

Undergraduate Research Internship Scheme Wins National Award!

The Undergraduate Learning and Teaching Research Internship Scheme from The University of Western Australia recently gained an OLT National Teaching Award for programs that enhance learning

The Undergraduate Learning and Teaching Research Internship Scheme (ULTRIS) was established in 2008 to provide an opportunity for undergraduate students from across the university to have an authentic research experience, equivalent in rigour to an Honours project. The program is highly innovative, distinctive and unique: the research projects undertaken by the students are in the extra-disciplinary domain of teaching and learning in areas of strategic importance to the institution. Topics researched have included 'Student Staff Interactions Outside the Classroom', 'the First Year Experience' and 'Internationalisation of

Higher Education'. Students in the international ULTRIS program, from different locations world-wide, interact and share perspectives, understandings and results as their research projects unfold. In 2013, the international students met face to face for the first time when they presented their research at ACUR.



Sally Sandover, Lee Partridge and Wayne McGowan, with their OLT National Teaching award.

ULTRIS has been recognised as a leader in the field and is at the cutting edge in engaging students in undergraduate research into the Scholarship of Teaching and Learning through facilitating them to work collaboratively within a university and a global classroom. The ULTRIS team, were presented with an Award for Programs that Enhance Learning in Canberra in November. Professor Sally Sandover, Associate Professor Lee Partridge and Dr Wayne McGowan were congratulated by Scott Ryan, Parliamentary Secretary to the Minister for Education, for having made an innovative and outstanding contribution to the quality of student learning and the student experience of higher education. It was one of only nine Australia-wide Awards for University Teaching 2013.

Second Australasian Conference of Undergraduate Research: "Awesome"!

Lilia Mantai and Angela Brew, Macquarie University

At the second ACUR conference held at Macquarie University in September, delegates were invited to write comments on paper "bricks" which were then arranged to make a wall. "Awesome"; "I am in AWE of this incredible research"; "So informative"; "I love ACUR!"; "A new and interesting experience"; "My first ACUR experience"; "So many nice people all around", etc. These summarise the most common phrases!

Around 55 Undergraduate, Honours and Master of Research students from all over Australia and New Zealand presented their research, either as a spoken or a poster presentation. 150 visitors came to hear and be stimulated by the wide variety of presentations on offer each day. Research presented covered diverse topics ranging across all disciplines, from "Big History" and "Web 2.0 technologies" to "Green Energy" and "The Meaning of Life".

The conference attracted some \$7,000 in prize money this year. In presenting the prizes, Macquarie's Vice-Chancellor Professor Bruce Downton congratulated the organisers Angela Brew and Lilia Mantai on this "terrific initiative".



Rodney Cross of Macquarie University won the \$1000 Prize for the Best Presentation and Paper (donated by Professor Adrian Lee), for his engaging paper entitled "Bold as brass: 'brass instruments' in the Roman army". The \$1000 Prize for the Best Presentation and Paper on

Community-Engaged Research, which was donated by the Participation and Community Engagement Unit of Macquarie University was won by Fiona Ng, University of Sydney for "Weather and Health: A rural perspective".

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The \$500 Prize for the Best Presentation in Computer Science or Electrical Engineering, (donated by National ICT Australia, NICTA) was won by Audri Biswas, Macquarie University for his presentation: "A high technology answer to the question, 'Where am I?' ", while Joseph Bunton, University of Queensland won the \$500 Prize for the Best Presentation in Mathematics or Statistics, (donated by the Australian Mathematical Sciences Institute, AMSI), for his presentation: "A Branch and Price Scheme for the Single Track Railway Line Problem". The \$500 Prize for the Best Presentation in Plant Science or Molecular Biology, (donated by the Australian Centre for Plant Functional Genomics, ACPFG) was won by the Macquarie University iGEM Team: Rani Sharma, Daniel Russell, and Kirsten Gadsby, for their presentation "Towards a new green energy: Production of chlorophyll in *E. coli*".

Four \$500 Travel Scholarships for students who have engaged in online education, (donated by the Faculty of Human Sciences, Macquarie University) were won by Patrick Vu, University of Western Sydney for his presentation: "Online education and its potential impact on international student inflow to Australian universities"; Dean Croxon, Macquarie University, for "Fair Go with Web 2.0: Effective strategies for the democratisation of teaching and learning processes using Web 2.0 technologies"; and Lauren Brady and Brad Wright from Charles Sturt University, for "Exploring personal development health and physical education HSC teachers' perceptions of the value of NSW HSC online website in preparing students for a high stakes examination".

Coop Bookshop vouchers were awarded to Jacqueline Ruchpaul, Open University Australia, the recipient of the prize for the best poster and Annash Babu Srinivasreddy, University of Wollongong, winner of the prize for the most interesting poster. Runners-up to the prize for the best paper also received Coop book vouchers. Macquarie University library provided vouchers to the 40 volunteers without whom the conference would undoubtedly not have run as smoothly.

Other highlights of the program included keynotes by Prof Stuart Hampton-Reeves (University of Central Lancashire), the founder of the British equivalent BCUR, Prof Rachel Spronken-Smith (University of Otago), and the student facilitated interactive research workshop. A BBQ for all ACUR attendees was organised by Macquarie's UG research student society (MUURSS) on the first conference day which was a welcome opportunity to socialise and network.

Feedback returned after the conference shows again that students appreciate the opportunity of presenting their research, sharing ideas with others and making valuable connections at a conference like ACUR. For example, one student commented:

"I'd like to thank you so very much for organising the ACUR 2013 - I'm so glad to be able to come down to Macquarie University, learn about other people's research, and mingle with like-minded peers."

And a student who presented also commented:

"I gained the understanding that the ability to conduct research is not restricted to academics at university, unlike a common perception that undergraduates only learn coursework and need to wait for higher level study to undertake projects. The great showcase of expertise in differing fields provides a great reason for more undergraduate students to answer their own questions as it is evident that we all are indeed capable of achievement in researching exciting and relevant issues."



ACUR volunteers

The ACUR committee acknowledges with gratitude the support of the many academics and doctoral students who acted as reviewers, the sponsors our valiant team of 40 volunteer undergraduate students, and of course all the undergraduates who wrote abstracts, papers and posters and who presented their work with such evident dedication and professionalism.



ACUR audience



Some of the prize-winners at ACUR 2013

Growing ACUR

The Australian Federal Government Office of Learning and Teaching has funded a 'seed' project designed to ensure the sustainability of an annual international conference of Australasian undergraduate research. A small project team together with an international consultant is now working to create an organisational framework to ensure that an Australasian Conference of Undergraduate Research is held each year in different universities on an ongoing basis. The team is led by Angela Brew, and also includes Jenna Mead, (UWA); Paula Newitt, (ANU); and Lilia Mantai (Macquarie); Stuart Hampton-Reeves, (University of Central Lancashire, UK) as the international consultant and Rachel Spronken-Smith, (Otago, NZ) as the project evaluator.

The team has established an organisational framework for ACUR, decided on the hosts for the 2014 conference, written criteria for hosting future conferences, and secured a web address. We are currently in the process of establishing an on-going international Steering Group with representatives from all Australian and New Zealand universities as well as overseas experts to take the work forward. The Steering Group will be charged with reviewing institutions' applications to host a conference and ensuring that a high quality conference is held annually in different Australasian universities.

In creating the organisational framework needed to establish a sustainable annual international conference of undergraduate research in Australia, the project builds on the experience in 2012 and 2013 of organising the highly successful ACUR conferences both of which have demonstrated a large unmet demand

for opportunities for undergraduates to present their research.

The OLT project also aims to encourage national investment in undergraduate research by raising its profile nationally. The idea is to publicise the importance of ACUR by following practice in the USA where Posters on the Hill have been displayed at an event on Capital Hill, Washington for many years. We plan to hold a Posters in Parliament exhibition in Canberra. The project team is currently working to secure a space for the poster display. Further details will be available in the new year.

If your university would like to host a future conference or if you would like further details please get in touch with the incoming Chair of ACUR, Paula Newitt (paula.newitt@anu.edu.au) or the Project Leader Angela Brew (angela.brew@mq.edu.au).

Announcing ACUR 2014

Third Australasian Conference of Undergraduate Research, Sep 18-19, 2014, Australian National University, Canberra.

ACUR 2014 will take place on 18-19 September 2014 at the Australian National University. This third annual conference will build on the successes of the two previous conferences held at Macquarie University. Take a look at http://www.mq.edu.au/ltc/altc/ug_research/ for information on the first two conferences and to see the impressive breadth of topics undertaken as research projects by undergraduate students from Australia and New Zealand.

An undergraduate research conference is just like any other academic conference but each presentation is delivered by undergraduate students, including Honours students, presenting research they have done either as part of their degree or as part of an internship. As a multi-disciplinary conference, undergraduates have the opportunity to network with other undergraduate researchers from their own disciplines, and also to learn about how other disciplines approach research problems. An undergraduate research conference provides a great opportunity to meet students from other universities and share their research.

ACUR 2014 has set a goal to attract students from all tertiary education institutions in Australia and New Zealand that offer research project experiences to undergraduates. The ACUR 2014 Steering Group is seeking sponsorship of at least 1 – 2 students per institution – stay tuned for more detailed information in the New Year.

ACUR 2014 will be a two day conference and is open to undergraduate students from all disciplines across Australasia. Students will present their research by means of spoken papers, posters, workshops or performance. Academic staff are encouraged to advertise this conference among their students. This early notice is intended to help staff plan or initiate research experience components to their course or unit offerings for 2014 in time for students to present at ACUR 2014. One strand of ACUR 2014 will focus on staff members discussing the implementation and management of undergraduate research.

Looking forward to seeing you in Canberra in September 2014.

Paula Newitt
Chair, ACUR 2014

Angela Brew
Chair, ACUR 2012/2013

Coming soon!!! <http://acur.edu.au>

For all information about Australasian Undergraduate Research Conferences

Inaugural Education Studio Undergraduate Research Scholarships

Clare Larandine, Macquarie University

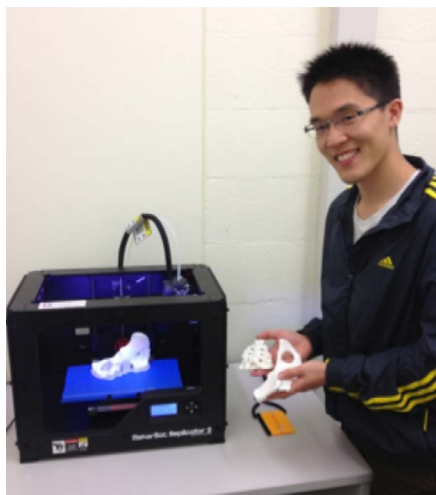
In 2013 high achieving undergraduate students at Macquarie University were given the opportunity to receive a \$1000 research scholarship and become part of Macquarie University's Innovation and Scholarship Program which is run by the Education Studio.

The Education Studio Undergraduate Research scholars form part of the student link which brings together academics, industry and students to find creative solutions to higher education problems.

Final year Actuarial student Yi Han Low, was one of the 11 recipients of this year's inaugural Education Studio Undergraduate Research Scholarships. Han is working with Dr Stefan Savannah to test the University's newly purchased 3D printer. They are producing facsimiles of sets of bones for use in Anthropology classes. Their research project is investigating how having the hands-on experience of fitting bones together and being able to touch them in class enhances student learning.

Han loads 3D files onto the platform using software connected to the 3D printer. The 3D printer uses PLA plastic to create the facsimile. The bone fragment in the picture below took over 4 hours to be created. Han is also conducting a literature review on 3D printing and its uses in education. He has found this research very interesting and even relaxing as it is so different from his actuarial studies. Han said:

"I feel very fortunate to have this unique opportunity. . . .it has given me a chance to widen and develop a range of problem solving skills that will be useful in my future."



Dr Brigitte Jandey is working with 3rd year Bachelor of International Studies student Saba Vayani-Lai to create teaching resources on idiomatic French expressions. Brigitte says

"The Education Studio Undergraduate Research Scholarship is a great idea as it helps create a bridge between researchers and students."

She explained that having to discuss her project and delegate components of it to her undergraduate scholar made her organise and plan her research better. Brigitte and Saba meet for half an hour each week to explore the scope and possibilities of the project. Saba has started by conducting a literature review on cognitive linguistics and their applications in teaching and learning.



Laura Feeney is a 2nd year Bachelor of Arts and Bachelor of Teaching (Primary) student working on a research project that will develop teaching support materials to assist computing students in the creation of ePortfolios.

The project team felt there were very tangible benefits from having a Human Sciences student working on the project. Laura has developed strong reflective learning skills as part of her course and can apply this knowledge to the project. Laura also feels that she can gain a lot from researching how computer science students learn and by giving herself greater exposure to technology in the classroom.

Project Leader Associate Professor Annabelle McIver appreciates the student perspectives Laura is able to provide, such as how to market the ePortfolios to students. Indeed, all the researchers involved commented on the undergraduate scholar's enthusiasm and how this is of value, acting as a support and driver to the projects.

Photos, clockwise from below:

Laura Feeney met with her project team over coffee at the library cafe. Left to Right: Laura Feeney, Michael Wilson, Natalie Spence and Annabelle McIver.

Yi Han Low with 3D printed bone fragments

Dr Brigitte Jandey and her undergraduate researcher Saba Vayani-Lai proudly holding her Scholarship certificate



Research in UNITS

Lilia Mantai, Macquarie University

To what extent can students understand what research is, and the kind of research that takes place in their units of study, by reading the unit guides? A study of learning outcomes and assessment tasks across one university suggests that research and research skills are often aspirations without necessarily the concrete strategies needed to achieve them.

“UNITS” is Macquarie University’s public unit outline depository. This database holds information of 1400 undergraduate units that are offered at Macquarie, which includes unit learning outcomes, assessment tasks and graduate capabilities. This UNITS research aims to raise awareness of the ways we communicate research and research activities to our students via unit learning outcomes and assessment tasks. While the review focus was on the learning outcomes, as the main source of unit information, attention was also paid to assessment tasks and graduate capabilities that were mapped to the units. The following gives a brief overview of the findings.

The review of undergraduate learning outcomes showed a relatively small number listing “research” or its synonyms. Synonyms of the term “research” include “explor-”, “discover-”, “investigat-”, “scientific”, “inquir-”, etc. Out of a total of 8,393 undergraduate

unit learning outcomes only 1,149 mentioned either “research” or one of its synonyms. The most frequently mentioned research related terms were “research” (1132), “scientific” (216), “academic” (69) and “explor-” (76). The action verb “to research” was used in 28 learning outcomes. Of all undergraduate learning outcomes 96 listed “research skills”. A closer look at individual learning outcomes that refer to “research” showed that “research” or “research skills” are not, or not sufficiently, specified, and where mentioned, not clearly explained to the student.

A closer look at the assessment tasks paints a similar picture. Of around 6,300 undergraduate assessment tasks mapped in UNITS, about 260 list a type of assessment that is to do with “research”. The types of research related assessment tasks include, for example, research report (82), research paper (35), research proposal (11), research essay (4), and research participation (2). Keeping in mind that an undergraduate unit has around four assessment tasks on average, this means that every sixth unit would include a research related assessment at best.

Considering the relatively small number of learning outcomes and assessment tasks related to a research activity or task, it is surprising that 87% of all units claim “research skills” as a graduate capability (Figure 1).

What the research related assessment tasks listed above exactly entail remains unclear. It is also unclear how the research that is taking place, and the research activities mentioned in learning outcomes, are constructed and scaffolded within undergraduate units. This information is currently an optional category in UNITS and only 17% of all unit convenors choose to disclose this information.

UNITS research is in its infancy. Although quantitative data does not provide a detailed outlook of what kind of research is happening in undergraduate units it does present an overall idea of how students are likely to perceive and experience research in their early years of university life based on what unit convenors are communicating to them via unit outlines.

This work raises the general question of what actually is going on in our universities when we say that research is integrated into the curriculum. It suggests that much more work is needed across the sector to understand how research is being introduced and what research capabilities students actually develop.

Acknowledgements: Ian Solomonides and Lucy Arthur for their support in carrying out this research

Undergraduate Capabilities Mapped

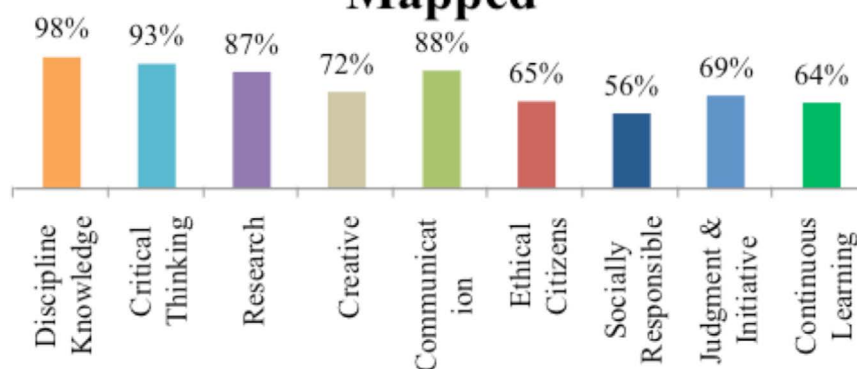


Figure 1: Undergraduate Capabilities mapped to all undergraduate units

Research Leaders of Tomorrow

Georgia Mitchell, University of Queensland

Undergraduate students at The University of Queensland (UQ) have many opportunities to contribute to research discoveries, build global networks, and explore research careers, through research experiences supported by UQ's Office of Undergraduate Education (OUE).

Director of the OUE, Dr Jessica Gallagher, says "UQ is committed to fostering a culture of curiosity, discovery and innovation. To support this goal, students at all levels are provided access to research programs that will extend their academic studies and enhance their professional development."

"Our summer and winter research programs have attracted over 1800 participants since their inception in 2008/2009, and a further 180 students have presented their research findings at UQ's multidisciplinary Undergraduate Research Conference."

"Student outcomes speak for themselves, with many participants taking advantage of the opportunity to publish their findings, present at international conferences, and over 20% of our summer and winter research scholars have pursued honours or a research higher degree after research experience."

"We are also very proud to see the program recognised for the contribution that it makes to the student experience and strengthening the UQ research community, when it was recently awarded a UQ Teaching and Learning Award for Programs that Enhance Learning".

Dr Paula Myatt, from UQ's Teaching and Educational Development Institute, agrees with the benefits that undergraduate students gain from research experiences.

"Research has shown us that students who participate in their own research experience report improved critical thinking and problem solving skills. Students really appreciate the opportunity to test-drive a career in research."

Suzanne Scott, a UQ Bachelor of Science (Hons) student, says access to UQ's dynamic research community has enriched her university experience.

"Through networks I developed at the Queensland Brain Institute as a part of UQ's Advanced Study Program in Science, I visited University College London (UCL) for a short research project and was supported by a UQ Advantage Grant," Ms Scott said.

"UCL has a great reputation for neuroscience research, and my research project gave me an insight into what it is really like to be a researcher".

"When I got back from London, I was really excited about my results and thought that the UQ Undergraduate Research Conference would be a good way to share them."

"Presenting my results was a challenging experience, but I believe communication is a fundamental part of science – if nobody knows about the amazing research you're doing, you may as well not have done it."

Before commencing honours, Ms Scott also participated in a UQ Summer Research Project with the Institute of Molecular Biosciences to "try something a little different" and gain experience outside of neuroscience.

While Ms Scott admits that she is still considering her options after graduation, her future certainly looks bright.

"Being involved in a range of research projects has exposed me to a wide variety of experimental techniques and I have developed my presentation and communication abilities - transferable skills that will help me in the future if I progress in research or choose another career," Ms Scott said.

"I feel privileged to have had these opportunities. Being immersed in a research environment is really the best way to learn and I have been able to do this at UQ and abroad."



Jennifer Gallagher and Paula Myatt, Recipients of a UQ Teaching and Learning award for programs that enhance learning

Upcoming Events

Integrating Research into the Curriculum

http://www.cur.org/events/integrating_research_into_the_curriculum/

Friday, March 28, 2014 - Sunday, March 30, 2014.

Florida Southern College, Lakeland,

National Conference on Undergraduate Research (USA)

http://www.cur.org/ncur_2014/

Thursday, April 03, 2014 - Saturday, April 05, 2014.

NCUR 2014 University of Kentucky. Readiness for the Future: Maximizing Undergraduate Research. The mission of the National Conference on Undergraduate Research (NCUR) is to promote undergraduate research, scholarship and creative activity done in partnership with faculty or other mentors as a vital component of higher education. Abstract Submission is now open.

Fourth British Conference of Undergraduate Research 2014

<http://www.bcur.org/>

14th and 15th April for the fourth British Conference of Undergraduate Research. BCUR 2014 will be held at the University of Nottingham. Conference dates: Mon 14 and Tue 15th April; (arrival Sun 13th) Abstract submission: Opens: Mon 21 October Closes: Extended to Friday, 3 January!

Third Australasian Conference of Undergraduate Research

<http://acur.edu.au>

To be held at the Australian National University (ANU) Canberra, 18th-19th September 2014. Further information is given above.

LiHE'14 Adelaide - 12th International Symposium on Learning-Centred Higher Education, 23rd to 27th November 2014 Adelaide, Australia

<http://lihe.info>

Participate in the LiHE 2014 symposium on LEARNING TO RESEARCH - RESEARCHING TO LEARN at the beautiful Monastery in the Wine Region of Adelaide, Australia. All accepted participants get their research published worldwide by Libri Publishing Ltd. Further details at http://www.mq.edu.au/lrc/altc/ug_research/websites.php#Upcomingevents

Overseas News

URNA is distributed worldwide. The network of people interested in knowing what is going on in undergraduate research in Australia is vast. We include here some initiatives from overseas which Australian colleagues should find of interest.

The process and content of learning: developing undergraduate research from year one in Higher Education

Joan M Goss and Lindey Cookson, Northumbria University, UK.

This paper demonstrates the process and competence of students as co-inquirers and undergraduate researchers. As lecturers we were aware that in the twenty first century there is ever growing pressure on all universities to develop attributes that will allow graduates to make their way in an uncertain world (Barrie 2004 and 2007). Graduate attributes can be developed implicitly, yet as co-inquirers with our students we considered that graduate attributes need to be explicitly understood. Such understanding is made more real through scholarly activities that explicitly engage, equip, inform and support students, and through the design of teaching and learning experiences that encourage and expand ideas into the formulation of 'new knowledge' (Barrie 2007). Following a staff enhancement event by Jenkins in 2013 we carried out an audit of the teaching and learning methods used in our modules and reviewed these in a way that would promote undergraduate research.

Recognising that supportive teaching and learning experiences enable students to become co-inquirers, and reduce the gaps between them and our knowledge, we developed a series of activities to involve students as active 'producers' not mere passive 'consumers' accepting of any knowledge provided (Jenkins and Healy, 2011; Baxter Magolda, 2008). We sought ethical approval to capture the data from teaching and learning activities focusing on students' developing competence as active co-inquirers.

Background to the study

This small scale piece of co-inquiry is merely one element of the composite study that involves cohorts studying two strands on a Joint Hons undergraduate programme. This inquiry, specifically engages students studying the strand entitled 'Early Years' during year one whilst other activities are taking place simultaneously with year two and three students.

To make the policy of childcare meaningful to students, as module lecturers we decided to embrace the ideology of enabling students to become active inquirers in their own learning. Most importantly, we decided to begin with what they know best, which is reflection on their own lives and in particular, where they were cared for, and by whom. Therefore the study proceeded as follows: **Phase one** 'in-class' activities began with the invitation to students to share their collective contributions of where they were cared for and who was a significant carer in their early lives. **Phase two** 'out-of-class' activity was the opportunity for students to provide their own qualitative statements, their feelings and experiences of being cared for. These statements provided '... thick and rich description' (Corbin and Strauss 2008: iv) that captured a sense of deep emotion and individual understanding. It was explained to the students from the outset that the findings produced would be developed into a position paper which could then be compared to similar papers and reports written by established authors in the field.

Out of a module with 94 registered students on the day of this activity there were 62 respondents. This is a percentage of 66 % of the cohort as a whole, and peaks beyond the projected number of possible respondents indicated as 60% of the possible sample in the submitted and approved ethical documentation.

Phase one: 'in-class' activity



The 'in-class' activities led by the lecturers provided an opportunity to gather some statistical data, albeit the rubric was un-sophisticated in design and relied on big sheets of paper, and post it notes to capture the data.

The types of care that featured high in the cohorts young lives were calculated and can be seen in figure one below. Using simple mathematical measurements introduced the students to quantitative data and new methodological phraseology.

Types of Care provided	
Grandparents	47
School Nursery	46
Play Group	31
Child minder	13
Crèche	12
Private Day Nursery	8
Older Siblings	2
Went to work with my Parent	2

Figure one – Cumulative care provided to the cohort as young children

The students were also asked to recall the most important people in the cohort's lives. The data produced detail on Mothers, Fathers, Mams and Dads as a unit, Grandmothers also known as (Nans) Grandfathers, Aunties, Uncles, older sister, brother, cousins. The data was distilled by us as lecturers and given back to the students during their class.

Phase two: 'out-of-class' activity

We invited students to provide small written qualitative statements that represented their views and feelings of being cared for. The responses provided were reflective and used emotive words and phrases. They also included small pen portraits of events, each with a unique voice emanating from the paper on which they were written. These materials were given to the lecturers for them to reduce the data down into meaningful themes.

Reading the student contributions as co-inquirers led us to reflect on our roles as co-researchers and to take care to uphold the integrity of the process. In doing so we made every effort to report candidly and convey the essence of what the students said by using a series of direct quotations to convey the strength and emotion knowingly being cared for.

Continued overleaf

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One respondent recalled "I had an early birthday and went for two years". "I was quiet and did long days at nursery and didn't see my parent's a lot." "In the setting, I did feel secure and well-cared for." However another less popular view was associated with the physical need for food, "I remember the sandwiches were not nice only egg!" and another stated "I didn't want to be in Nursery because I didn't like milk" while another claimed "I enjoyed the nursery, but was scared of Halloween".

Using this simple opportunity to reflect deeply on their own views and present their own voices allowed for understanding of qualitative data and as above new methodological phraseology.

Phase three: the provision of a draft of the position paper

We developed the findings from the 'in class' activity and the 'out of class' activity into a draft position paper entitled 'Early Years Students as co-inquirers: a collective consideration of who cared for us and being cared for as young children'. This was provided for students on the e-learning portal alongside the teaching and learning materials for the module. We decided to share the paper in a draft format so that students could try to identify themselves and their words in the working document. Parallel to this

we worked on the first phase of the paper locating literature to illustrate and interpret the cohort's data in relation to contemporary theory.

We continued to engage students and asked them to read and review the broad themes that had emerged from their qualitative statements, and we asked them to bring to class some ideas from the literature that they had read so far in order that we could embed further their ideas into the paper.

Phase four:

a) a review and a reminder of purpose and ethical protocol. The students were provided with a re-cap and reminder that the range and scope of teaching and learning activities were an essential part of understanding content of the module. The activities also had a role in engendering them as active agents in their own learning, but as active agents and participants they were reminded of their rights and as such their contributions or withdrawal from the paper, and indeed this reporting of each stage of the activities required their informed consent.

b) additional 'in-class activities' took place which enabled students to feel supported in locating and sifting through literature with discernment in order that they could review and understand the themes through the lens of temporal and critical theory, and policy making.

Throughout all phases of the activity students have been asked in class to develop a glossary of new terms so that they can own the scholarship of higher education and truly understanding the terms used therein.

If you are interested in reading the completed position paper with our students as co-inquirers please contact joan.goss@northumbria.ac.uk or lindey.cookson@northumbria.ac.uk

References

- Barrie S.C. (2004). A research-based approach to generic graduate attributes policy. *Higher Education Research and Development*, vol. 23, no. 2, pp 261-275.
- Barrie, S.C. (2007). A conceptual framework for the teaching and learning of graduate attributes. *Studies in Higher Education*, vol. 32, no. 4, pp 439-458.
- Baxter Magolda, M. B. (2008) Educating for self-authorship: Learning partnerships to achieve complex outcomes. In C. Kreber, (Ed.) *The university and its disciplines: teaching and learning within and beyond disciplinary boundaries*. Oxford, UK: Routledge.
- Corbin, J M. and Strauss, A C. (2008) *Basics of Qualitative research: Techniques and Procedures for developing grounded theory*. London: SAGE Publications.
- Jenkins, A. and Healey, M. (2011) *Navigating Between Teaching, Learning and Inquiry: Developing Students as Researchers*. HETL Review, Vol 1 (6)



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