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## Editorial

Interest and practice in Australian undergraduate research has grown enormously since the first issue of URNA in 2010 and this is reflected in the size of this sixth issue. The aim of this newsletter is to share ideas and practices, dilemmas and news of events. It is not designed to be a scholarly journal. However, in Issue 6, as well as news of upcoming events there is news of interesting initiatives and resources including from overseas. We always try to include contributions by undergraduate students and in this issue, the newly formed Macquarie University Undergraduate Research Student Society is featured. Kirsten Zimbardi and Paula Myatt report on an important study looking at the range of undergraduate research experiences available across the whole of UQ. Negotiating ethics committees is a recurring theme in discussions of undergraduate research. Michael Emslie and colleagues at RMIT present a challenging real life case study of unethical practice and discuss the ethical processes needed to deal with undergraduate research in Australian universities.

If you are wondering how to introduce research into your large undergraduate science class, or trying to decide how to assess undergraduate

research, two OLT projects in this issue will help you. Team ALURE from UQ provides practical help and mentorship for implementing research based learning in large classes, while the TREASURE team from the ANU have some useful suggestions for assessing undergraduate research. There is also in this issue a recently published tool for decision making in implementing research opportunities for students.

Contributions from overseas colleagues include initiatives that Australasian colleagues may find useful. In this Bumper issue there is also news of upcoming events including the first call for papers for the second Australasian Conference of Undergraduate Research.

URNA is published twice a year, so please keep your articles and items of news coming. In the next issue we hope also to include news of undergraduate research opportunities available for Australian undergraduates. So please let us know of any.

Angela Brew  
URNA Editor

## Immersing ourselves in undergraduate research

Elizabeth Tran (President) & Emma Wu (Vice President),  
MUURSS, Macquarie University

MUURSS (Macquarie University's Undergraduate Research Student Society) is a group consisting of undergraduate students with a common interest to engage in research. Leading members of this group are Elizabeth Tran, Emma Wu, Kelera Butu-Levu, Sumiya Sultan, Chi Quoc & Cevi Seto, who were past volunteers from the first Australasian Conference for Undergraduate Research in 2012. The positive experience developed awareness of the opportunities available for undergraduate students to undertake at Macquarie University, including the awareness of academic support.

However, due to the lack of a particular support group available for undergraduate research, past volunteers who had an interest in research were encouraged by Professor Angela Brew, Lilia Mantai and Ademir Hajdarpasic to form a student body that supports and promotes undergraduate research. As a result, on the 19th of March 2013, MUURSS officially became an affiliated group at Macquarie University. The work contributed to form this group was a team effort, so many thanks go to the team members and especially Lilia Mantai and Ademir Hajdarpasic for their

continuous provision of resources and support to help formulate and grow MUURSS.

MUURSSERS, members of the growing MUURSS group which currently consists of over 50 members, are highly valued as they contribute towards the growing developments of research opportunities on campus by being ambassadors for undergraduate research. Also, academic support from all departments contributes towards the growth of research undertaken at university through the provision of scholarships and internships relative to research. Hence, MUURSS aims to become a bridge between academics and students to collaborate in sharing and developing new found knowledge through the involvement of research.

MUURSS will be hosting various events this year such as the recent Meet & Greet session. This was the first time MUURSS had a big get-together for all of our members and the academics from the Learning and Teaching Centre. Followed by this will be a 'Bake Sales' activity, which aims to promote the awareness of MUURSS on campus and collect some funding for later events. MUURSS has a proposed activity called HSR (High School Research) Program. The main purpose of this is to give high school students, especially senior high school students a brief idea of what is research and prepare them for the research tasks involved at University. Furthermore, members have a chance get involved in the Australasian Conference for Undergraduate

Research which will be held in September, acting as ambassadors for creative curriculum change. Last but not least, we will have a welcome BBQ as the first event in the next semester.

These are only the beginnings which are going to put our efforts to make MUURSS to become more involved with undergraduates who are doing research, and in turn MUURSS could exist as a communication platform for members and professionals.



Elizabeth Tran promoting MUURSS at O-Week

## Negotiating ethical dilemmas in undergraduate youth research

Judith Bessant, Michael Emslie and Rob Watts, RMIT

In this excerpt from a recently published book edited by Kitty te Riele and Rachel Brooks and titled *Negotiating Ethical Challenges in Youth Research*, Judith Bessant, Michael Emslie and Rob Watts use a case study to explore the ethical issues raised when university students were asked to act as researchers as part of their study program. The research project required undergraduate students to research the lives of a highly vulnerable group of other young people. The authors use this case study to identify some basic ethical requirements in undergraduate youth research.

### THE CASE

The ethical issues arose in the wake of curriculum decisions taken by a senior academic who was charged with developing a new undergraduate subject in a professional human services program. In line with increasingly widespread practice in many universities, the academic adopted a problem-based learning (PBL) approach that required students to 'design' and carry out a short research project which would be assessed. The project involved researching and writing a 'field report' and required students to interview a young person whose cultural, linguistic and ethnic origins were different from their own. Students were informed that they would be assessed and graded in part on their choice of interviewee. The subject guide described how additional marks would be given if students interviewed young people from specified backgrounds. Extra marks would be given for (a) those who had recently arrived to Australia; (b) those with a refugee or asylum-seeker background; (c) those who were culturally different from mainstream Australia (e.g. Somalis were preferred to people from Latin America); (d) those who had interesting aspects about their life and experiences as an immigrant or refugee. Students were required to write a report based on material they collected from the interviews and carry out further research on the 'interviewee's ethnic group and their country of origin'. The stated learning objectives of this assessment activity were: 'to gain knowledge of the interviewee's personal, family and cultural background, values, norms and religion', 'to obtain information about his or her personal situation in the interviewee's country, their way of leaving and the circumstances of why they left', and 'to gain the interviewee's impressions of Australia, reasons for

migrating, and their positive and negative experiences of migrating'.

The research aspects of the project involved designing questions, identifying an interviewee, carrying out an interview and writing up the results. Students were required to complete a field interview approval pro forma after they had identified an interviewee aged 18–35 which involved asking the prospective interviewee to complete and sign the form. Students had to collect identifying information about the person like their name, contact telephone number, age, country of birth, 'cultural or ethnic background', and 'reason why they are in Australia'. This was not a conventional 'plain language statement' or consent form of the kind normally required by Australian universities for research projects involving 'human subjects'. Once the form was completed students had to give it to the teacher who used it to decide whether the student could proceed with the interviews. Students were instructed to use 'false names' rather than the interviewee's real name because of 'issues of confidentiality'. There was no elaboration about what the confidentiality issues were in the assessment material provided to students in the subject guide.

### LEARNINGS

The case described here of a class of young people being asked to research other (vulnerable) young people raises issues rarely acknowledged or addressed in the literature on problem-based learning. Our chapter therefore is some value inasmuch as it assumes there is a case for paying attention to the ethical nature of practices that engage undergraduate students (themselves mostly young people) as researchers of other young people. We suggest there are two main implications.

The first implication is in relation to formal ethical approval procedures. Australian universities have a range of policies and practices relevant to the question of whether undergraduate assignments that involve research activities, like interviewing people, should require some kind of formal ethical oversight. At the Australian Catholic University (ACU) (2004) for example the Code of Conduct for Research applies to all research conducted by staff and students and aligns with the National Statement on Ethical Conduct in Human Research (National Statement) and the Australian Code for the Responsible Conduct of Research (the Code). The ACU (2010) requires 'teaching demonstrations' and 'teaching projects' involving human participants to seek and get ethical clearance. Similarly the University of Technology Sydney (UTS 2011) has specific Human

Research Ethics Committee (HREC) guidelines for undergraduate work. In many other universities, not only in Australia but internationally, however this kind of policy is either absent or unclear.

While there is always room for debate about categories (ie., was this a research activity or not?), we note that the National Statement, which offers a prominent guide to research in Australia states that: '... research ... is widely understood to include at least investigation undertaken to gain knowledge and understanding or to train researchers' (NHMRC, ARC and AVCC 2007: 7). Prima facie it seems the assignment meets criteria for applying the category of 'research'. It was an 'investigation undertaken to gain knowledge and understanding' as detailed in the aims of the assessment. Indeed it may be said that many essays or reports written by university students are 'research' activities. When it is empirical and relies on direct contact with human beings or animals then it is likely that an extra level of ethical and legal issues arise.

A further criterion of 'research', namely, 'investigation undertaken ... to train researchers', is likewise relevant to a task which requires students to do interviews with the intent of exposing those students to this research method. As the NHMRC, ARC and AVCC (2007: 8) explain, human research:

*... is conducted with or about people, or their data or tissue. Human participation in research is therefore to be understood broadly, to include the involvement of human beings through: taking part in surveys, interviews or focus groups ... researchers having access to their personal documents or other materials ...*

Similarly, the Code recognizes students can do research as part of assignments, and this research must align with the Code (NHMRC, ARC and UA 2007: 2.1). The NHMRC (2005) guidelines on undergraduate research also makes it clear that undergraduate student research needs to undergo an ethics review and if the research involves more than low risk, as this assessment did, then it needs to be adequately scrutinized, approved and monitored by a HREC:

*The same principles ... apply to design, review and conduct of [undergraduate] student research as to any research involving humans ... The ethical issues raised by the National Statement need to be addressed and student research adequately scrutinized, whether at a full meeting of an HREC or in an expedited manner (NHMRC 2005: 1–2)*

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We argue that any student research that involves moderate to high risk needs to undergo some form of 'ethics insurance' or clearance. One option is to require 'class clearance' that teachers or program coordinators apply for, which requires the teacher to ensure students have specified knowledge and skills before they engage in the activity, and that this is integrated into the curriculum of the relevant subject/s. More specifically, it would be useful if the requisite knowledge and skills go beyond proficiencies in developing student abilities in eg. drafting consent forms, interview techniques etc and included (somewhere in their program) learning activities designed to develop their capacities to

apply basic ethical practices on how to exercise 'good judgment' in ways that are relevant to their project.

We suggest this as a second implication, because we doubt that an ethics clearance on its own can produce the desired results because rules and regulations are not enough. Cases where codes of practice have been developed and yet the medical professional and experts of various kinds have proceeded to cause considerable harm have been detailed in several publications (eg. Rothman 1992, Goliszek 2003, Annas and Grodin 1992: 228). It is for this reason that we argue that adherence to rules and regulation as they relate to ethical research need to be complemented with an

introduction to practical wisdom (Sharpe and Schwartz 2010). 'Practical wisdom' or good judgment requires us to think about what we do which relying on rules and policies only tends to inhibit. Many of the chapters in this book point to the limitations of formal ethical approval procedures. Arguably, then, the development of such praxis is likely to be useful for all, young and adult, youth researchers.

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## Undergraduate Research Across Multiple Disciplines

Undergraduate research can be defined, and experienced, more broadly than the traditional model of a student research project situated in a single laboratory.

In 2009, Kirsten Zimbardi and Paula Myatt conducted a study at The University of Queensland to investigate the diversity of undergraduate research opportunities available across the entire institution. The final report from the study (Farrand-Zimbardi, van der Burg and Myatt, 2010) is available online via [espace.library.uq.edu.au/view/UQ:212669](http://espace.library.uq.edu.au/view/UQ:212669).

The large research project developed detailed descriptions of 77 research activities and brief descriptions of additional 58 activities across 28 Schools within the institution, ranging from Archaeology to Dentistry, from Science to Social Work and from Engineering to Journalism. The broad range of disciplines included in the study highlighted variations in the language used to describe academic research, and also the research activities undertaken by undergraduates.

To assist in the identification of undergraduate research across such diverse disciplines the study developed a clear understanding (definition) of undergraduate research using the previous work of Healey (2005), Jenkins and Healey (2010) and Beckman and Hensel (2009). The study explicitly focussed on undergraduate research models which actively engaged undergraduate students with the research of their discipline, and excluded models in which students were more passive (less engaged) in the research experiences.

Importantly, this study engaged academic staff in explicit conversations about the nature of undergraduate research and enabled individual academics to understand more clearly the diversity of possible ways to engage students in undergraduate research. The benefits of the study included not only the data obtained but also the indirect benefits of raising the profile of undergraduate research through academic discussions.

Access the full report at: [espace.library.uq.edu.au/view/UQ:212669](http://espace.library.uq.edu.au/view/UQ:212669).

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## The Allure of undergraduate research

Imagine your class of 200 undergraduate science students all engaged in research during their regular laboratory or field sessions. It sounds like fun, and it's probably going to be a good learning experience for the students - but does it also sound daunting?

What if there was someone out there who could help you do it?



*Team ALURE: From left Dr Susan Rowland - Primary Project Leader (s.rowland1@uq.edu.au), Co-leaders Dr Gwen Lawrie and Dr Kirsten Zimbardi, Team members Dr Jack Wang and Dr Paula Myatt, and Project manager Mr Peter Worthy*

### Allow us to introduce ourselves.

Team ALURE is a group of teaching-focused academic scientists at UQ (Figure 1). Our OLT leadership project was funded in 2012. We are currently recruiting up to five new champions who want help implementing large-scale undergraduate research experiences for one or more of their science classes in Semester 2 2013, Summer Semester 2013-2014, Semester 1 2014. Our aim (and the aim of the Leadership Project) is to develop and resource academics who want to help students conduct and communicate undergraduate research on a large scale.

- The projects are important to students because they are linked to the research interests of a real academic group. The results are novel, and potentially useful to an extant research program.
- "Large scale" can be anything more than 10 students – we have run ALUREs for groups ranging from 15 to 200 students. ALUREs can be expanded to larger classes. The size is potentially unlimited.
- ALUREs can be opt-in, or compulsory for the whole cohort, depending on the composition of your class and the educational needs of your students.

methods (including pre-made surveys), and analysis of your survey results for you.

- Regular Personalised Backup: We visit ALURE implementers and meet with them regularly through Skype. We also have a project Website and blog – CoP members have more access than the general public so we can share ideas freely in a protected environment. Website: <http://alure-project.net>
- Meetings and Workshops: This year the ALURE project will present an interactive showcase at HERDSA (1-4 July, <http://herdsa.nz123.co.nz>). We would love to see you there!

Are you interested? Your first step is to contact Susan Rowland on [s.rowland1@uq.edu.au](mailto:s.rowland1@uq.edu.au).

We're happy to come and visit you on-site to get your ALURE implementation started!

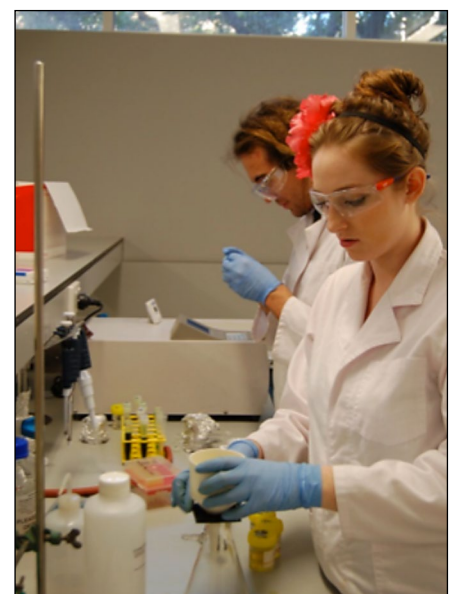


### What can we offer you?

- Experience: Since the beginning of the project the ALURE team has been involved in developing, implementing, and documenting more than 10 new large-scale undergraduate research projects. We work on a Community of Practice (CoP) mentor-mentee model, where experienced ALURE champions help new champions design, implement, and evaluate their ALURE.
- Protocols and methods: We are collaborating with groups at ANU, Griffith, and Sydney University as well as several ALURE champions at UQ. In each case we document the details of "how to" for the ALURE – these protocols and notes become available to new champions.
- Project Evaluation: We also provide evaluation

### What defines an ALURE?

- An ALURE is an Apprenticeship-style Large-scale Undergraduate Research Experience.
- ALURE students do real research projects in the undergraduate laboratories, and these projects replace the regular laboratory program in a class.



# The TREASURE project: enhancing student learning in undergraduate research experiences

Susan Howitt, Anna Wilson, Denise Higgins, Australian National University

## What is TREASURE?

TREASURE (Teaching Research: Evaluation and Assessment Strategies for Undergraduate Research Experiences) is an OLT funded project involving the Australian National University, the University of Western Sydney and the University of Canberra. TREASURE aims to enhance student learning in undergraduate research projects by:

- encouraging students to think about the nature of research;
- providing an opportunity for students to reflect on the disciplinary and generic skills they are developing; and
- assisting supervisors to provide targeted feedback by letting them know what their students are thinking.

Previous research has suggested that student learning in undergraduate research experiences (UREs), can be limited by both their own and their supervisor's expectations of what kind of learning opportunities the project presents. Most URE assessment occurs at the end of the project and focuses on formal presentation of findings and conclusions. This can mean that the processes through which the student arrived at their findings can be undervalued, and a student's struggle with the reality of research and its inherent uncertainty can be hidden. Yet many project supervisors agree that it is through this process that the most important (and uniquely research-related) learning takes place.

To make this learning visible to both students and supervisors, TREASURE uses learning logbooks (online reflective journals), where students reflect on their projects in response to prompt questions co-developed by the TREASURE project team and supervisors at the participating institutions. The questions are intended to scaffold student thinking about the nature of research and their developing problem-solving skills. The project is also developing a number of resources to assist academic staff to align intended and actual learning in UREs with assessment strategies and criteria.

## Approach

The TREASURE project has been running for just over a year. In the initial phase, we mapped supervisors' perceptions of the benefits and intended learning

outcomes of UREs, together with their beliefs about what skills and attributes are characteristic of good researchers in their field. We then worked with supervisors to use this information to develop a set of prompt questions to help students think about not just what they are doing, but why they are doing it; what they are learning (particularly from the problems they encounter and the way they go about solving them); and how what they are learning links to their learning in other contexts. We set up a Learning Logbook (a private blog) for each student, with their supervisor also having access. Here, the students can post responses to whatever prompt questions they choose. Our aim was for students to post responses regularly, with the logbooks providing an opportunity for students to think reflectively about their projects by going beyond the day-to-day focus on the immediacies of research.

We have piloted the use of Learning Logbooks in a range of contexts and at differing year levels, with more than 130 students from ANU and UWS participating so far and with University of Canberra participating next semester. While our initial focus was in the sciences, we are now extending the use of Learning Logbooks to the arts and humanities.

## Outcomes

### Student learning

The project team has been using the logbook postings to better understand students' initial and evolving expectations and understandings of research. Some emergent areas concern ways of thinking and practicing as a disciplinary researcher; opportunities for students to deploy and develop their capabilities in problem-solving, critical thinking and creativity; and the link between confidence and students' willingness to make independent, critical judgments.

Learning Logbooks appear to be most effective when they are supported by the course convenor, contribute to assessment and include regular deadlines for posts during the project. While students vary in the level of reflexivity or metacognition in their reflections, the posts of many students show that as they gain understanding and confidence, their ability to engage with the project improves. Learning Logbooks therefore can make explicit learning that is not usually assessed (or even visible) in UREs.

### Value for supervisors

Interviews with supervisors conducted as part of the project reveal that they generally have a much broader range of learning outcomes than those that are assessed or included in formal learning outcomes, for example, critical thinking and independence. Use of Learning Logbooks can potentially help make learning gains in these areas visible to supervisors. Despite this, some supervisors are reluctant to use the logbooks, seeing them as a distraction from the real work of the URE. In some participating courses, the decision of the course convenor to include Learning Logbooks in assessment has meant that some initially reluctant supervisors had no choice and were exposed to the experience. Subsequent interviews with supervisors show some coming to find genuine and significant value in the Learning Logbooks, as can be seen in the following quotes:

*... it would be almost valuable to have something like this for all courses ... students often don't really understand what they've learnt. I think this sort of thing is really useful for making students think more broadly about the significance of what they've learnt, and I think it's actually useful for them when it comes to writing their CVs and things like that.*

*I did enjoy reading it and I guess I was thinking that it might be giving me a different perspective and maybe it did help the student to synthesise things...*

*... it didn't take me a lot of time to go over and have a look. It did provide a different perspective on things and [to] hear what else she has to say about the project that she might not have been comfortable saying in front of me for example.*

The TREASURE team are currently developing a resource based on these interviews, showing what supervisors learned about their students from the logbooks.

## Conclusion

The findings from the first year of the TREASURE project suggest the practice of keeping Learning Logbooks can be of significant benefit to both students and their supervisors. TREASURE is an ongoing project, and we welcome participation at other institutions. For more information, please contact us at [treasure@anu.edu.au](mailto:treasure@anu.edu.au).

## Developing our future researchers

Whether “testing the research-career waters” or actively pursuing a particular field of interest, undergraduate students from The University of Queensland (UQ) have numerous opportunities to participate in activities that extend their academic studies such as vacation research programs, conferences, and student exchanges.

Director of UQ’s Office of Undergraduate Education (OUE) Dr Jessica Gallagher says that as a research-intensive university, UQ’s focus begins at the undergraduate level.

*“Our summer and winter research programs are the perfect opportunity for students to gain valuable academic and professional skills, develop links with industry and academia, and ‘test-drive’ research before embarking on careers in industry or research or commencing higher degree research projects.*

*“The programs are open to both UQ and non-UQ students, and provide undergraduate and postgraduate coursework students with an opportunity to gain practical research experience by working on a UQ research project over the vacation period.*

*“The programs have certainly been popular, with more than 1800 scholars participating since the inception of the Summer Research program in 2008/9,” Dr Gallagher said.*



Students participating in the global Television Media Lab at UQ

UQ political science and international studies student, Lanz de Jesus, found that undergraduate research experiences helped him develop critical skills and open up research career pathways. He spent his 2012 summer holidays investigating how the shifting global media landscape influences contemporary conflicts through UQ’s Summer Research Program.

*“While I was Treasurer for the Responsibility to Protect Student Coalition, fellow members introduced me to OUE’s undergraduate research programs,” Mr de Jesus said. “I wanted to gain research skills and a better understanding of the research process, so I submitted an application.”*

Mr de Jesus was involved in a project with the Global Television Media Laboratory, a unique research facility that allows for the recording of twelve 24-hour TV news channels so researchers can monitor and evaluate the television coverage of ongoing world conflicts.

As part of the project, Mr de Jesus and his research partners were involved in fine-tuning the methodological aspects of the research approach, challenging many of their own assumptions about the research process along the way.

*“We asked questions such as, how do we run the lab? What kind of information should we draw from the data we have? How can we best and most efficiently draw that information?” he said. “It opened my eyes to the reality that research isn’t a set, structured thing. It can be a fun experience that involves creativity and the key thing really is the desire to discover.”*

Dr Gallagher echoes Mr de Jesus’ sentiments, and says that undergraduate research programs provide an important platform for students to explore research at early stages in their academic and professional lives.

*“Previous participants have gone on to publish their findings, present at international conferences or pursue research higher degrees after the experience. By expanding our undergraduate research offerings, we hope that more students will take advantage of the exceptional research facilities and advisors we have at UQ, and explore the possibility of a future in research,” Dr Gallagher said.*

To find out more about UQ’s undergraduate research programs, visit [www.uq.edu.au/undergraduate/undergraduate-research](http://www.uq.edu.au/undergraduate/undergraduate-research)

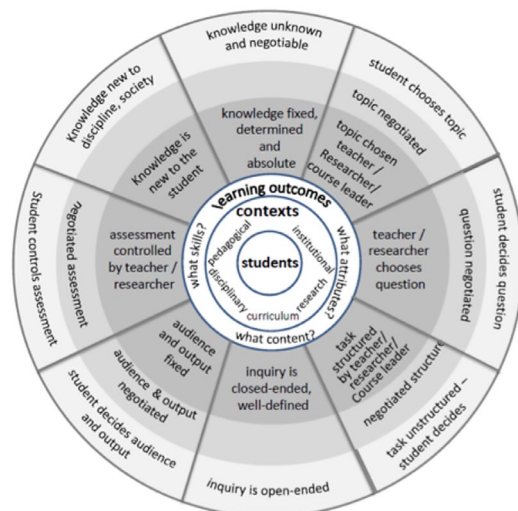
## Making decisions to introduce research

Angela Brew, Macquarie University

Introducing undergraduate research, whether for individual students working alongside academics in research internships or scholarships, or whether for large or small classes of students within their degree, requires a number of complex decisions to be made. Some of these are decisions about the overall curriculum and some are about the particular pedagogies to be used. In a recently published article in *Higher Education*, a decision-making framework was presented. It is a tool for teaching and learning decision-making but it is based on the steps needing to be taken in research such as deciding on the questions to be addressed, the kind of methods to be used and the knowledge to be obtained, who is the audience for the research, and so on.

The article explores existing models and different ways of understanding undergraduate research suggesting that there is a need for a framework for student research that can contribute to curricular and pedagogical decision-making. A framework derived from analysing and integrating models of undergraduate research within the literature and from investigation in different countries is presented and explained. This framework graphically highlights the curricula and pedagogical choices involved where it is intended to engage students in research and inquiry. The article then indicates how it has been and can be used and discusses implications for research and practice.

*A holistic model for Research-based learning decision-making. From Brew, A. (2013). Understanding the scope of undergraduate research: a framework for curricular and pedagogical decision-making. Higher Education. Online First. DOI 10.1007/s10734-013-9624-x*





## 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.

### Undergraduate Students doing research in Eire

Bettie Higgs, University College Cork

In University College Cork, Second year Geology students work in small groups in the 'natural laboratory' to observe, measure, record, and eventually interpret what they see, with the aim of making a geological map. They must try to interpret, using what they see, rather than what previous authors have written. It is common, in this 'natural laboratory', for new evidence to be found to substantiate or refute the published literature.

Carrying out this research in groups of 3 or 4 resulted in significant peer learning, as students try to articulate their ideas to each other. A new innovation is that each group must make a 2 minute video to describe and explain one important feature that was found during their research. This is later shared with the whole class. Preparing the video resource resulted in intensive engagement by the students, and a rich learning experience. The resources created were shared with other groups in the evening. In this social learning setting, natural (uncontrived) peer review, and self-assessment occurred. The video resource was submitted by students for assessment along with the traditional field note book and completed map.

The students are often researching something that has already been discovered and interpreted by others, but there is always something that they find that has not been discovered before. Original research has come out of these projects. This work builds research skills that are consolidated in subsequent years, in particular in their final year research project.



Images show geology students working along the coast near Ballyferriter, The Dingle Peninsula, Co. Kerry, Ireland. This is a 4 day residential field-based experience. The small groups all come back to the field base in the evening to discuss their findings.



### Undergraduate research and learning: First year undergraduate students in the hot seat: co-constructors of knowledge and inquiry in Higher Education

Joan M Goss (formerly O'Keefe) and Jan Grinstead, Northumbria University and Sunderland University, UK

Research skills and inquiry promote independence and autonomy of the learner, yet these expectations of Higher Education are not always made explicit to the student body. Informal discussions have a recurring theme that reflects students are failing to read enough. While students in later stages of their study are indicating they wished that they had read more. In an effort to becoming increasingly 'student-centered', perhaps there has been an element of overlooking learner inquiry, engagement and ownership (Ramsden, 2001).

Engaging and enabling first year undergraduates to become active researchers and learners has led us to note their abilities to search, or source literature, but the limitations or stumbling block to this inquiry process is in making sense of such sourced literature, and deeper knowledge acquisition. There are students who demonstrate a reluctance to engage with the implicit pedagogical expectations, and practices of directed and self-directed reading. Engagement and academic discernment with such materials would aid knowledge construction, challenge beliefs; provide theoretical underpinning, tensions and arguments to be used in formative and summative tasks. Stevenson and Okeefe (2011) identified such students as 'searchers' rather than early 'researchers' and proposed the need to develop learner attributes of questioning and inquiry.

In the context of this work, we meet students both full and part time who are the first in their families to study higher education in an untried institution. They have little knowledge, understanding or relatable experience on which to draw. They tend to rely on what they know, and bring with them to their studies, rather than spending time in preparation of seeking out new higher level knowledge. There is a sense of uncertainty around gaining new knowledge in an unfamiliar learning space. To promote inquiry consideration of a sound pedagogical and andragogical process to both problematise, and assist students in the ownership of knowledge was sought (Mortimore, 1996; Knowles 1996; 2005).

The students' voices indicated that their uncertainty led to a very narrow view, or lens of knowledge, and the belief that there would be a single answer to any question posed. With the recognition of such uncertainty, an explanation for the need to think more widely for themselves, and with each other was given. This provoked discussion on multiple perspectives, and a reassurance that there are multiple lenses and a range of viewpoints to consider in the disciplines of social science degrees. An approach offered to students was shared and paired reading strategies (Kingston and Forland 2004) to stimulate thinking about such perspectives, create a collegiate and socially constructed approach through reading with a purpose.

Developing a hybrid approach for student inquiry we also drew upon an idea of Ginnis (2002). The approach

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involves every member of the class in 'taking the hot seat' for 2- 5 minutes (including lecturers). Participants need to be cooperative and agentive in discussions, we call this 'caring and sharing knowledge.' Individuals in the hot seat begin to evaluate what they have read, and reveal their understanding, knowledge and positionality to the wider group. The approach reflects Bruner's (1996, p.96) interlocking of ideas. This sharing of inquiry, when practiced as a pedagogical process allows for a narrowing of the relationship between those teaching and learning as co-constructors of knowledge. The discursiveness of back-and-forth reciprocity offers opportunities to propose wide ranging, or critical views (Healey and Jenkins, 2009). Most significantly, it prevents the danger of working solo, or holding a view '...widely off the mark.' Or that one's own views and observations may be difficult to justify and validate.

Collaborative inquiry is socially constructed learning; it is progressively driven by discursive processes with other active minds which can promote social transformation, and the production of new and owned knowledge, rather than a pedagogy of excess, or consumerism (Neary and Hagyard, 2010). It can dispel the mis-placed notion of some students who believe they are impostors in the higher education system. The formation of new knowledge in higher education is more easily understood in the new context of collaborative inquiry, as opposed to highlighting earlier differences of learning experiences. The participation of sharing in new socially constructed knowledge promotes ownership of understanding, which can reduce the potential threat of cultural suicide and loss of earlier innocence an affinity of former learning experiences (Brookfield, 2005).

The findings so far reveal 'mixed feelings,' an initial wariness, to a clear liking of being asked to take the 'hot seat'. The student cohorts indicated by their own poll there are benefits from engagement in the process. These include reading more frequently, greater quantity, and selecting literature of their choice, which they in turn recommend to their peers and lecturers.

The students' ownership of this text based inquiry, indicate a sense of playfulness, through the formation and accretion of both ideas and challenges. This is aided by the collegiate support from peers and tutors alike. It has given students confidence in their academic journey through university, with clear ownership of their learning progression.

The exchange of ideas, and points of view have led to

a continuum of developing research skills and inquiry, with additional benefits of becoming competent in extensive referencing of materials, most importantly, instilling within them their intellectual right, and ability to critique others work and contribute to the discourse.

The use of e-learning materials and technology has provided some undergraduate researchers with technological skills, as not all belong to the 'good generation' (Rowlands, Nicholas and Huntingdon, 2008). The students' realisation of their own learning and knowledge has offered unprompted written views, and their voices were also captured through a multi-modal method (video) as a measurement of what occurred in the 'hot seat'. Ownership of inquiry is important for achievement in an uncertain world, a world where important knowledge is frequently contested.

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## "Undergraduate research is now an international movement."

(Jenkins and Healey, 2010)

[http://www.cur.org/resources/institutions/international\\_perspectives/](http://www.cur.org/resources/institutions/international_perspectives/)

We think that readers may find this website (periodically updated) of interest. It provides open access to all articles published in the International Desk of the Council on Undergraduate Research's CUR Quarterly. These provide perspectives from outside the USA on innovative and important international developments in undergraduate research and inquiry.

In addition this site provides key resources to support undergraduate research internationally as well as resources from international seminars organised by CUR and ISSoTL.

Mick Healey and Alan Jenkins, International Editors *CUR Quarterly*

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# Upcoming events

## ACUR 2013 - Second Australasian Conference of Undergraduate Research, Sep 19-20, 2013, Macquarie University

<http://www.undergraduateresearchaustralia.com>

ACUR 2013 will take place on 19-20 September 2013 at Macquarie University. The highly successful First Australasian Conference of Undergraduate Research (ACUR) was held in 2012. This two-day conference will include poster presentations and spoken papers by undergraduate students from all disciplines and from across Australasia.

Academic staff are encouraged to advertise this conference among their students. Presentations judged to be the best will be published in MQ Matrix (Macquarie University's Undergraduate Research Journal).

## U21 Undergraduate Research Conference 2013, Amsterdam

<http://www.uq.edu.au/undergraduate/u21-urc>

### Event details

Date: 8-12 July

Theme: Urban Challenges – building healthy, smart & creative cities for the future

Host: University of Amsterdam

Location: The Netherlands

Website: [www.urc2013.uva.nl](http://www.urc2013.uva.nl). Check the website for more details

## UQ Undergraduate Research Conference 2013, Queensland

<http://www.uq.edu.au/undergraduate/urc>

### Event Details

Date: Tuesday 17 September, 2013 – Wednesday 18 September, 2013. Time: 9:00am- 4:00pm.

Venue: Innes Room, UQ Union Complex, UQ St Lucia.

Program: The event program will be available in early September. Check the website for more details.

## Contact us:

If you didn't receive this directly from us, it means that you are not on our list. Please let us know if you would like to join our extended network of interested people. For further information, or to submit an item for inclusion in the next issue, contact:

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**19-20 September 2013**

**SECOND AUSTRALASIAN CONFERENCE OF UNDERGRADUATE RESEARCH (ACUR)**

# First Call for Papers



The second Australasian Conference of Undergraduate Research is to be held at Macquarie University in Sydney on 19-20 September 2013. This two-day conference will include poster presentations and spoken papers by undergraduate students from all disciplines and from across Australasia.

**Who is eligible to present?**

- Undergraduate Students (all years)
- Master of Research Students (first year only)
- Honours Students who graduated in 2012



photo © Efiy Alexakis

**Procedure:** (N.B. there are different requirements for each category)

**UNDERGRADUATE STUDENTS AND STUDENTS IN THEIR 1ST YEAR OF MASTER OF RESEARCH**

1. First you need to **submit an abstract** of no more than 300 words by **9 am on Monday 1st of July 2013**. Abstracts will be peer reviewed and the conference committee will decide the format of your presentation (a poster or a paper) depending on the quality of your abstract. You will be informed of the committee's decision by the 22nd July 2013. You may be asked to submit a revised abstract.

**Your abstract must include:**

- A clear statement of your research question that is accessible for a broader audience (i.e. people not necessarily experts in your field)
- A clear statement of the methodology used in your research
- The background to your research project
- A summary of your conclusions (or preliminary conclusions)

2. Once your abstract is accepted, you have the opportunity to **submit a full paper** (max 4000 words). The deadline for receipt of full papers is **5 pm Friday 30th August**. The best full papers submitted by undergraduates will be published in a Special Issue of *MQ Matrix* (Macquarie University's peer reviewed undergraduate research journal). These will also be eligible to win the prize for the best presentation at the conference.

**COMPLETED HONOURS 2012 STUDENTS: - Submit a full paper**

If you completed your Honours degree in 2012, you must submit a **full paper** by **9 am on Monday 1st of July 2013**. Please refer to [www.undergraduateresearchaustralia.com](http://www.undergraduateresearchaustralia.com) for submission guidelines. Best Honours student papers will be invited to give a spoken presentation in a special session at the conference. We will endeavour to inform you of the outcome of your paper by 9th August 2013.



Go to: [www.undergraduateresearchaustralia.com](http://www.undergraduateresearchaustralia.com) for more details and to submit your **abstract** or **paper**.

Note that for the purposes of this conference, "undergraduate" refers to students who have not previously been awarded a degree. It includes Masters students undertaking a first degree at undergraduate level.

U21-ACUR-014-30 April 2013