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Academic Enrichment 2017 Annual Report

Introduction

Academic Enrichment is positioned within the Deputy Vice-Chancellor Education portfolio and is the umbrella grouping of the Learning Centre and the Mathematics Learning Centre. The Centres provide co-curricular support programs for students in the areas of communication, academic integrity, language and learning development (Learning Centre) and mathematics and statistics (Mathematics Learning Centre). The Centres also work collaboratively with faculties to embed communication and language development, provide support for learning, the development of graduate qualities, academic integrity and mathematics and statistics development. This work is carried out within the curriculum or as adjunct tutorials and/or online learning resources.

Academic Enrichment programs are underpinned by our research within discipline areas such as the mathematical sciences, education and linguistics; and relevant higher education, assessment and evaluation literature. Academic Enrichment teaching programs also inform discipline and higher education research and practice.

The Centres employ a multifaceted approach including:

- co-curricular face-to-face, eLearning and blended learning student programs and workshops
- the development and implementation of curriculum embedded approaches to support disciplinary learning, communication, graduate qualities and academic integrity
- the development of undergraduate students' mathematics and statistics knowledge, understanding, skills, confidence and learning techniques
- the development and embedding of eLearning resources within/or as adjunct to teaching programs
- engagement with University, national and international colleagues on projects related to furthering the research and evidence base related to teaching and learning and informing disciplines.

Academic Enrichment (AE) supports the achievement of the vision, goals and strategies of the Strategic Plan of the University of Sydney 2016-2020 using a range of strategies, initiatives and programs. These programs also assist the University to meet the support services requirements of the higher education standards framework.

The body of the report is divided into two sections, each respectively detailing the activities of the Learning Centre (LC) and the Mathematics Learning Centre (MLC).
AE Future Directions

In 2018, a key challenge will be further extending the reach (while maintaining the quality) of all AE programs given the increase in University of Sydney student numbers over the last 5 years (2013: 56803-2017: 67783). Staff numbers within AE have remained relatively stable over this time.

Key activities planned for 2018:

- continue to provide and expand (where possible) student facing programs and projects.
- adapt MLC teaching program and workshops to accommodate introduction of pre-requisites in 2019.
- adapt review and expand MLC revision workshop program including PG programs in SPH.
- further supplement LC F2F workshops with LMS deliver – as staff have time to convert F2F workshops to e-community version.
- maintain MLC drop in Centre activities for students in Science, FEIT, FASS.
- add to existing suite of co-curricular on-line learning programs and resources with:
  - Linear Algebra
  - Writing in an Academic Style
  - the delivery of Writing the Literature Review OLE
  - the delivery of the Research Writing Tool EI project
- continue to provide curriculum embedded programs to support student learning.
- continue to refine and teach into EDGU1006 – a unit designed to support new students and NESB UG students learning and communication across different disciplines.
- provide/support academic literacy/ English Language (EL) diagnostic and follow up (Engineering capstone, Nursing first year, ADP, FASS PG).
- complete and evaluate SNS Singapore EI project Recognising Culture and Developing Academic potential in Singapore Nursing Students
- complete and evaluate FASS first year embedded project.
- work with Hub and Spokes teams when possible/practical in design and delivery of faculty workshops and projects.
- continue to support communication as a graduate quality work across the University via the CECLD network.
- contribute to the development of university-level rubrics for assessment of communication as a graduate quality.
- contribute to the development of the Land T framework re EL and Diversity support and programs.
- continue to develop the F2F and online Cadigal tutors academic enrichment program.
- contribute to the completion of Indigenous service learning OLT project.
Learning Centre 2017 Report

Introduction and Strategic Plan

The Learning Centre (LC) provides a range of programs and resources to support students’ academic language and learning, and the development of graduate qualities. All enrolled students at the University are eligible to use the LC and its resources at no cost to themselves.

There are 11 key LC initiatives that are aligned with 6 Strategies of the University of Sydney Strategic Plan 2016-2020. Overarching these initiatives is the University’s commitment affirmed in the University Strategic Plan Strategy 7: Embed our values Initiative 2. Continue to implement existing programs in the area of Aboriginal and Torres Strait Islander, women’s and LGBTIQ inclusion and develop new programs for people of culturally and linguistically diverse backgrounds. This same commitment to inclusion remains a key driver informing all LC programs.

Strategy 7: Embed our values.
Strategy 5: Transform the learning experience.
Strategy 4: Transform the undergraduate curriculum.

Initiative 1: Central Program, Individual Learning Program and Projects

Initiative 2: Faculty Program and Projects (including communication diagnostic assessment: MASUS)

Initiative 3: Orientation and Transition Programs

Initiative 4: eLearning Program

Initiative 5: University wide projects and cross University projects

Strategy 3: Develop partnerships that enable our research to make a difference, locally and globally.

Initiative 6: Engagement in University and OLT projects and research with Aboriginal and Torres Strait Islander communities

Strategy 2: Attract and develop outstanding researchers.

Initiative 7: Research student co-curricular and faculty-based workshops

Strategy 1: Invest in and drive research excellence across the University.

Initiative 8: Research in learning and teaching, cultural competence, graduate qualities and informing disciplines (linguistics, TESOL, higher education)

Initiative 9: Engagement and leadership in the profession and the University

Strategy 7: Embed our values.

Initiative 10: Evaluation and Planning: Plan to ensure the provision of high quality teaching and learning support

Initiative 11: Internal capacity building: Ensure that LC staff are supported in their career development
Summary facts and figures 2017

- Using a combination of Faculty Teaching Activities, Central Programs (co-curricular workshops) and a Teaching Program outside faculties (Orientation and Transitions/Bridging programs), the LC offered language, communication and learning support for 9702 students in 2017 (2016: 8767). Table 1 summarises the main teaching activities across the Centre’s Programs in 2017, compared with 2016. Figure 1 provides an overview of the reach of LC programs 2014-2017.

- A total of 2896 students from all 6 faculties and 3 schools enrolled in the Central Workshop Program. Included in these figures are 290 students who attended one of the LC’s 3 hour workshops: Quoting, Summarising and Paraphrasing Evidence, Using Evidence in Essays, Language Strategies for Referring to Evidence. These workshops were offered multiples times across the full year to support the University’s focus on Academic Honesty. An additional 817 students completed the LMS module version of Quoting, Summarising and Paraphrasing which was launched in November 2016. Included also are the 21 students who accessed Thesis Including Publications workshops delivered to remote campuses via Adobe Connect. The overall figure also includes 76 students who enrolled in the Foundations of Grammar LMS module; and, 90 students who accessed the LMS module What did you miss at orientation?

- In 2017, 69.2% of students in scheduled workshops in the Central Program were of non-English-speaking backgrounds, the 48.4% of these being international students. Of the 1301 hours of face to face workshops offered in the Central Program, 20 % (259 hours) were restricted to students of non-English-speaking backgrounds through the WELL (Workshops in English Language and Learning), Oral Presentations for NESB students and other Academic Reading & Writing workshops.

- The patterns of enrolment in the Central Program were generally similar to the past three years in most categories, with a high proportion of International and NESB students. Female students still far outweigh male students in enrolment in the Central Workshop Program accounting for 70.4% of enrolments, compared with 58.2% of total University enrolments.

- As in 2016, the proportion of postgraduate students (65.4%) enrolled in the Central Workshop Program in 2017 far outweighed that of undergraduates (34.6%). Over the years, postgraduate students have been consistently over-represented in the LC’s Central Workshop Program, when compared to the total University enrolment (44.3%). This is most noticeable from the high numbers of research students in LC workshops in 2017 (22.5%) (2016:16.2%) compared with 7.9% of total University enrolments. The Adobe Connect workshops to Camden, Narrabri and Westmead, along with two weekend writing boot camps for research students helped to boost these numbers.

- In 2017, the LC provided 307.5 hours (2016: 360) in individual consultations for 177 students (2016: 194) (an average of 1.74 hours per student). The highest percentage of students was from the Faculty of Arts and Social Sciences (31.64%), which includes Education & Social Work and Economics students, followed by Health Sciences (29.4%) and Business (8.47%). Of these, 130 students, (73.4%) were female, 120 (67.8%) were NESB (2016: 61.9%) and 101 (57.1%) were postgraduates (of whom 26.7% were research students). The commonest areas supported through this program were writing (Essay and Thesis) and grammar.

- A total of 2266 students received language and learning support through the Faculty Program operating in faculties and schools. This figure includes approx. 400 students in the Sydney School of Education and Social Work, who benefitted from a fully embedded academic language and learning program within EDU1019, now taught by Faculty staff. Further details, including a sample of evaluations, are available in Appendix 4.

- The MASUS academic literacy diagnostic procedure and tutor training in the implementation of the procedure was conducted in Architecture Design & Planning, the Cadigal Academic Enrichment Program, Education & Social Work, Nursing & Midwifery, and Pharmacy for 321 students (Undergraduates and Postgraduates). Follow-up sessions of academic literacy support were provided in all cases.
• Approximately **4040** students received support through teaching outside Faculties. This included 3880 students attending orientation Learning to Learn lectures, and 43 attending bridging programs. Further details, including a sample of evaluations, are available in Table 3 Appendix 3.

• Approximately **3494** students attended orientation sessions within or outside faculties. (See Table 5 in Appendix 3)

• In 2017, the LC (Camperdown/Darlington Campus) had **8.0** FTE academic staff on continuing positions. The LC (Cumberland Campus) had **0.6** FTE academic staff contract position. LC staff and programs were supported by **1.4** FTE professional staff members from the DVCE Portfolio SPAA team. Casual staff also provided teaching on the central workshop program. Further staffing details are available in Appendix 1.

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**Table 1: Summary of Learning Centre Teaching 2016 and 2017**

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Central Workshop Program</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of student enrolments</td>
<td>2982</td>
<td>2896</td>
</tr>
<tr>
<td>Number of Faculties represented</td>
<td>16</td>
<td>All (6 +3)</td>
</tr>
<tr>
<td>Number of workshops offered</td>
<td>453</td>
<td><strong>313</strong></td>
</tr>
<tr>
<td>Number of teaching hours</td>
<td>1717</td>
<td>1313</td>
</tr>
<tr>
<td><strong>Independent Learning Program</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of students taught</td>
<td>194</td>
<td>177</td>
</tr>
<tr>
<td>Number of preparation hours</td>
<td>92.5</td>
<td>86</td>
</tr>
<tr>
<td>Number of teaching hours</td>
<td>344</td>
<td>307.5</td>
</tr>
<tr>
<td>Average hours per student</td>
<td>1.77</td>
<td>1.74</td>
</tr>
<tr>
<td><strong>Faculty Teaching Program</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of students taught</td>
<td>2179</td>
<td>*<strong>2266</strong></td>
</tr>
<tr>
<td>Number of teaching hours</td>
<td>200</td>
<td>177</td>
</tr>
<tr>
<td>Number of faculties/schools</td>
<td>16</td>
<td>All (6+3)</td>
</tr>
<tr>
<td><strong>Teaching Program outside Faculties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of students taught (est.)</td>
<td>3412</td>
<td>**<strong>4040</strong></td>
</tr>
<tr>
<td>Number of teaching hours</td>
<td>36</td>
<td>76</td>
</tr>
<tr>
<td><strong>Total Students</strong></td>
<td>8767</td>
<td>9289</td>
</tr>
</tbody>
</table>

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* This figure includes students enrolled in the Office of Education Integrity approved development workshops across the University.

** In addition to this face-to-face delivery number, the modules developed for blackboard delivery (Foundations of Grammar; Quoting, Summarising and Paraphrasing; What did you miss at Orientation?) were made available all year for student access.

*** These figures include diagnostic assessments of students’ writing (MASUS), embedded academic language and learning programs in Units of Study, and Academic Bridging Programs for DVCISS. Faculty consultation, negotiation and resource development hours are not included.

**** This figure includes Learning to Learn lectures in O-Week and other non-faculty-based teaching sessions and is an estimate only. See Appendix 3 for details including student evaluations.

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**Figure 1: Overview of LC program reach 2014–2017**
Strategy 7: Embed our values.
Strategy 5: Transform the learning experience.
Strategy 4: Transform the undergraduate curriculum.

Initiative 1: Central Program, Individual Learning Program and Projects

70 different face-to-face workshops were offered multiple times for different target groups (UG–HDR), ranging from 2 to 12 hours per workshop. The timetable runs from January to December, including semester and year breaks with 9 Blocks of workshops. It is designed to give maximum flexibility for students in the time and duration of the courses. Several were offered in the early evening (5-7pm) and some were offered on Saturdays for the benefit of students with busy timetables, part-time students and postgraduate research students who work during the day. Courses were also offered on an intensive basis during semester as well as non-semester periods. Several workshops were either added or revised based on student and staff feedback and requests. These focused on research student support, reading and grammar. The greatest workshops participation was from the Faculty of Arts & Social Sciences (27.1%), followed by the School of Business (20.9%). This reflects the general patterns of enrolment per faculty for the University. Further details are available in Appendix 2.

Results of student evaluations of the Central Workshop Program can also be found in Appendix 2, showing data for each of the 5 evaluation questions. For example, from a sample of 248 out of 313 workshops, 95% strongly agreed or agreed that they had learnt valuable skills in the workshop. (Question 1) while 93% of students also strongly agreed or agreed that they could see the relevance of the workshops to their degree studies (Question 4).

In 2017, the LC provided 307.5 hours (2016: 360) in individual consultations for 177 students.

Initiative 2: Faculty Program and Projects

The Faculty Program is the main LC vehicle supporting curriculum innovation and the development of graduate qualities. The program involves working collaboratively with discipline-based staff to either embed academic language, literacy and learning support into Units of Study (UoS) and degree programs or to offer programs as an adjunct to a UoS. The program is developed to meet the needs of all students, including domestic, international and culturally and linguistically diverse students. Since 2013, we have been working towards a more sustainable model involving School or Faculty identification of key UoS and close collaboration with faculty staff to develop learning resources and scaffolded learning experiences, with the aim of fully curriculum embedded support and handover to faculty staff delivery. In 2017, LC staff collaborated with faculty staff on the design of teaching resources and in some cases co-taught with faculty staff. Further details can be found in Table in Appendix 4, Table 6.

Highlights in 2017 initiatives included:

- The Education & Social Work Thesis & Dissertation Workshop program consisted of 8x2 hour sessions to support HDR students in all aspects of their thesis writing. Students were also given the opportunity to present their research to their peers and receive feedback. The program was evaluated very highly with an overall mean rating of 4.9/5.
- A 4 hour embedded session for Veterinary Science second year students in ANSC3103 involved students in developing communication criteria for writing based on 2 student example texts and assigning communication standard descriptions to these texts. The student criteria and standards were used by staff to develop a rubric for students’ first assessed assignment. This assignment and the communication criteria are developed further in a second group assignment, a brochure. LC staff provided annotated brochure examples for this assignment to illustrate visual and written criteria.
- Expanding on 2016 project embedding academic integrity and writing development in a first year core UoS, Architectural History and Theory BDES1011 in the School of Architecture Design and Planning.
- The initial planning and consultation for fully embedded sustainable support for both students and staff within the Sydney Nursing School Singapore program. This resulted in the submission of a successful Education Innovation Grant: Recognising Culture and Developing Academic Potential in Singapore Nursing Students. This is a collaborative project between The Sydney Nursing School and the LC (project leads: Bloomfield, James, Green). The aim is to develop
sustainable resources to support students and staff with a particular focus on engagement, critical thinking and communication within a framework of culture relevance.

- Initial planning and consultation to provide fully embedded sustainable support within a FASS identified UoS EUST 1001.

**Initiative 3: Orientation, Bridging and Transition Programs**

Each year the Learning Centre provides a *Learning to Learn* lecture series as part of the University's Orientation program at the beginning of the year, and short information sessions before the start of semester 2. In 2017, an estimated 3880 students attended the 16 hours of the *Learning to Learn* lecture series in Semester 1. This figure was higher than in 2016 (3412 students).

The LC has a long history of supporting a diverse student cohort through a number of programs and initiatives. Bridging programs are especially important for students entering University through a variety of pathways. Evaluations have shown not only their value in developing the academic skills necessary for successful university study but also their role in enabling students to develop social support networks.

In 2017, three different transition/bridging programs were provided.

- The Cadigal Academic Enrichment Program for Aboriginal and Torres Strait Islander students entering University through either the Cadigal or Pemulwuy pathways. The program included a two-week orientation program (18 hours) for 16 students. It comprised two different diagnostic writing tasks (MASUS) for Sciences and Humanities and Social Sciences students and several academic skills workshops. Overall, the majority of students strongly agreed or agreed the program offered a helpful transition into University (mean rating 4.5).

- A one-week (15 hours) E12 Broadway Academic Literacy and Learning bridging course to support eligible students (those with refugee status, in financial hardship, from a disadvantaged school environment, or from culturally and linguistically diverse backgrounds) entering the University with an ATAR lower than 85. The course was attended by 17 students and is designed to familiarise students with academic expectations at university and provide them with grounding in useful learning strategies related to academic reading and writing. Ten of the 15 students who completed the course evaluated it as 'very helpful', while 5 rated it 'mostly helpful'.

- The Bachelor of Education (Early Childhood) and Bachelor of Social Work Bridging Program for students entering University from TAFE. The 12 hour course ran for 3 days in February and included topics such as academic expectations, assignment types and writing in an academic style. Overall, all students strongly agreed that the program had given them a good idea of expectations around learning at the University of Sydney.

**Initiative 4: eLearning Program**

The LC’s eLearning Program includes a suite of innovative, award winning, e-Learning resources developed in collaboration with faculties, other universities and educational designers. The resources are designed to address students’ academic language, literacy and learning needs, particularly in the area of writing in the disciplines, and are of benefit to all students.


A key feature of the LC site is the Help Yourself pages.

http://sydney.edu.au/stuserv/learning_centre/help/helpYourselfSplash.shtml This resource provides quick answers to the most common questions that students have about their academic reading, writing and learning needs, and links to follow for more detailed information.

In 2017, the LC developed a series of short ‘tasters’ of a number of these resources which are now housed on the student website. The LC site analytics for 2017 show 356,137 page views, compared with 373,039 page views in 2016.

Highlights in 2017 blended/online learning initiatives:
Highlights for 2017

- University of Sydney Education Innovation grant (LC lead: Alexandra Garcia) used to develop and complete an Open Learning Environment (OLE) module on Writing a Literature Review in collaboration with the University of Sydney Library.
- Further development of the Research Writing Tool (lead: Dorothy Economou) for use by both research students and supervisors in medical related fields.
- Development of Writing in an Academic Style Blackboard module – adapted from the popular LC workshop of the same name.
- Launching of the What did you miss at Orientation? Blackboard module

Initiative 5: University wide projects and cross University projects

Project and grant highlights for 2017:

- Delivery of the 2017 program of events for the Curriculum Embedded Communication and Language Development (CECLED) Scholars Network, showcasing work across the University (leads: James, B. & Simpson, A.)
- The Research Writing Tool: writing development for higher degree research students in medical-related faculties), Economou, D.; Salis (nee Sainsbury), A.; Hey-Cunningham, A.; Szenes, E. Small Educational Innovation Grant. The tool is based on research into supervision of HDR writing in medicine.
- Work continued on the OLT funded project (2015). Walker, R. (UOW chief investigator), James, B.; (Sydney); Gullifer, J., (CSU); Simon, (UON). Academic integrity in action: Discipline specific case studies and approaches to preventing academic misconduct.
- AALL Managers/Heads Essentials: The Toolbox; James, B.; Vezzub, E. Association for Academic Language and Learning/AALL Research and Resource Development Grant.
- Writing a literature review (Open Learning Environment – HDR), Garcia, A.; Harrison, M. Small Educational Innovation Grant.
- Recognising culture and developing academic potential in Singapore nursing students, Bloomfield, J.; James, B.; Green, J.; Ridgway, G.; Harvey, A.; Garcia, A. Small Educational Innovation Grant to commence in 2018.
- Organising committee membership and reviewers for the 8th Asia Pacific Conference on Education Integrity at the University of Sydney.

Strategy 3: Develop partnerships that enable our research to make a difference, locally and globally.

Initiative 6: Engagement in University and OLT projects and research with Aboriginal and Torres Strait Islander communities

Highlights for 2017:

- Work continued on the OLT funded ($435,000) project An interdisciplinary model and resources for culturally competent service learning in Aboriginal Community Controlled Organisations (Gabrielle Russell-Mundine, Julie Maakrun, Juanita Sherwood, Arlene Harvey (LC). This project involves collaboration between two Aboriginal Community Controlled Organisations and the University of Sydney aimed at developing service learning opportunities which provide intercultural and interdisciplinary placements for student and enhancing graduates’ employability.
- Indigenous Health and Critical Self-Reflection: Looking inwards to achieve culturally safe practice (Josephine Gwynn, Arlene Harvey (LC), John Gilroy, Merrolee Penman, Gabrielle Russell-Mundine). The aim of this Educational Innovation Grant funded project ($11,911) was to improve students’ capacity to engage in the process of critical self-reflection when working with Australian Indigenous communities. The project team developed a teaching tool consisting of six video clips of University of Sydney students and staff as well as recent graduates who work/or intend to work in the area of Indigenous health critically reflecting on their experiences. The videos are accompanied by study questions and teaching materials.
- In 2017, the Learning Centre worked closely with the Mana Yura unit staff to redevelop and teach in the Supporting tutors to support Indigenous students training program (in Semesters 1
and 2). The two units are collaboratively redeveloping the face-to-face workshop into an online format for tutors who cannot attend the sessions or for tutors who live in regional areas.

- **Academic literacy and cultural competence (Arlene Harvey, Gabrielle Russell-Mundine).** This research project explores the relationship between cultural competence and other graduate qualities, such as critical thinking, professional development, and communication. A conference paper, ‘Transforming the knowledge store: The social justice implications of the policy and practice of curriculum renewal’ was presented at Higher Education Close Up 8, Lancaster University, 18th – 20th July, 2016 (Arlene Harvey, Gabrielle Russell-Mundine) is currently under review for publication in a higher education journal. This work has informed teaching and learning practices in the Learning Centre and in faculties.

**Strategy 2: Attract and develop outstanding researches.**

**Initiative 7: Research student co-curricular and faculty based writing workshops**

In addition to the research student focused co-curricular Central Program workshops reported earlier and in Table 2, many of the Faculty Program workshops focused on developing students’ understanding of critical writing and writing for research purposes. Full details in Appendix 4 Table 6. Highlights included:

- Online delivery via Adobe Connect of LC thesis writing workshops to HDR students from outlying campuses at Sydney Institute of Agriculture, Narrabri and School of Veterinary Science, Camden.
- GENC5020: Writing the Literature Review and Thesis including Publications for research students at the Kolling Institute.
- MASUS task and feedback for new HDR students in Architecture, Design and Planning.
- INFO 5993: embedded support for students writing an annotated bibliography and literature review related to their research area as well as writing the proposal for their research in Faculty of Engineering and Science.
- Sydney Conservatorium of Music Honours students: support for their first experience of research writing. Students developed communication criteria for writing based on 2 student example texts and then assigned communication standard descriptions to these texts. The student criteria and standards were used by staff to develop a rubric for students' first assessed assignment.

**Strategy 1: Invest in and drive research excellence across the University.**

**Initiative 8: Research in learning and teaching, cultural competence, graduate qualities and informing disciplines (linguistics, TESOL, higher education)**

2017 LC publication output:

- 7 journal articles
- 1 published paper in conference proceedings
- 13 unpublished conference and other professionally oriented presentations

Full details of publications and presentations are available in Appendix 5.

- **Helen Drury** continued her PhD research (to be completed in 2017). *Thesis title:* The evolution of online learning environment for teaching academic writing in the disciplines: the development of an e-learning pedagogy.
- **Bronwyn James** Associate-supervision of PhD student Fatimah Fatimah within SEWS. *Thesis title:* ‘The impact of contextually based assessment process on student engagement: A perspective on the Indonesian EFL context’.

**Initiative 9: Engagement and leadership in the profession and the University**

In 2017 LC staff provided leadership in the profession, and expert consultancy advice outside and within the University.

- Learning and Teaching Committee, Faculty of Arts & Social Sciences (Presentation to invite interest in a fully embedded approach within an identified UoS for delivery in 2018).
- Crown Institute of Higher Education (Invited external membership of Academic Board)
- Communication Graduate Quality Working Party (Working to develop a definition of the graduate quality – Communication).
• LC head on organising committee for 8th Asia-Pacific conference on Educational Integrity, organised reviewers and managed review process.
• LC staff were invited by the Department of Linguistics to deliver a lecture on aspects of SFL theory (discourse semantics) and LCT theory and their educational application in resources for academic writing development to postgraduate research students in the Educational Linguistics course.
• Presentations within the DVCE portfolio.
• Consultancy and exam ratification for University of Sydney Foundation Program, Taylors College.

Contributions as reviewers/editors to professional journals

LC reviewers for:

• Australian Review of Applied Linguistics (ARAL)
• Asian Journal of the Scholarship of Teaching and Learning (AJoSTL)
• Higher Education Research and Development (HERD)
• Journal of Second Language Writing
• Journal of University Teaching and Learning Practice (JULTP)

Editorial board for:

• Journal of Language of Aggression and Conflict (JLAC)

Membership of professional associations

• Applied Linguistics Association of Australia (ALAA)
• Asia Pacific Forum on Educational Integrity
• Association for Academic Language and Learning (AALL)
• Australian Systemic Functional Linguistics Association (ASFLA)
• European Association for the Teaching of Academic Writing (EATAW)
• Language and Society Centre, Monash University (LASC)
• Latin American Association of Systemic Functional Linguistics (ASFAL, Spanish Acronym)
• International Association for Systemic Functional Linguistics (ISFLA)

International and local visitors received within the profession

• Staff members from the e-Learning team at the KDI School of Public Policy and Management, Republic of Korea

University working parties and committees

• Education Portfolio Learning and Teaching Strategy workshops
• Faculty of Science Education Committee
• Sydney Orientation Planning Committee
• The University Education (UE) Education Committee
• University working party to define the graduate attribute ‘Communication’
• 8th Asia Pacific Educational Integrity Conference Committee
**Strategy 7: Embed our values.**

**Initiative 10: Evaluation and Planning:** Plan to ensure the provision of high quality teaching and learning support

**and**

**Initiative 11: Internal capacity building:** Ensure that LC staff are supported in their career development

The LC and the MLC hold regular fortnightly Academic Enrichment team meetings to ensure that programs are current and aligned with University initiatives and priorities and to ensure the quality teaching programs, for example, by assisting colleagues to plan their faculty teaching, providing feedback on teaching activities, revising teaching workshops and resources, discussing teaching issues. Staff engage in further development (e.g. Cultural Competence Leadership Program, Turnitin workshops, EL workshops), showcase staff teaching projects and research, and attend and present at professional and relevant disciplinary conferences when funding is available. All staff complete the APD process and are encouraged to attend promotion workshops. Successful promotion applications are freely shared with staff intending to apply for promotion.
Appendix 1
Staff of the Learning Centre 2017

Academic Staff

Dr Bronwyn James
BA (Sydney), GradDipEd (Sydney), GradDip TESOL (UTS), MEd (Deakin), PhD (UOW)
Head of Academic Enrichment; Head of the Learning Centre, Senior Lecturer

Helen Drury
BSc Hons (London), DipEd (Manchester), Cert TEFL (Aston), MA Applied Linguistics (Sydney)
Senior Lecturer

Dr Dorothy Economou
BA, MA Applied Linguistics, PhD (Sydney)
Lecturer

Dr Alex Garcia
BEd (Atlántico), MA (Liverpool), MTeach (UWS), PhD (Macquarie)
Associate Lecturer

Dr Arlene Harvey
BA Hons, PhD (Sydney)
Senior Lecturer

Dr Marie McInnes (0.6 FTE, on leave from July 2017)
BA (UNE), M.Litt (UNE), MA Hons (UNE), Dip Cont Educ (UNE), RSA Cert TEFL (Aust College of English), PhD (Sydney), PhD (Sydney)
Learning Skills Adviser

Theresa Millman (0.6 FTE, commenced August 2017)
BA Psych/Soc (UOW) MA TESOL (UTS)
Lecturer

Peter O’Carroll
BA Hons (WAust), GradDipEd (SAust), MEd IT in Education and Training (UOW)
Lecturer

Dr George Ridgway
BSc Hons (Manchester), PGCertEd (Reading), MA Applied Linguistics (Sydney), PhD (London)
Lecturer

Dr Eszter Szentes
MA, Cert TESOL (Budapest, Hungary), PhD (Sydney)
Associate Lecturer

Professional Staff

Karlo Jurasovic
Senior Administrative Officer

Susan Robinson (0.4 FTE)
Student Services Officer

Honorary Academic Staff

Dr Angela Ardington
BA Hons, Dip TEFL (Leeds), PGCE, MA (Sussex), MPhil, PhD (UWS)
Honorary Senior Lecturer
Dr Janet Jones
BA DipEd (UNE), MA Applied Linguistics, EdD (Sydney)
Honorary Senior Lecturer

Dr Lorraine Ryan (0.6 FTE)
BA (Macquarie), MA LM (Provence), MA Hons (Sydney), DEA EHESS (Paris), Dip RSA
(UCLes), M App Ling, PhD (Macquarie)
Honorary Lecturer

Casual Academic Staff

Glenice Aiken
BA Hons, GradDipEd, MEd (Sydney)

Dr Maria Chisari
BA Social Sciences, GradDip TESOL, MA Language and Literacy, PhD Communication (UTS)

Dr Ian Davis
BA Hons (Open Uni UK), MA (Leiden Netherlands), PGCertEd (London), PhD (Griffith)

Talia Gill
BA Hons (Sydney)

Helga McNamara
BEd, GradDipCounselling (Inst. Counselling), Cert TESOL (UNSW), MA (UTS)

Theresa Millman
BA Psych/Soc (UOW) MA TESOL (UTS)

Angela Snelgrove
BA (Sydney), Grad DipTESOL (UTS) MA Lang & Literacy (UTS), Cert IV TAE
Appendix 2
Central Workshop Program

Figure 2 shows the number of student enrolments in the face-to-face Central Workshop Program by Faculty/School in 2017.

Students from all faculties and schools enrolled in the Central Workshop Program. The greatest participation was from the Faculty of Arts & Social Sciences (27.1%), which this year included the faculties of Education and Social Work and Economics followed by the School of Business (20.9%). This reflects the general patterns of enrolment per faculty for the University. The next largest groups were Science (11.6%), Engineering and Information Technologies (9.9%) and Health Sciences (7.2%).
Table 2: Central workshop range of offerings for both UG and PG students 2017

<table>
<thead>
<tr>
<th>Name of course</th>
<th>Level</th>
<th>Times offered</th>
<th>Total hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACADEMIC READING AND WRITING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysing an Assignment Question</td>
<td>UG/PG</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Analytical Writing</td>
<td>UG/PG</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Clearer Writing (NESB)</td>
<td>UG/PG</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>Clearer Writing (3 hours ESB)</td>
<td>UG/PG</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Critical Reading of a Research Article</td>
<td>UG/PG</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Critical Reflection in the Social and Health Sciences</td>
<td>UG/PG</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>UG/PG</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Developing an Argument</td>
<td>UG/PG</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Effective Reading and Notetaking</td>
<td>UG/PG</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Essay Writing</td>
<td>UG/PG</td>
<td>14</td>
<td>168</td>
</tr>
<tr>
<td>Foundations of Grammar</td>
<td>UG/PG</td>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td>Functional Grammar for Academic Writing</td>
<td>UG/PG</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>Introduction to Critical Reading (ESB)</td>
<td>UG/PG</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Critical Reading (NESB)</td>
<td>UG/PG</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Introduction to Critical Writing in Essays</td>
<td>UG/PG</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Language Strategies for Referring to Evidence</td>
<td>UG/PG</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Planning an Assignment</td>
<td>UG/PG</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Professional Report Writing in the Social Sciences</td>
<td>UG/PG</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Quoting, Paraphrasing and Summarising Evidence</td>
<td>UG/PG</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Reading for Effective Notetaking</td>
<td>UG/PG</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Reading Strategies</td>
<td>UG/PG</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Using Evidence in Essays</td>
<td>UG/PG</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>Writing a Critical Review on a Single Text or Object</td>
<td>UG/PG</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Writing a Critical Review on a Topic Area</td>
<td>UG/PG</td>
<td>9</td>
<td>27</td>
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<tr>
<td>Writing Case Studies</td>
<td>UG/PG</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Writing in an Academic Style (2 hours ESB)</td>
<td>UG/PG</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Writing in an Academic Style (6 hours NESB)</td>
<td>UG/PG</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td><strong>STUDYING AT UNIVERSITY</strong></td>
<td>UG/PG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice for Multiple Choice Question Exams</td>
<td>UG/PG</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Practice for Short Answer Exams</td>
<td>UG/PG</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Preparing for Essay Exams</td>
<td>UG/PG</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Preparing for Exams</td>
<td>UG/PG</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Procrastination and Managing Time</td>
<td>UG/PG</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Time Management</td>
<td>UG/PG</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>SPOKEN COMMUNICATION</strong></td>
<td>UG/PG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral Presentation (PG ESB)</td>
<td>UG/PG</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>Oral Presentation (PG NESB)</td>
<td>UG/PG</td>
<td>7</td>
<td>56</td>
</tr>
<tr>
<td>Oral Presentation (UG NESB)</td>
<td>UG/PG</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Oral Presentation (UG NESB)</td>
<td>UG/PG</td>
<td>4</td>
<td>32</td>
</tr>
<tr>
<td>Pronunciation Skills (PG NESB)</td>
<td>UG/PG</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td><strong>WORKSHOPS FOR POSTGRADUATE STUDENTS</strong></td>
<td>UG/PG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introductions, Conclusions and Abstracts</td>
<td>UG/PG</td>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td>Managing the Literature for Coursework Assignments</td>
<td>UG/PG</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Overview of a Thesis</td>
<td>UG/PG</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Preparing a Thesis Proposal</td>
<td>UG/PG</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Preparing for Postgraduate Study - Coursework</td>
<td>UG/PG</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Preparing for Postgraduate Study - Research</td>
<td>UG/PG</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>The Process of Getting a Journal Article Published</td>
<td>UG/PG</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Working with Your Supervisor</td>
<td>UG/PG</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Writing a Journal Article in the Sciences</td>
<td>UG/PG</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Writing a Literature Review</td>
<td>UG/PG</td>
<td>11</td>
<td>66</td>
</tr>
<tr>
<td>Writing a Thesis Including Publications (including 2 by remote delivery)</td>
<td>UG/PG</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Writing a Thesis Proposal</td>
<td>UG/PG</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Writing Coursework Assignments</td>
<td>UG/PG</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Writing Bootcamp for HDR Students</td>
<td>UG/PG</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>Writing up Research in the Humanities</td>
<td>UG/PG</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Writing up Research in the Sciences</td>
<td>UG/PG</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Writing up Research in the Social Sciences</td>
<td>UG/PG</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Writing up a Systematic Review</td>
<td>UG/PG</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>WORKSHOPS FOR LANGUAGE AND LEARNING</strong></td>
<td>UG/PG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammar Clinic for Editing and Proofreading</td>
<td>UG/PG</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>Vocabulary for Writing About Data</td>
<td>UG/PG</td>
<td>2</td>
<td>24</td>
</tr>
</tbody>
</table>

Sub Total: 169

Sub Total: 87

Sub Total: 20

Sub Total: 160

Sub Total: 70

Sub Total: 279
Figures 2, 3, 4, 5 and 6 provide details of student evaluations of the Central Workshop Program in 2017. They represent results for each question of evaluations of 248 workshops using a 5-question questionnaire.

now the table

| Discussion Skills and Working in Groups | 4 | 12 |
| Sub Total | 8 | 60 |

WORKSHOPS FOR HONOURS STUDENTS

| Detailed Reading for Academic Writing | 5 | 20 |
| Developing the Thesis Argument | 2 | 4 |
| Managing the Final Stages of an Honours Year | 1 | 2 |
| Managing the Honours Year | 1 | 2 |
| Overview of an Honours Thesis | 2 | 4 |
| Writing an Honours Proposal | 2 | 6 |
| Writing Introductions, Conclusions and Abstracts | 2 | 4 |
| Sub Total | 15 | 42 |
| Overall Total | 315 | 1319 |

Q1. I have learnt valuable skills in this workshop.

0 10 20 30 40 50 60
Strongly agree Agree Neutral Disagree Strongly disagree
% of respondents

Figure 3: 2017 Student Evaluations of Question 1, Central Program workshops

Q2. The teaching in this workshop helped me to learn effectively.

0 10 20 30 40 50 60
Strongly agree Agree Neutral Disagree Strongly disagree
% of respondents

Figure 4: 2017 Student Evaluations of Question 2 of Central Program workshops
Figure 5: 2017 Student Evaluations of Question 3, Central Program workshops

Figure 6: 2017 Student Evaluations of Question 4, Central Program workshops

Figure 7: 2017 Student Evaluations of Question 5, Central Program workshops
### Table 3: Summary of teaching activities outside Faculties 2017

<table>
<thead>
<tr>
<th>Unit</th>
<th>Program</th>
<th>Students</th>
<th>Tutors</th>
<th>Hours</th>
<th>Usefulness Mean rating /5</th>
<th>LC staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation: Learning to Learn lectures</td>
<td>Successful Essay Writing (Sessions 1 &amp; 2)</td>
<td>750</td>
<td>2</td>
<td>4.35</td>
<td>George Ridgway, Dorothy Economou, Arlene Harvey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plagiarism &amp; How to Avoid it (Sessions 1 &amp; 2)</td>
<td>580</td>
<td>2</td>
<td>4.5</td>
<td>Dorothy Economou, Arlene Harvey, Alex Garcia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lectures and How to Use Them</td>
<td>450</td>
<td>1</td>
<td>4.3</td>
<td>Peter O’Carroll</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Developing Critical Thinking</td>
<td>100</td>
<td>1</td>
<td>4.5</td>
<td>Alex Garcia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Successful Report Writing (Science &amp; Engineering 1 &amp; 2)</td>
<td>800</td>
<td>2</td>
<td>4.65</td>
<td>George Ridgway</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strategies for Effective Academic Reading</td>
<td>150</td>
<td>1</td>
<td>4.3</td>
<td>Eszter Szenes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collaborative Learning</td>
<td>60</td>
<td>1</td>
<td>4.0</td>
<td>Alex Garcia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strategies for Successful Learning</td>
<td>300</td>
<td>1</td>
<td>4.4</td>
<td>Helen Drury</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What is this Thing called Uni?</td>
<td>60</td>
<td>1</td>
<td>4.3</td>
<td>Bronwyn James, Jackie Nicholas, Arlene Harvey</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Developing Oral Presentation Skills</td>
<td>200</td>
<td>1</td>
<td>4.6</td>
<td>Arlene Harvey</td>
<td></td>
</tr>
<tr>
<td>Cross Faculty/ Postgraduate Research</td>
<td>Writing an Initial Research Proposal (Sciences/Engineering cluster)</td>
<td>100</td>
<td>2</td>
<td></td>
<td>George Ridgway</td>
<td></td>
</tr>
<tr>
<td>Research Recruitment</td>
<td>Procrastination &amp; Time Management</td>
<td>4</td>
<td>2</td>
<td></td>
<td>Trish Weekes</td>
<td></td>
</tr>
<tr>
<td>University Library</td>
<td>Preparing for Exams (3 workshops)</td>
<td>15</td>
<td>3</td>
<td></td>
<td>Alex Garcia</td>
<td></td>
</tr>
<tr>
<td>Learning Centre</td>
<td>LC Weekend Bootcamp for HDR Writers</td>
<td>8</td>
<td>12</td>
<td></td>
<td>Helen Drury, Dorothy Economou, Arlene Harvey, Bronwyn James</td>
<td></td>
</tr>
<tr>
<td>LC Cross Faculty Undergraduate Bridging program</td>
<td>Academic Literacy &amp; Learning Bridging Program for Students entering via the Broadway/E12 program</td>
<td>17</td>
<td>15</td>
<td>Peter O’Carroll, Dorothy Economou</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mana Yura Unit, Student Services</td>
<td>The Cadigal Academic Enrichment Program</td>
<td>16</td>
<td>18</td>
<td>4.5</td>
<td>Arlene Harvey</td>
<td></td>
</tr>
<tr>
<td>Mana Yura Unit, Student Services</td>
<td>ITAS tutors supporting Indigenous students (Sem 1 &amp; Sem 2)</td>
<td>43</td>
<td>8</td>
<td>4.7</td>
<td>Arlene Harvey</td>
<td></td>
</tr>
<tr>
<td>Total students</td>
<td>* These figures are estimates only</td>
<td>4040</td>
<td>76</td>
<td></td>
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</tr>
</tbody>
</table>

### Table 4: 2017 Qualitative comments from evaluations of a sample of Orientation Week Lectures

<table>
<thead>
<tr>
<th>Topic</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breaking Bad Grammar Habits</td>
<td>• Both the lecturer and slideshow were good.</td>
</tr>
<tr>
<td></td>
<td>• It was very in depth and helpful</td>
</tr>
<tr>
<td>Plagiarism and How to Avoid it</td>
<td>• Great introduction to the workshop that I will attend in future</td>
</tr>
<tr>
<td></td>
<td>• More examples of plagiarism</td>
</tr>
<tr>
<td></td>
<td>• A little more detail into the questions of when to quote or reference would have been helpful</td>
</tr>
<tr>
<td>Strategies for Academic reading</td>
<td>• I certainly will be using these methods and would strongly recommend the continuation of this informative session!</td>
</tr>
<tr>
<td></td>
<td>• thought the information was all very helpful and informative</td>
</tr>
<tr>
<td>Successful Essay Writing</td>
<td>• Really helpful lecture and informative lecturer</td>
</tr>
<tr>
<td></td>
<td>• Perhaps a slightly greater discussion of different essay writing styles for the various academic disciplines</td>
</tr>
<tr>
<td>Unit</td>
<td>Program/Group</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>International Office</td>
<td>Orientation/International students (3 sessions)</td>
</tr>
<tr>
<td>Student Support Services</td>
<td>Orientation + Panel/ Mature age and Part time students</td>
</tr>
<tr>
<td></td>
<td>Postgraduate Student Welcome (Sem 1)</td>
</tr>
<tr>
<td>Student Support Services</td>
<td>Q&amp;A panel for newly arrived students (Pathways Student welcome)</td>
</tr>
<tr>
<td>Centre for English Teaching (CET)</td>
<td>Orientation Direct Entry UG/PG (School of Business) ASAS students</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty of Dentistry</td>
<td>Orientation Postgrad</td>
</tr>
<tr>
<td>Faculty of Engineering &amp; Information Technologies</td>
<td>UG Orientation</td>
</tr>
<tr>
<td>School of Education &amp; Social Work</td>
<td>Special Education Masters orientation</td>
</tr>
<tr>
<td>School of Life &amp; Environmental Sciences</td>
<td>UG Orientation</td>
</tr>
<tr>
<td>Sydney Law School</td>
<td>Orientation (International students)</td>
</tr>
<tr>
<td>FASS</td>
<td>Orientation for HDR students</td>
</tr>
<tr>
<td>FASS &amp; Law</td>
<td>Orientation for HDR students</td>
</tr>
<tr>
<td>FASS</td>
<td>UG Orientation and mentor Program Campus at Dusk (UG)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL * = est</strong></td>
<td></td>
</tr>
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</table>
## Appendix 4
### Faculty Program

#### Table 6: Summary of Teaching in LC Faculty Program 2017

<table>
<thead>
<tr>
<th>Faculty/School</th>
<th>Program name</th>
<th>Target group/UOS code</th>
<th>No. of students</th>
<th>No. of hours</th>
<th>LC staff</th>
<th>Faculty staff</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARTS &amp; SOCIAL SCIENCES</strong></td>
<td>Annotated Bibliography assignment support</td>
<td>1st yr Global Culture &amp; Society INGS1002</td>
<td>100</td>
<td>3</td>
<td>Bronwyn James</td>
<td>Dirk Moses</td>
</tr>
<tr>
<td><strong>School of Philosophical &amp; Historical Inquiry</strong></td>
<td>Bridging Program</td>
<td>2nd yr TAFE entry EC ED &amp; Social Work</td>
<td>10</td>
<td>12</td>
<td>Arlene Harvey</td>
<td>Marianne Fenech, Donna Bridges</td>
</tr>
<tr>
<td></td>
<td>Embedded academic literacy</td>
<td>1st yr EDUF1019</td>
<td>400</td>
<td>N/A</td>
<td>Bronwyn James, Arlene Harvey, Eszter Szenes</td>
<td>Min Kang Kim</td>
</tr>
<tr>
<td></td>
<td>Co-developed &amp; co-taught UoS Texts &amp; Expectations</td>
<td>1st yr EDGU1006</td>
<td>40</td>
<td>15</td>
<td>Bronwyn James, Arlene Harvey</td>
<td>Marie Stevenson</td>
</tr>
<tr>
<td></td>
<td>Thesis &amp; Dissertation Writing</td>
<td>PhD</td>
<td>13</td>
<td>16</td>
<td>Arlene Harvey, George Ridgway</td>
<td>Ilektra Spandagou</td>
</tr>
<tr>
<td></td>
<td>Special Ed Retraine Program Academic Literacy</td>
<td>Masters CW, EDPD 5001</td>
<td>12</td>
<td>5</td>
<td>Eszter Szenes</td>
<td>David Evans</td>
</tr>
<tr>
<td><strong>School of Literature, Arts &amp; Media</strong></td>
<td>Analytical &amp; Critical Writing &amp; application of SFL theory</td>
<td>HDR (Educational Linguistics)</td>
<td>16</td>
<td>2</td>
<td>Dorothy Economou</td>
<td>Jim Martin</td>
</tr>
<tr>
<td></td>
<td>Invited workshop on Reading to Learn theory (Sem 1)</td>
<td>PhD (Educational Linguistics) Masterclass program</td>
<td>35</td>
<td>4</td>
<td>Eszter Szenes</td>
<td></td>
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<tr>
<td></td>
<td>Invited workshop on LCT (Sem 2)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>All FASS</strong></td>
<td>Writing support: Clearer Writing</td>
<td>PG CWork</td>
<td>5</td>
<td>4</td>
<td>Arlene Harvey</td>
<td>Louise Katz</td>
</tr>
<tr>
<td></td>
<td>Introduction to Critical Reading &amp; Essay Writing</td>
<td>PG CWork, Writing Hub SS U/Grads</td>
<td>19</td>
<td>3</td>
<td>Eszter Szenes</td>
<td>Trish Weekes</td>
</tr>
<tr>
<td><strong>DENTISTRY</strong></td>
<td>Academic Writing for Research Reports x 2</td>
<td>PG DMD2 SS</td>
<td>45</td>
<td>3</td>
<td>George Ridgway</td>
<td>Shanika Nanayakkara, Nicole Taylor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>45</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td><strong>ENGINEERING &amp; INFORMATION TECHNOLOGIES</strong></td>
<td>Critical Thinking in Engineering, Pronunciation</td>
<td>1st yr ENGG1813</td>
<td>44</td>
<td>21</td>
<td>Glenys Aiken</td>
<td>Michael Paton</td>
</tr>
<tr>
<td></td>
<td>a) Research Skills (with library)</td>
<td>HDR, Masters, Honours</td>
<td>30</td>
<td>2</td>
<td>Helen Drury</td>
<td>Mohamad Reza Hose Albert Zomaya, (Eng IT); Glen Smyth, Carli Croker (library)</td>
</tr>
<tr>
<td></td>
<td>b) Preparation for lit review &amp; proposal (Sem 1 &amp; 2)</td>
<td>HDR, Masters, Honours, INFO5993</td>
<td>56</td>
<td>4</td>
<td>Bronwyn James</td>
<td>Mohamad Reza Hose Albert Zomaya,</td>
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<tr>
<td></td>
<td>c) Lit Review workshop (Sem 1 &amp; 2)</td>
<td>PG, INFO5993</td>
<td>55</td>
<td>5</td>
<td>Bronwyn James, Helen Drury</td>
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</tr>
<tr>
<td></td>
<td>Research Writing</td>
<td>HDR, Masters</td>
<td>70</td>
<td>2</td>
<td>George Ridgway</td>
<td>Javid Atai, Hannah Gleeson</td>
</tr>
<tr>
<td></td>
<td>Proposal &amp; prep for lit review</td>
<td>New PhD</td>
<td>23</td>
<td>4</td>
<td></td>
<td>Javid Atai, Nicola Harber</td>
</tr>
<tr>
<td>HEALTH SCIENCES</td>
<td>Dealing with MC Questions</td>
<td>1st yr BHS</td>
<td>20</td>
<td>1</td>
<td>Alex Garcia</td>
<td>Krestena Aiken</td>
</tr>
<tr>
<td>Clinical Communication, speaking/pronunciation workshops Physiotherapy</td>
<td>Mixed UG, PHTY2063</td>
<td>6</td>
<td>18</td>
<td>Glenice Aiken</td>
<td></td>
<td></td>
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<tr>
<td>MC &amp; SA Exam Questions</td>
<td>1st yr BHS</td>
<td>150</td>
<td>1</td>
<td>Alex Garcia</td>
<td>Peggy Timmins</td>
<td></td>
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<tr>
<td>MEDICINE</td>
<td>Writing the Lit Review</td>
<td>PG students GENC5020 (Kolling Institute)</td>
<td>14</td>
<td>3.5</td>
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<td>Jane Fleming</td>
</tr>
<tr>
<td>Structuring the Thesis Including Publications (TIP) Writing a Research Paper</td>
<td>HDR</td>
<td></td>
<td></td>
<td>George Ridgway</td>
<td>Carolyn Scott</td>
<td></td>
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<tr>
<td>NURSING</td>
<td>Writing a Manuscript</td>
<td>Honours (Animal &amp; Vet Science)</td>
<td>24</td>
<td>6</td>
<td>Dorothy Economou</td>
<td></td>
</tr>
<tr>
<td>School of Veterinary Science</td>
<td>Communication in Animal Science (Embedded support in assignment writing)</td>
<td>2nd yr, ANSC3103</td>
<td>250</td>
<td>8</td>
<td>Arlene Harvey, Helen Drury</td>
<td>Peter White</td>
</tr>
<tr>
<td>School of Geosciences</td>
<td>a) Writing a Research Proposal</td>
<td>Honours Geography &amp; Geology</td>
<td>10</td>
<td>7</td>
<td>Arlene Harvey</td>
<td>Phil McManus</td>
</tr>
<tr>
<td>School of Geosciences</td>
<td>b) Writing a Lit Review</td>
<td>Honours</td>
<td>10</td>
<td>3</td>
<td>George Ridgway</td>
<td>Derek Wyman</td>
</tr>
<tr>
<td>PHARMACY</td>
<td>Academic Writing &amp; Paraphrasing</td>
<td>Honours PHAR4B30</td>
<td>13</td>
<td>1</td>
<td>Alex Garcia</td>
<td>Daniela Gnijdic</td>
</tr>
<tr>
<td>School of Veterinary Science</td>
<td>MASUS feedback</td>
<td>PHAR5711</td>
<td>16</td>
<td>1</td>
<td>Alex Garcia</td>
<td>Daisy Cheung</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>Writing a Manuscript</td>
<td>Honours (Animal &amp; Vet Science)</td>
<td>24</td>
<td>6</td>
<td>Dorothy Economou</td>
<td></td>
</tr>
<tr>
<td>School of Geosciences</td>
<td>a) Writing a Research Proposal</td>
<td>Honours Geography &amp; Geology</td>
<td>10</td>
<td>7</td>
<td>Arlene Harvey</td>
<td>Phil McManus</td>
</tr>
<tr>
<td>School of Geosciences</td>
<td>b) Writing a Lit Review</td>
<td>Honours</td>
<td>10</td>
<td>3</td>
<td>George Ridgway</td>
<td>Derek Wyman</td>
</tr>
<tr>
<td>SCHOOLS</td>
<td>Architecture, Design &amp; Planning</td>
<td>MASUS</td>
<td>PG students</td>
<td>5</td>
<td>1</td>
<td>George Ridgway</td>
</tr>
<tr>
<td>Embedded writing skills</td>
<td>1st yr, BDES1011</td>
<td>300</td>
<td>1.5</td>
<td>Dorothy Economou</td>
<td>Lee Stickells</td>
<td></td>
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<tr>
<td>Conservatorium of Music</td>
<td>Types of Research Writing</td>
<td>Honours in Performance</td>
<td>18</td>
<td>5</td>
<td>Dorothy Economou</td>
<td>Helen Mitchell</td>
</tr>
<tr>
<td>Law</td>
<td>Law School Writing Seminar (Sem 1 &amp; 2)</td>
<td>PG International</td>
<td>100</td>
<td>6</td>
<td>Peter O’Carroll</td>
<td>Michelle Roberts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sue Ng</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>2266</td>
<td>177</td>
<td></td>
<td></td>
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</table>
Table 7: Summary of LC Faculty Teaching Activities 2017

<table>
<thead>
<tr>
<th>Faculty/School</th>
<th>Students</th>
<th>Hours</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Social Sciences</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>School of Education &amp; Social Work</td>
<td>670</td>
<td>67</td>
<td>29.6</td>
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<tr>
<td>School of Philosophical &amp; Historical Inquiry</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>School of Literature, Arts &amp; Media</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dentistry</td>
<td>90</td>
<td>5</td>
<td>4.0</td>
</tr>
<tr>
<td>Engineering &amp; Information Technologies</td>
<td>278</td>
<td>36</td>
<td>12.3</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>176</td>
<td>20</td>
<td>7.8</td>
</tr>
<tr>
<td>Medicine</td>
<td>34</td>
<td>6.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Nursing</td>
<td>272</td>
<td>1</td>
<td>12.0</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>29</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School of Geosciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School of Veterinary Science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School of Life &amp; Environmental Sciences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institute of Agriculture, Narrabri</td>
<td>294</td>
<td>24</td>
<td>13.0</td>
</tr>
<tr>
<td>School of Architecture, Design &amp; Planning</td>
<td>305</td>
<td>2.5</td>
<td>13.4</td>
</tr>
<tr>
<td>Sydney Conservatorium of Music</td>
<td>18</td>
<td>5</td>
<td>0.8</td>
</tr>
<tr>
<td>Law</td>
<td>100</td>
<td>6</td>
<td>4.4</td>
</tr>
<tr>
<td>Total</td>
<td>2266</td>
<td>177</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: 2016 Quantitative and/or Qualitative Evaluations from Students for a sample of Faculty work

<table>
<thead>
<tr>
<th>Faculty/School</th>
<th>UoS</th>
<th>Teaching Focus</th>
<th>Student Cohort</th>
<th>Student Evaluation</th>
</tr>
</thead>
</table>
| Medicine                                            | GENC5020  | Writing the literature review                                                   | PG and HDR                                                                     | Mean student evaluation 4.4/5  
|                                                    |           |                                                                                |                                                                                 | Great teacher-         
                                                                                       | very engaged and clearly made an effort to understand the area of study-    
                                                                                       | fairly specific area                                                       |                                                                                 |
| School of Engineering and Information Technologies   | INFO5993  | Writing the literature review                                                   | Honours, Masters by Research, PhD                                             | Mean student rating 4.3/5     
|                                                    |           |                                                                                |                                                                                 | Found out a lot and learnt a lot about literature reviews                  |
| Sydney School of Education and Social Work           | Education and Social Work Thesis & Dissertation Workshop program | 8 x 2 hour sessions on Writing the Thesis Dissertation | Research students | Mean student rating 4.9/5  
|                                                    |           |                                                                                |                                                                                 |                                                                                 |
| Engineering                                         | Research Methods Induction | Literature Review and Research Proposal | New research students | Mean student rating >94% of students agreed or strongly agreed that the workshop was useful |
| Veterinary Science                                  | ANSC3103  | Brochure assignment                                                             | Undergrad – 2nd year                                                          | Mean student rating 88.88% of students agreed or strongly agreed that the resources helped understanding of assignment expectations |
Appendix 5
Learning Centre Publications and Presentations 2017

**bold = LC author**

**Journal Articles**


**Conference Presentations**


**Book Launch**

Mathematics Learning Centre 2017 Report

Introduction and Strategic Plan

The Mathematics Learning Centre (MLC) assists eligible undergraduate students to develop the mathematical knowledge, skills and confidence that are needed for studying mathematics or statistics at university.

A wide range of teaching programs have been developed to meet the needs of those undergraduate students who enter the University of Sydney without the ‘assumed knowledge’ in mathematics they need for their first level mathematics or statistics units of study.

The Centre, therefore, targets students from the following groups:
- Students who have not studied the appropriate level of mathematics at secondary school which is assumed for their university studies;
- Mature age students who have not studied mathematics for several years;
- Students from overseas or interstate who may find gaps in their mathematical knowledge or who are not familiar with mathematical terms in English;
- Students whose studies have been interrupted for some reason including those students who have taken a ‘gap year’; or
- Students from equity groups.

Attendance at all MLC programs is voluntary.

When students first visit the Centre, their mathematics background is assessed against the assumed knowledge for their units of study. Students are then advised about MLC programs that are suitable for their needs. Students who are not considered eligible at this first visit are referred back to the appropriate teaching staff in their unit of study.

The Centre employs 7 key initiatives that are aligned with 4 strategies of the University of Sydney Plan 2016-2020.

Strategy 5: Transform the learning experience

Initiative 1: Provide bridging programs
Initiative 2: Provide semester programs to support our target groups of students
Initiative 3: Provide eLearning resources

Strategy 1: Invest in and drive research excellence across the University
Strategy 3: Develop partnerships that enable our research to make a difference, locally and globally

Initiative 4: Support research in mathematics and statistics education and mathematics discipline knowledge

Initiative 5: Engagement and leadership in the profession and the University

Strategy 7: Embed our values

Initiative 6: Evaluate and Planning: Plan to ensure the provision of high quality teaching and learning support

Initiative 7: Internal capacity building: Maintain a professional, supportive, collegial work environment for MLC staff
Summary statistics for 2017

About 810 individual students attended MLC programs with 633 students attending our semester programs and 256 students attending bridging programs (some students attended multiple programs). The faculty breakdown for the students who attended the MLC Semester Programs including the Drop-in Centre, the supplementary tutorials and workshop program for economics students is given in Table 1.

Table 1: MLC Drop-in Centre, Supplementary Tutorial and Workshop Participants

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Number</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Social Sciences</td>
<td>137</td>
<td>21.6</td>
</tr>
<tr>
<td>Business School</td>
<td>17</td>
<td>2.7</td>
</tr>
<tr>
<td>Engineering and Information Techn</td>
<td>101</td>
<td>16.0</td>
</tr>
<tr>
<td>Medicine</td>
<td>20</td>
<td>3.2</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>41</td>
<td>6.5</td>
</tr>
<tr>
<td>Science</td>
<td>299</td>
<td>47.2</td>
</tr>
<tr>
<td>Other faculties</td>
<td>18</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>633</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Strategy 5: Transform the learning experience

Initiative 1: Provide bridging programs

The MLC organises bridging courses in mathematics and statistics in February each year. Students pay a fee for these courses.\(^1\)

Mathematics Bridging Courses

Description and content

The MLC, jointly with the School of Mathematics and Statistics, offered Mathematics Bridging Courses at the HSC Mathematics (2 unit) and HSC Mathematics Extension 1 levels. After a short exposition by the lecturer, students were encouraged to work in groups of four on their problems for the day. There was, therefore, ample opportunity the students to seek one-to-one assistance from the lecturer when needed.

Timing and duration

The courses ran in a daytime and evening format. The classes were kept small with approximately 16 students in each resulting in 16 individual classes each running for 24 hours of class time over 12 working days.

Attendance

Two hundred and forty students registered online before the cut off date: 155 2 unit students and 85 Extension 1 students. The MLC Drop-in Centre was open for two hours per day (a total of 24 hours)

---

\(^1\) A small number of scholarships were available for mathematics bridging course students.
during the bridging courses to further assist the students in their learning of the bridging course material. There was a total of 168 student hours of attendance.²

**Student evaluation**

A survey was conducted at the end of the course with 164 students returning the survey. The students reported that they appreciated the way that the course was structured with small classes, the opportunity to ask questions and the opportunity to make new friends. Typical responses to the question What things did you like about your maths bridging course?:

- Small class, lots of attention … content broken down well by topic …
- Seriously aided my maths understanding. The table groups was [sic] a good idea. Made me feel less isolated and lost. Also 10am to 12pm is good timing.

The students were asked to rate their tutor’s teaching on a scale of 1 to 10 (10 being the best). All 16 teachers received a rating over eight with seven teachers receiving a rating of nine or more (mean 8.8, SD 0.5). The students’ qualitative responses often commented specifically on the teaching. Typical responses were:

- The fantastic teacher who [went] above and beyond the call of duty.
- [The tutor] is a great teacher and [was] very helpful at getting me to understand the maths concepts in the course.

**Statistics Bridging Courses**

**Description and content**

The MLC offered a Statistics Bridging Course for students enrolling in PUBH5012 and PSYC2012. The bridging course concentrates on the mathematics needed for the study of statistics and some statistical concepts that are common to PSYC2012 and PUBH5018 including mean, standard deviation, the normal distribution, correlation and regression. The approach taken uses the statistical concepts to motivate and build the mathematics needed, and develops the student’s understanding of these basic concepts.

**Timing and Duration**

The course ran for 18 hours over 6 days during a two-week period on Monday, Tuesday and Thursday. The classes were taught as workshops with students encouraged to work on the material either individually or in groups during the class. The two-week structure also provided time for the students to consolidate their learning between classes.

**Attendance**

A total of sixteen students attended the course.

**Student evaluation**

A survey was conducted at the end of the sixth workshop with 15 students returning a survey. The question: The best things about the stats bridging course were, elicited 11 responses including:

- The booklets were really clear and easy to understand. I feel confident that if I ever get stuck I can refer back to the booklet for help.

² A student hour is our measure of Drop-in Centre attendance. It is the number of students × the number of hours, so if two students spend 0.5 hours each studying in the Drop-in Centre, that equals one student hour.
The teachers all displayed so much patience.

The students were asked about their confidence in learning statistics as a result of attending the bridging course. All 15 students responded that their confidence in learning statistics had increased with 12 students responding that their confidence in learning statistics had ‘increased a lot’.

The students were asked to rate the statistics bridging course on a five point Likert scale. All 15 students rated the bridging course in the highest two categories, i.e. as good or excellent.

**Initiative 2: Provide semester programs to support our target groups of students**

The MLC semester programs of revision workshops and the MLC Drop-in Centre continued in 2017. The total number of student hours of attendance in these programs is given in Table 2. The programs are discussed below.

**Table 2: Student hours of attendance for MLC semester programs**

<table>
<thead>
<tr>
<th>Source</th>
<th>Semester 1</th>
<th>Semester 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop-in Centre</td>
<td>2712</td>
<td>2412</td>
<td>5122</td>
</tr>
<tr>
<td>Revision workshops</td>
<td>944</td>
<td>255</td>
<td>1199</td>
</tr>
<tr>
<td>Total</td>
<td>3654</td>
<td>2667</td>
<td>6321</td>
</tr>
</tbody>
</table>

**Drop-in Centre**

Students can attend the Drop-in Centre at any time during opening hours. It is an informal environment where individual assistance is tailored as far as possible to each student’s needs. We aim to develop a learning community – one where students are expected to understand the mathematics they are studying and learn to think for themselves. All attendance is voluntary.

In 2017, the Drop-in Centre was open for 35 hours per week during semester time, 33 hours per week during Stuvac and in the exam periods for a total of 1148 hours.

Drop-in Centre attendance accounted for 81% of the total attendance in our semester programs. Drop-in Centre attendance increased by 24% in 2017 compared to 2016, returning Drop-in attendance to pre-2016 levels.

A description of a week in Semester 1 will give a snapshot of the operation of the Drop-in Centre. Week 10 in Semester 1 2017 was the third busiest week in the semester with 220 student hours of attendance. During Week 10, the Drop-in Centre was open for 35 hours during which time 88 students visited. Thirty-six students (41%) made multiple visits with an average of 2.5 visits per student. Five students who made a visit in this week made at least 4 visits each. There were a total of 139 visits with a mean time spent per visit of one hour 35 minutes.

**MLC Evaluation survey**

An anonymous MLC Drop-in Centre survey was conducted in the final weeks of Semester 2 2017. The students were not handed a survey to return but were alerted to the survey by signs and survey forms were available on the desks. A ballot type box was provided at the sign-in table for completed surveys. Thirty-one students chose to return the survey. After the end of exam period, one of our regular students expressed an interest in doing the survey now that exam/time pressures were off. We reopened the survey using Socrative software for three days. The students, who attended during the survey weeks, were invited to do the survey by email if they had not already done so. A further 13 students returned a survey.
Quantitative questions

The students were asked about their confidence in learning mathematics or statistics as a result of attending the Drop-in Centre, and asked to rate the assistance they received there on a five point Likert type scale. There were 44 student responses.

Ninety-three percent of students reported that their confidence in learning mathematics or statistics had increased with 55% of students (n=24) reported that the confidence had 'increased a lot'.

The students also rated the assistance they received in the Drop-in Centre highly. Ninety-six percent of students (n=42) rated the assistance they received in the MLC Drop-in centre in the highest two categories, i.e. as good or excellent with 71% of students (n=31) rating the assistance as excellent.

Qualitative questions

The students were asked a series of open-ended questions. The questions, together with a range of the students’ comments that capture the flavour of the responses are given below. All comments are given in the Appendix. The question: ‘The best things about the Maths Learning Centre Drop-in Centre were’ elicited 43 responses.

The students appreciated the one-to-one assistance with the tutors being described as ‘knowledgeable’, ‘patient’, and ‘helpful’. Many students commented specifically on availability of help when they needed it, the ability find a tutor that suited them and the benefit of working with students with the similar issues.

The responses included:

‘The staff are unbelievably helpful, kind and willing to go above and beyond to help!’

‘Being able to come in whenever I need to. Having things explained slowly and in a way I can understand.’

‘The assistance of the tutors is of a very high standard. Having different tutors with some varied experience and a timetable is also helpful.’

‘The patient tutors and the lovely students I met who understood my struggles.’

The question: ‘What things didn’t work and how could we improve them?’ elicited 40 responses.

Fifteen students commented on the time spent waiting for help or on the need for more tutors at busy times, and some students (5) commented that the Drop-in Centre could be noisy. Eleven students indicated that no changes were necessary or made positive comments. All comments and suggestions will be evaluated and changes made if appropriate. The responses included:

‘More than 1 tutor during peak times such as quiz/exam weeks’

‘The level of group work noise (particularly at busy times) and distracting chit-chat was sometimes a distraction. Thankfully this is pretty rare.’

‘Wait time – some tutors spend way too long with students.’

The final question: ‘Are there any other comments you would like to make?’ elicited 34 responses.

Twenty-five students used this opportunity to express their appreciation for the service or to compliment the staff. There were two negative comments about noise (included in the count above). The responses included:

‘Thank you so much to the amazing people at maths help. Without maths help, I am sure I would not have survived 1st year maths.’

‘The mathematics learning centre helped and encouraged me to try harder to understand the different concepts in the math units I took this semester.’
**Revision workshops**

In 2017 we continued our supplementary tutorial/revision workshop program. Students are encouraged to join one of our supplementary tutorials whenever possible, both for reasons of efficiency and because we believe group discussion and co-operative work lead to more effective learning.

During 2017, we continued to make changes to the supplementary tutorial program in mathematics units of study by reconfiguring them as revision workshops. The reconfiguration of the revision workshops in MATH1001/1002/1003/1011/1013/1014 included a change of name and an explicit statement of the content to be covered in any given week.

Thirty-three revision workshops were held in Semester 1 and 36 held in Semester 2.

Student attendance increased after these changes. For Semester 1, revision workshop attendance increased across MATH1001 and MATH1011 by 347% from a low base in 2016. For Semester 2, revision workshop attendance increased by 92% across MATH1003/1013/1014.

Our supplementary tutorial program continued in MATH1111, PSYC2012 and PUBH5018.

The supplementary tutorials are held (in most cases) once a week from Week 2 to Week 13 for a total of 54 hours of class time.

Overall tutorial/workshop attendance increased by 35% and 37% for Semesters 1 and 2 respectively compared to the previous year.

**Workshops for School of Economics students**

In the first eight weeks of each semester, a series of workshops were held for students studying economics units of study in the School of Economic, Faculty of Arts and Social Sciences. The workshops covered topics in mathematics and probability that would be useful for students studying economics and statistics. In 2017, the number of workshops given in each semester was five. Consequently, a total of 10 two-hour classes were held with 69 students attending at least one class.

**MLC special activity**

Indigenous STEM Spring Workshop for the Faculty of Engineering and Information Technologies (FEIT)

Team: Dr Collin Phillips, Dr Ken Ly, Dr Erwin Lobo and Mr Alex Majchrowski.

The MLC organised two workshops (3.5 hours in total) for potential future students of FEIT on 26 and 27 September 2017. Fourteen students attended the workshops.

To assist with planning, questionnaires were sent out to the students to assess their mathematics background, the topics that would help them the most with their studies and general topics in mathematics that they would find interesting.

As a result of the questionnaire, MLC divided the group into two groups – an algebra group and a calculus group – according to their mathematics backgrounds. The groups concentrated on developing the most relevant mathematics topics for the students. The groups came together for the final session each day to participate in the general interest topics: Codes and code cracking and solving (some of) Rubik’s cube.

Feedback from the students as reported by FEIT: ‘we’ve had excellent feedback from both students & houseparents on these sessions, and many students noted that the maths sessions were the most useful sessions of the week. We’ve asked all students to score activities out of 5, and the maths sessions scored 63/70, which is really great.’
Initiative 3: Provide eLearning resources

MLC staff have produced learning resources for our students since 1986. All MLC resources are available online. In 2017 there were 60,345 visits to our website with 76,402 page views.

Since 2010 we have produced short videos on many mathematical topics. There are currently 89 videos available online. One new video was added in 2017, and planning commenced for a new suite of ‘Just in time’ videos to be rolled out in 2018/2019.

Mathematics Bridging Course videos
In 2010 we received a HEPPP grant to produce eLearning resources for our Mathematics Bridging Course students and have been producing short videos covering topics in mathematics ever since. A total of 59 short videos are available to complement the mathematics bridging courses.

‘Just in time’ videos

23 ‘Just in time’ videos have been produced for students enrolled in MATH1111: Introductory Calculus. These short videos were linked to their unit of study tutorial material and covered a topic in the tutorial questions that was likely to cause the students difficulty.

Modelling and Calculus videos

The Modelling and Calculus eLearning project continued with Dr Collin Phillips and Mr Collin Zheng. This project focuses on helping first year mathematics students with the language and techniques of mathematical modelling and is relevant for students enrolled in MATH1013 and MATH1003. A new video titled ‘Introduction to Recurrence Relations’ was added making a total of eight videos.

Student use of MLC web resources

Table 3 gives a court of visits and page views for the resources on our web pages from 1 January to 31 December 2017.

Table 3: Count of visits and page views for MLC web resources for 2017

<table>
<thead>
<tr>
<th>Web material</th>
<th>Visits</th>
<th>Page views</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper based maths materials</td>
<td>13,159</td>
<td>15,407</td>
</tr>
<tr>
<td>MATH1111 ‘Just in time’ videos</td>
<td>1,389</td>
<td>1,589</td>
</tr>
<tr>
<td>Modelling and calculus videos</td>
<td>192</td>
<td>228</td>
</tr>
<tr>
<td>Mathematics Bridging Course videos</td>
<td>7,795</td>
<td>8,968</td>
</tr>
<tr>
<td>Total</td>
<td>22,535</td>
<td>26,192</td>
</tr>
</tbody>
</table>
Strategy 1: Invest in and drive research excellence across the University

Strategy 3: Develop partnerships that enable our research to make a difference, locally and globally

Initiative 4: Support research in mathematics and statistics education and mathematics discipline knowledge

C1 Refereed journal articles (MLC staff in bold)

Publication


Accepted for publication

T.A. Bui, J. Li and F.K. Ly, T 1 criteria for generalised Calderon-Zygmund type operators on Hardy and BMO spaces associated to Schrodinger operators and applications, *Annali della Scuola Normale Superiore di Pisa, Classe di Scienze*


Submitted for publication


E1 Refereed conference papers

Submitted for publication


E2 Unrefereed conference papers

Initiative 5: Engagement and leadership in the profession and the University

Presentations at conferences

Dr Ken Ly and Dr Collin Phillips presented a paper: ‘Blended Learning in Mathematics Support’ at the 13th Biennial conference of the Association for Academic Language and Learning 1-3 November 2017, Deakin University, Victoria.

Dr Ken Ly presented a paper: ‘An embedding result for Hermite distribution spaces’ at the 61st Annual Meeting of the Australian Mathematical Society, Harmonic Analysis special session 12-15 Dec 2017, Macquarie University, Sydney.

Ms Jackie Nicholas presented a paper: ‘Mathematics Support: promoting student learning and some factors that may work against student learning’ at the Mathematics Education beyond 16: Pathways and Transitions, a conference of the IMA, CETL-MSOR, and Teaching Mathematics and its Applications, University of Birmingham, 10 – 12 July, Birmingham, UK.

Ms Jackie Nicholas presented a paper: ‘Evaluating the effectiveness of mathematics support’ at the 13th Biennial conference of the Association for Academic Language and Learning 1-3 November 2017, Deakin University, Victoria.

Dr Collin Phillips presented a paper: ‘Designing Inclusive Indigenous STEM Workshops for School Students’ at the Jon Borwein Commemorative Conference 2017 Mathematics and Education: Spirit, Culture and Community on 24th September, Newcastle University, NSW.

Dr Collin Phillips presented a paper: ‘Employing Cultural Plasticity in STEM workshops for Prospective Indigenous Engineering and Information Technology Students’ to the Mathematics Education special session at the 61st Annual Meeting of the Australian Mathematical Society (AustMS) at Macquarie University in December.

Other activities
Dr Ken Ly was invited to spend a week at UniSA to work with an academic and her two students in Feb 2017. This included sharing his expertise in parts of harmonic analysis, while fostering a community of collaboration and research at UniSA. He also spent some of the time developing ideas for further research.

In June, Ms Jackie Nicholas attended the IMA Gold Medal Lecture at The Royal Society in London, UK. The lecture, ‘Improving mathematics education: what can we learn from 25 years of mathematics support?’ was given by Professor Tony Croft (Loughborough University) and Professor Duncan Lawson (Newman University).

Ms Jackie Nicholas attended the First Year in Maths NSW symposium at Western Sydney University in December.

Ms Jackie Nicholas was the Faculty Liaison in mathematics for the University of Sydney Foundation Program, Taylor’s College.

Strategy 7: Embed our values

Initiative 6: Evaluate and Planning: Plan to ensure the provision of high quality teaching and learning support

The MLC is committed to providing high quality mathematics support that is based on best practice. Statistics are tallied weekly to track the student attendance in the Drop-in Centre and at our revision workshops. As described above, the re-conceptualisation of the revision workshops were a result of this analysis.
All MLC bridging courses are assessed for their relevance and quality by student survey, and changes are made as needed. In 2017, a MLC Drop-in Centre was conducted. The results of the surveys are reported above.

**Initiative 7: Internal capacity building: Ensure that MLC staff are supported in their career development**

MLC staff are provided with financial support to attend conferences both in Australia and overseas.

Dr Ken Ly received funding to attend and present at the 61st annual meeting of the Australia Mathematics Society (AustMS) conference at Macquarie University in December. Dr Collin Phillips received day funding to attend and present at this conference.

Dr Ken Ly, Dr Collin Phillips and Ms Jackie Nicholas were funded to attend and present at the 13th Biennial conference of the Association for Academic Language and Learning at Deakin University in November.

Ms Jackie Nicholas was partly funded to attend and present at the Mathematics Education beyond 16: Pathways and Transitions, a conference of the IMA, CETL-MSOR, and the journal Teaching Mathematics and its Application at the University of Birmingham in July.
Appendix 1

Comments from MLC end of year survey 2017. Minor corrections made to verbatim errors to increase readability.

The best things about the Maths Learning Centre Drop-in Centre was:

- Being able to ask specific questions to the tutor. The ability to focus on the maths units. Copies of lecture notes and text books.
- The patient tutors and the lovely students I met who understood my struggles.
- The tutors, the open space, work groups
- The tutors explain concepts in a clear way including background that I may have missed when I did HSC maths several years ago.
- Clear explanations of concepts when needed without being made to feel silly.
- Having tutors available to help.
- Help from the tutors.
- Helpful! The tutors are helpful.
- The weekly review session with Collin [Zheng].
- The tutors!
- The tutors are amazing and they never lose their patience at you. The fact that you can ask any question is amazing.
- Quiet place to work. Tutors who explain everything.
- Made friends
- Convenience — tutors are very knowledgeable. Ken! — he’s the best, so helpfull!
- You can drop-in and ask any mathematical questions at any time as long as it’s open. It’s cross-subject.
- The helpful tutors
- Practice
- Solve questions for me
- A sense of personalised tutoring, really helpful and knowledgeable tutors (and patient), opportunities to work with others struggling as well.
- No questions are too simple
- Always having a tutor plus resources such as computers, text books and white boards.
- Tutoring — people explaining the concept and proposing exercise.
- Tutors teach me stuff that I need help with.
- Tutors are always there — individual questions can be answered rather than it simply being like a classroom.
- I could integrate it into my timetable — I’m a little hyperactive so it gave me a quiet distraction free environment to do work — the staff were really friendly.
- Instant help, when you need it — quite informative and knowledgeable.
- Having a knowledgeable tutor who can work through my questions individually.
- The staff are unbelievably helpful, kind and willing to go above and beyond to help!
- Clear answers — patient — knowledgeable
- Desk space
- Asking questions — hard to clarify thought process with google and lecturers may not have 15 mins to explain (also student might not). Good place to study.
- Being able to come in whenever I need to. Having things explained slowly and in a way I can understand.
- The assistance of the tutors is of a very high standard. Having different tutors with some varied experience and a timetable is also helpful.
- Tutor always could explain a topic
- Experienced teaching staff, availability of resources, computers, books etc. Extra tutes for maths units such as 1013 which are better than standard tutes run by the unit of study.
- The variety of staff rostered at different times throughout the day. This is an ingenious method of both ensuring students can maximise the chance of getting assistance from the tutor that best suits their learning style whilst simultaneously keeping the teaching staff fresh to handle student
enquiries. The great availability of hours open. Could almost always find suitable times around lectures and other commitments.

- They were extremely patient, knowledgeable, and very willing to help.
- The service was great.
- The tutors
- Solving maths problems promptly, tutor availability.
- I can just drop in for a single question or stay for multiple.
- The staff and teachers explain the steps
- Tutor was there always so I could get help whenever I needed.

What things didn’t work and how could we improve them?

- More than 1 tutor during peak times such as quiz/exam weeks
- I haven’t found anything that wasn’t helpful.
- Sometimes with some of the tutors they explain stuff in a way that I don’t understand so maybe don’t assume I know all the basics.
- Can get really busy – good to have 2 tutors around lunch time at the end of semester.
- Less talking by attendees
- Late opening at 10am
- No improvement needed
- I think it all worked
- Much of the help, I felt was tailored around the fundamental mathematics, so some equivalent or extra guidance would be handy for higher maths students.
- Nothing – maybe towards the end of semester having more tutors on
- Sometimes it gets very busy and tutor cannot get to everyone all the time. Some resources should be available for students when that happens, eg notes on integration and differentiation.
- Everything is just PERFECT
- Maybe two tutors could be rostered on in busy periods such as from 12 – 1. Later hours would also be helpful as a lot of my classes finished at 5pm this semester.
- Wait time – some tutors spend way too long with students.
- n/a
- Need more tutors when many people here
- Charging ports on the table
- Sometimes the tutor to student ratio is too low
- Sometimes I might wait for a long time before I can get a tutor for help. Maybe more staff–to-student ratio?
- Sometimes it’s quiet [sic] busy and you have to wait a long time for help. Maybe having more than 1 tutor on at a time would be helpful.
- Not enough tutors
- Not tutors fault but often too loud due to other students. Some tutors weren’t that helpful as well.
- Need more scrap paper
- There weren’t too many tutors who knew about stats.
- Please put the review session in an easier-to-find location, or provide directions on website.
- Not enough time for consultation, only one tutor
- n/a
- Having more computers – running revision workshops that focus on specific topics within the unit
- Probably lecture the tutors on how to handle students who are frustrated. I can understand how upsetting it is when you feel you can’t accomplish something.
- I would like a course for pharmacy maths
- Not your fault, just that the unit based course revision sessions all seemed to clash with my lecture and (assessable) lab sessions so I couldn’t get to those.
- Nothing wrong.
- The level of group work noise (particularly at busy times) and distracting chit-chat was sometimes a distraction. Thankfully this is pretty rare.
- Cannot think of any at the moment
- To have more tutors there so as to decrease precious waiting time during the exam period
• I think that everything is just fine as it is it is well organised we have access to computer and book for extra exercises.
• Minor number of tutor gave wrong solutions. Insufficient time with tutor during peaks.
• It all worked.
• Waiting
• n/a

Are there any other comments you would like to make?

• n/a
• Thank you
• Love the MATH1014 review session
• Overall really good service
• No
• Good! I like the math learning centre!
• Free snacks
• It’s such a good program for student who need math help.
• Thank you so much to the amazing people at maths help. Without maths help, I am sure I would not have survived 1st year maths.
• Coffee machine please. Please allow second year maths students attend, or create a second year maths centre. I don’t know if I will cope next year without this place.
• THANKS How poss [not readable] because of the Centre and the helpful tutors.
• Thank you for all the help this sem (;)”
• Need to start MLC for Advanced maths too. Have more tutors available.
• Thanks
• This place has helped me unexplainable amounts!
• Fantastic service offered. As a mature age student returning to study the assistance is invaluable!!
• Tutor was inconsiderately loud when assisting other students, making it difficult to concentrate for other students to the point where I chose to leave.
• Free coffee? (smiley face) Please!
• All the tutors are really fantastic!
• This centre was a lifeline for me being mature age with a limited maths background. Have given me opportunities I believe I probably otherwise wouldn’t have.
• Special thanks for all tutors especially Ken Lai [sic].
• The mathematics learning centre helped and encouraged me to try harder to understand the different concepts in the math units I took this semester.
• Keep this going – it helps everyone!
• Thank you for all your help
• You guys are great, I should have come in there sooner!
• Thank you so much couldn’t have passed this year without you.
• I’d just like to extend my gratitude to the helpful staff of the MLC who have provided a carefully tailored solution to aid students like myself who are willing to put in the time/effort but can’t afford private tutors. The MLC fills a very important gap that might exist in the maths portfolio for mature age or maths challenged students like myself.
• I am really grateful that the learning centre exists
• Nil
• Keep doing what you guys are doing it is perfect!
• May suggest that other students keep their voice low if they are not working on maths.
• Keep up the good work.
• All the staff were very friendly.
• I wish this learning centre will keep [being] maintained.
Appendix 2
Staff of the Mathematics Learning Centre 2017

Academic Staff

Ms Jackie Nicholas
BSc (Hons) MSc Hull DipLaw LPAB GradDipLegalPrac College of Law
Head | Senior Lecturer

Dr Collin Phillips
BSc (Hons) DipEd PhD Sydney
Senior Lecturer

Dr Fu Ken Ly
BComm/BSc (Hons) PhD Macquarie
Associate Lecturer

Professional Staff

Ms Susan Robinson
BA Sydney

Casual Academic Staff

Dr Nahid Banihashemi
BA Amir Kabir U Tech MSc Chamran PhD UniSA

Dr Jo Bellanca
BA WC MA PhD SUNY

Dr Erwin Lobo
BSc (Hons) PhD Sydney

Mr Alex Majchrowski
BSc (Hons) Sydney

Dr Krishnasamy Muraleedaran
BSc Sri Lanka MSc PhD Sydney

Mr George Papadopolous
BSc (Hons) MSc Sydney

Mr Geoff Phillips
BSc (Hons) Sydney

Mr Collin Zheng
BSc (Hons) Sydney