- Use of nonverbal communication (eye contact, facial and other gestures)
- Effectiveness of oral communication (appropriate tone, volume and expression).

Writing for College of Health and Science Honours students

In 2009 and 2010, the Student Learning Unit in collaboration with the Honours Convenor of the College of Health and Sciences (CHS) developed a program of workshops and writing circles for CHS Honours students. Workshop topics included:

- Structuring your Honours thesis
- Writing your introduction, literature review, methods, results (including tables and figures), discussion, and conclusion
- Creating a scientific poster
- Giving a short oral presentation.

In addition, the Student Learning Unit created a vUWS site that comprised online lectures and discussion boards for all CHS Honours students to access. According to student feedback, they found the accessibility of the vUWS online lectures and the weekly meetings the most useful aspects.

Other Collaborations Include:

- Third year and master's level engineering
- Graduate nursing
- Honours thesis writing in the School of Languages

Higher degree research writing support

In response to the growing pressure on higher degree research students and academic staff to make their research public, requests for the Student Learning Unit for extended writing support toward building a research writing culture at UWS have increased substantially. The SLU has offered a growing number of workshops and retreats to the UWS research community for the support of writing for publication in recent years. Such programs not only increase publications and success rates for grant submissions, they also help develop a writing-rich research culture shared by UWS doctoral students, early career researchers and academics.

SLU support for these students is delivered through workshops, lectures and writing circles for master's honours, doctoral candidates and UWS staff.

Higher degree research seminars

Through the Office of Research Services, the Student Learning Unit offers a variety of modes for Higher Degree Research Students, including face-to-face workshops, writing circles and online postgraduate materials. Seven different types of workshops are offered by SLU staff and these have as many as fifty students in attendance during the orientation week, but average around twenty to twenty five during semester.

The ORS workshops included:

- Confirmation of Candidature
- Getting Ready to Write your Literature Review
- Writing a Literature Review
- Presenting your Research Orally
- Writing about your Qualitative data
- Writing the Introduction to your Thesis

In addition, two continuous writing support circles were delivered. Ongoing, peer mentoring writing circles meet fortnightly throughout the year. In addition, an intensive eight-week 'taught' course, the 'Thesis Writing Circle', presents different components of a research thesis for students in the latter part of their first year who had immediately completed or were about to submit their CoC proposal. Students in this program are enthusiastic about the benefits for HDR students:

“It has been an excellent interchange of understandings and collegial support and clarifications of directions.”

“The logical, sequential and flexible approach to achieving the goals required for HDR research students with all aspects very pertinent and greatly appreciated.”

The Student Learning Unit has also contributed to several specific higher degree research programs in the College of Business. Workshops for the Research Unit 200361 – Advanced thesis preparation (graduate certificate in research studies) for COB and COA students were delivered on the following topics:

- Commencing a literature review
- Critical thinking/critical writing
- Structuring your thesis
- Presenting in an academic environment
- Writing about data.

In a second COB Research Seminar ‘Thesis Preparation and Ethics’, the Student Learning Unit ran adjunct tutorial support for candidates in the new degree, Doctorate of Business Administration. Student feedback was positive with SLU lecturers receiving high ratings.

Grant writing workshops with facilitated peer support writing circles were offered in conjunction with the Office of Research Services, College of Business and the Centre for Industry and Innovation Studies (CInIS).

The Student Learning Unit also facilitated Writing Retreats for doctoral students writing their thesis for the following:

- CInIS Grant and Publication Writing Retreats 2008, 2009
- Sustainability Research Node: Writing for Publication Writing Retreat (CoB) 2009
- Social Justice Social Change Research (SJSC) Doctoral Student Writing Retreats, 2009, 2010
- UWS School of Psychology, Doctoral Student Writing Retreat, 2010

Writing for Publication workshops and Facilitated Peer Support Writing Circles

- Urban Research Centre, 2009, 2010
- Centre for Cultural Research (CCR), 2009, 2010
- Social Justice Social Change Research 2009, 2010.
- School of Education Writing for Publication six week writing Circle 2010

". . . Feedback from the staff [about the writing workshops] has been easily and uniformly the most positive I have ever received for any research event run by the School since I have been HoR.

“Already there is strong demand for it to become an annual event . . . It is a great tribute to your expertise in facilitating such events that this demand should be there and that people felt greatly helped and clearly gained a real sense of achievement.”

Professor, School of Education

Staff and Supervisors

In addition to the ORS/SLU workshop program, SLU has facilitated Writing Retreats for publication for the following UWS staff:

- Student Learning Unit Writing for Publication Retreat, November 2010
- UWS Early Career Researcher Writing Retreat, November 2010

Workshops specifically designed for supervisors for the support of HDR student writing:

- College of Business, 2009
- ORS Research Supervisors Forum, 2010.

Writing for Publication Writing Circle

- Early career researchers and postdocs have been meeting monthly throughout 2009 and 2010.

Online Resources

Postgraduate Essentials

In 2009-1010, the Student Learning Unit continued to coordinate a team of specialists from the Office of Research Services, Library and Teaching Development Unit to adapt and facilitate the online transition program to all commencing higher degree research (HDR) candidates through vUWS. Licensed from the University of Melbourne, School of Graduate Research, this self-paced program demystifies the crucial early stages of candidature. With the support of specialist university advisers from the project team, candidates work through a series of interactive modules that cover settling in, project planning, supervision, literature searching, writing a literature review, preparing for Confirmation of Candidature and research ethics.

In the original program candidates enrolled twice a year. In order to improve flexibility ongoing enrolment was implemented in July 2010. This enables new candidates to access the program as soon as their enrolment process is completed.

In 2010, 275 new higher degree research (HDR) candidates enrolled in the Postgraduate Essentials online program. Within the first 6 months, more than 141 candidates had completed the online program. Feedback on the program was positive and a few themes prominently emerged from the evaluation comments as highlighted below.

- The program content was relevant to me, (combined agree and strongly agree), 92%
- Topics were covered in sufficient depth, 94%
- The program helped me to identify resources and skills required to successfully complete my research degree, 91.5%
- The program increased my understanding of the expectations and stages of a research degree, 92.9%
- Overall the program met my expectations, 90.9%

“The confirmation of candidature module was fantastic. I have a much better idea of the requirements now thanks to this online course!”

“Modules 1 to 4 were the most helpful. I gained a lot from the assistance they provided in understanding and organising the very early planning stages. They provided a road map that allowed me to pin down realistic expectations for the coming 3 years, which put me at ease intellectually while helping me to give a practical shape to my daily research activities. “

Supervisor Support

Dr Claire Aitchison was one of a number of UWS academics interviewed and podcast as part of a new online resource for UWS HDR supervisors.

Scholarly Involvements

In 2009 / 2010, SLU staff were involved in receiving awards and grants, contributing to scholarly publications, conference workshops, researching and presenting papers at conferences both nationally and internationally. These papers, which report on various aspects of learning and teaching, were co-authored by colleagues from UWS (within SLU and / or other departments) as well as those from other institutions. In addition, several staff members have extended their scholarly publications to authoring / co-authoring books or contributing chapters to books.

Awards and grants

The Student Learning Unit saw several staff rewarded in 2009 and 2010 for their contributions to the language and learning community and successful in their grant applications to promote scholarly teaching in tertiary education.

Awards

Claire Power, Dawn Ross, Jane Box: Highly commended, UWS Vice Chancellors Excellence in Professional Service Award, PASS Coordination Team, 2009

ALTC citation, UniStep Academic Literacy Program, 2009 (Neera Handa, Clare Power, Erst Carmichael)

Grants

The ALTC priority project grant

Enhancing the student experience: Transition from vocational education and training to higher education

In 2009 and 2010, the Student Learning Unit worked with the Vocational Education and Training (VET) Relationship Manager to jointly lead an Australian Learning and Teaching Council (ALTC) Priority project aimed at identifying gaps in the transition of VET students moving to university to study a bachelor's degree. As part of the research project, strategies were developed to support a smoother experience for the student and to provide a better understanding of expectations and how to prepare for university.

The target group initially consisted of undergraduate students from Business and Nursing courses, and then in 2010 this was expanded to include those from the Social Science (Pathway to Early Childhood Teaching) program.

EARLY THEMES ARISING FROM THE RESEARCH

- The first teaching session in which students found the shift to be significant was when they contemplated staying or leaving. Those who persisted reported the second session to be much better as they understood what was expected as they became more familiar with the learning environment and conventions of university study.
- The main areas students reported as being most difficult were in academic literacy – reading, writing, referencing, structure of essays (all), mathematics (Business and Nursing), work-loads and time management (all), lack of face to face and personalised tuition (all), not enough face to face, especially in the first session (Early Childhood).
- Time management was also a significant factor in adjusting to workloads (esp. reading).
- Most students reported the shift between expectations of them in their VET study to be significantly different (much greater) to expectations of them at university.
- Students generally do not realise they are in need of support until they are immersed in their studies making it difficult to convince them to take preparation and bridging programs prior to commencing their degree.

A range of strategies is currently being considered to help provide VET students with a smoother transition to university studies.

UWS Equity Grant Scheme

Funding through the UWS Student Equity Grant Scheme was approved for two SLU project proposals – "Supporting the first year student experience: Education Technology Preparation (ETP) at UWS" and "Pilot postgraduate academic preparation program online."

Education Technology Preparation (ETP) grant

The Educational Technology Preparation (ETP) project was funded by the UWS Higher Education Equity Program (HEEP). This is a collaborative partnership between the Student Learning Unit (SLU), the Teaching Development Unit (TDU), Library and the IT Services.

The ETP project – is aimed at developing new students' basic computer skills to enable them to:

- participate fully in their course through accessing online information about their units on vUWS
- complete online components of their units
- help students to access the various facilities and online services available to them.

This collaborative project, was piloted in 2010. The ETP program includes an E-lecture on how to use vUWS; Video showing how to use the computer lab and printing facilities; a module on how to use library online research and services; the development of online literacy skills for online group and collaborative work. It also has Podcast and E-lecture activities to develop note-taking and online peer review skills.

Pilot academic preparation program online

The online postgraduate academic preparation program was a collaborative project between staff from the Student Learning Unit, Counselling Services and Careers & Cooperative Education to create a vUWS website for new postgraduate students. This site aims to provide useful information about study skills, academic writing at postgraduate level, and careers.

Association for Academic Language and Learning (AALL) grant

In 2010, an AALL grant was awarded to a joint nursing writing online project between the Student Learning Unit at the University of Western Sydney and the Learning Centre at the University of New South Wales. The project aims to provide nursing students with a flexible learning environment online to enhance their language and learning skills in academic writing. The site also enables academic staff in the AALL community to share existing and new material online to promote community collaboration and knowledge sharing across institutions.

Publications and presentations

In 2009 / 2010, SLU staff contributed to the language and learning community through their research projects, the papers from which were authored / co-authored by colleagues within the university, as well as those from other institutions. These papers have been published (or submitted for publication) in academic journals and books, or presented at conferences both nationally and internationally. A selection of these publications, presentations, workshops and reviews is listed below and on subsequent pages.

Papers published or submitted

Aitchison, C. (2009). Writing groups for doctoral education. *Studies in Higher Education*, 34(8), 905-916.

Aitchison, C., Catterall, J., Ross, P., & Burgin, P. (Forthcoming). Tough love and tears: Learning doctoral writing in the sciences. *Higher Education Research & Development (HERD) Journal*.

Catterall, J., Davis, J., & Yang, D. (Submitted). Facilitating the learning journey from VET to higher education.

Catterall, J., Ross, P., Aitchison, C., & Burgin, S. (Forthcoming). Pedagogical approaches that facilitate writing in postgraduate research candidature in science and technology. *Journal of University Teaching and Learning Practice*.

Power, C. (2010). PASS: through a complexity lens [Electronic version]. *The Australasian Journal of Peer Learning*, 3(1). Retrieved from <http://ro.uow.edu.au/ajpl/>

Power, C. (2010). Transitioning to a life sustaining society [Electronic version]. *The International Journal of Environmental, Cultural, Economic and Social Sustainability*, 6(1). Retrieved from <http://onsustainability.com/journal/>

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Books & book chapters

- Aitchison, C. (2009). Research writing groups and successful thesis writing. In J. Higgs, D. Horsfall & S. Grace (Eds.), *Writing qualitative research on practice*. The Netherlands: Sense Publishers.
- Aitchison, C. (2010). Good mothers go school shopping. In S. Goodwin & K. Huppertz (Eds.), *The good mother: Contemporary motherhoods in Australia*. Sydney: Sydney University Press.
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- Inglis, M., & Campbell, N. (Forthcoming contribution). The formal essay and essay writing process. In N. Campbell (Ed.), *Business academic skills* (4th ed.). Sydney: Pearson.
- Lee, A., & Aitchison, C. (Forthcoming). Working with tensions: Writing for publication during your doctorate. In T. Rocco & T. Hatcher (Eds.), *The Handbook of scholarly writing and publishing*. San Francisco: Wiley and Sons.
- Lee, A., & Aitchison, C. (2009). Writing for the doctorate and beyond. In D. Boud & A. Lee (Eds.), *Changing Practices of Doctoral Education* (pp. 87-99). London: Routledge.
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Conference presentations

Conference keynote addresses

Aitchison, C. (2010). Keynote address at the Higher Degree Research Writing Groups Colloquium. Australian National University, Canberra.

Handa, N., Power, C., & Carmichael, E. (2009). Keynote address, Student Transition to University, Teaching and Learning Project Grants showcase on Student Transition to University. University of Newcastle, NSW.

Conference papers

Abrandt-Dahlgren, M., Aitchison, C., Lee, A., & Paré, A. (2010). Student publishing in doctoral education: Pressures, promises and pedagogies. Paper presented at the *Quality in Postgraduate Research (QPR) Annual Conference*. Adelaide.

Aitchison, C., Catterall J., Ross, P. & Burgin, S. (2010). Learning doctoral writing in the sciences: Pain and pleasure. Paper presented at the *Writing Development in Higher Education (WDHE) Conference*. London Metropolitan University: London.

Aitchison, C., Kamler, B. & Lee, A. (2009). Publishing pedagogies for doctoral education. Paper presented at the *Australian Association for Research in Education (AARE) International Education Research Conference*. Canberra.

Aitchison, C., & Proctor, H. (2009). Good mothers and schooling 1: Intergenerational experiences of school choice. Paper presented at the *AARE International Education Research Conference*. Canberra.

Carmichael, E., & Farrell, H. (2009). Secret students' business: The mysteries of critical thinking. Paper presented at the *Higher Education Research and Development Society of Australasia (HERDSA) 32nd Annual Conference*. Charles Darwin University, Darwin.

Farrell, H., Yang, D., & Carmichael, E. (2009). Facilitating online learning: What can facilitators learn from students' usage patterns and feedback? Paper presented at the *Ninth Biennial National Conference of the Association for Academic Language and Learning (AALL)*. University of Queensland, Brisbane.

Fellbaum Korpi, M. (2010). The discourse structure of the Western thesis. Paper presented at the *Free Linguistics Conference*. University of Sydney, Sydney.

Fellbaum Korpi, M. (2009). Linearisation and the syntax / semantics interface. Paper presented at the *Free Linguistics Conference*. University of Sydney, Sydney.

Fellbaum Korpi, M. (2009). Linearisation: The nexus of information and definiteness structures. Paper presented at the *Australian Linguistic Society 2009 Annual Conference*. Latrobe University, Melbourne.

Handa, N., Power, C., & Carmichael, E. (2010). UniStep: a sustainable approach to developing academic literacy. Paper presented at the *23rd International Conference on the First-Year Experience*, Maui, Hawaii.

Morris, M. (2010). She can't do sums a bit: Tracking student learning. Paper presented at the *2010 Australian Conference on Teaching Statistics (OZCOTS)*.

Morris, M. (2011). When the teacher stops teaching: Supporting undergraduate statistics. Paper presented at the *Fourth Annual Applied Statistics Education and Research Collaboration (ASEARC) 2010 Conference*. University of Western Sydney, Sydney.

Power C. (2010). Contemplating supplemental instruction / PASS through a complexity lens. Paper presented at the *Sixth International Conference on Supplemental Instruction*, New Orleans, Louisiana.

Power, C. (2010). Supplemental instruction through a complexity lens. Paper presented at the *PASS National Forum*, Gold Coast, Queensland.

Conference posters and round table discussions

Carmichael, E. & Handa, N. (2009). A stepping stone to uni: Dress rehearsal for the first semester at university. Poster presentation at the *HERDSA International Conference*, Charles Darwin University, Darwin.

Farrell, H., Yang, D., & Carmichael, E. (2009). Facilitating online learning: What can facilitators learn from students' usage patterns and feedback? The *Ninth Biennial National Conference of the Association for Academic Language and Learning (AALL)*, University of Queensland, Brisbane.

Yang, D.F., Grierson, P., Goldsworthy, K., Pavincich, M., Mitchell, C. & Ross, L. (2009). Education technology - Enhance learning with a flexible and independent approach. The *Ninth Biennial National Conference of the Association for Academic Language and Learning (AALL)*, University of Queensland, Brisbane.

Workshops

In 2009 and 2010, staff from the Student Learning Unit, PASS facilitators, and students from the SLU UniStep and AcPrep programs presented workshops on the differences of deep and surface learning and how this can lead to success in academic writing and mathematics in the university environment. The workshops, which took place at Penrith and Campbelltown campuses, were part of two annual UWS Day events in which local high school students and staff visiting the university attended.

Dr Claire Aitchison facilitated, co-facilitated and / or presented:

- Reviewing for academic journals at the *Association of Academic Language and Learning (AALL) Conference*, December 2009 (Facilitator)

- Doctoral thesis writing: Issues and practicalities at the *Australian Association of Educational Researchers Workshop Series*, 2010 (Co-facilitator with Prof Alison Lee, UTS)
- Establishing and maintaining successful writing groups for research students at the *Writing Development in Higher Education (WDHE) Conference*, London Metropolitan University, June 2010 (Co-presenter with S. Haas)
- Facilitation and workshop presentations at the *Summer School Writing Retreat*, Centre for Research in Education, University of South Australia, January 2010 (Facilitator)
- UWS Doctoral Candidates' Writing Retreat, 2009 (Facilitator / Presenter)
- Social Justice Social Change Research (SJSC) Doctoral Student Writing Retreat, 2009 / 2010 (Facilitator / Presenter)
- Student Learning Unit Writing for Publication Retreat, November 2010 (Facilitator)
- Doctoral Student Writing Retreat, UWS School of Psychology, November, 2010 (Facilitator / Presenter)
- UWS Early Career Researcher Writing Retreat, November 2010 (Facilitator / Presenter)

Reviews and Professional Contributions

SLU staff contributed to reviews of work in:

Journal reviews

- Studies in Higher Education, 2009 / 2010
- English for Specific Purposes Journal, 2010
- Journal of Social Sciences and Humanities, 2010
- Studies in Continuing Education, 2010
- The Australian Educational Researcher, 2009
- Journal of Academic Language and Learning (JALL), 2009 / 2010

Conference reviews

- Australian Association for Research Education (AARE) Biennial Conference, 2009 / 2010
- AARE Annual Conference, 2009 / 2010

Editorial board memberships

Dr Claire Aitchison is an editorial board member of the following journals:

- Journal of Academic Language and Learning (JALL) (2006 - present)
- International Journal of Teaching and Learning in Higher Education (IJTLHE) 2009 / 2010

Unilearn LISTSERVE

SLU continues to provide a leadership role in our professional community with the responsibility for managing Unilearn which is an active LISTSERVE (electronic discussion list). Unilearn provides support and discussion opportunities to 557 teaching staff involved in academic literacy and maths teaching across national and international universities. It also provides a primary means in promoting the professional activities of the Association of Academic Language and Learning (AALL). Subscribers to Unilearn are from Australia, New Zealand, Canada, South Africa, Zambia, the United Kingdom and the United States of America.

Hosting visiting scholars

The Student Learning Unit and the Teaching Development Unit combined with the Office of Research Services presented Professor Anthony Paré from McGill University, Canada, at a Research Supervisors Forum on 6 April 2010.

Anthony Paré – a Professor in the Department of Integrated Studies in Education at McGill University, Montreal, Editor of the McGill Journal of Education, and former Director of the Centre for the Study and Teaching of Writing – spoke to a group of 26 higher degree research supervisors about writing issues in doctoral education in Canada. In his address, Professor Paré drew on two studies:

1. A survey of doctoral students and supervisors at eleven Canadian universities
2. A study of supervisory sessions devoted to the dissertation.

During the presentation, and in follow-up discussions, he emphasised how supervisors can support candidates' writing.

Feedback about the forum was extremely positive; even very experienced UWS supervisors expressed enthusiasm for the event.

Directory

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