Communicating Research: Audiences, Academics and Research Students

Wendy Bastalich,
Monica Behrend,
Robert Bloomfield,
Judy Ford,
Cassandra Loeser, and
Alistair McCulloch
University of South Australia

The traditional focus of the PhD is the production of a research thesis. In recent years, a second purpose for the PhD has developed that emphasises the development of researchers. This emphasis is sometimes referred to as the ‘generic skills agenda’ which, among other things, emphasises broader communication skills than those implicit in the ability to produce and defend an academic thesis. This focus has resulted in the development of what are effectively ‘curricula’ for doctoral education through the promulgation of documents such as the 1999 Australian Deans and Directors of Graduate Studies Statement on Skills Development for Research Students (DDOGS 1999, revised in 2005) which included reference to communication skills as one of four generic skills which Higher Degree by Research (HDR) students should attain as part of their training. In the UK, 2001 saw the Research Councils and the then Arts and Humanities Research Board issue a Joint Statement of the Skills Training Requirements for Research Students (RCUK 2001). There has been an associated and increasing emphasis on ‘employability’ post-PhD. In the Australian context, these developments have been discussed most recently in Innovation: Inspiring Australia—a national strategy for engagement with the sciences (DIISR 2009).

The policy emphasis on generic research skills training has led many universities to employ academic or professional staff to work with HDR students within a variety of existing organisational structures for research support. Within the Learning and Teaching Unit at the University of South Australia (UniSA), there is a Research Education Team consisting of Research Education Advisers that work with HDR students, and academic developers that work with supervisors. Much of the work undertaken is dedicated to developing the research writing capacity of HDR students and their supervisors. Discussions within the team have often led to reflection upon the educational rationales that inform our work, from which a framework for the development of writing curriculum has emerged. This paper is the first step in attempting to articulate this rationale and framework.

The paper presents the framework and educational rationale upon which individual elements of the overall writing support program are built. It is hoped that the paper will encourage further conversation and scholarly debate about the development of writing and communication curriculum within doctoral education.

---

34 There is a developing body of doctoral work which is based on the production of an artefact or other piece of creative work, but even here, in most cases, there is a requirement to produce a well-crafted and extended piece of research writing.

35 An example, to which we will refer later in this paper, is the UK Research Councils’ Joint Statement of the UK Research Councils’ Training Requirements for Research Students (RCUK 2001)
Communicating research to academic/disciplinary audiences

Communicating research through writing is of crucial importance in contemporary research education, although the complex nature of the activity and the fact of multiple audiences are not typically elaborated in discourse about generic skills training. The primary audience for doctoral students and their supervisors is the academic and research community, engaged through journals, conferences and books. This engagement has been intensified by the increasing spread of the culture of publish or perish. Driven initially in the US by the system of tenure, the need to be both expert and efficient at communicating research in writing to academic audiences has been given a significant transatlantic boost by the UK’s Research Assessment Exercise (and its slightly mutated offspring, the Research Excellence Framework) in the years since 1992. Australia and New Zealand have also developed research assessment mechanisms that have given the same sort of impetus to academic publication and the associated skills. (These exercises are called respectively Excellence for Research in Australia [ERA] and the New Zealand Performance-Based Research Fund (PBRF). Other countries have also followed suit leading to considerable pressure upon doctoral students and early career researchers to publish their research findings.

Writing support for doctoral students, as is also the case with writing support for other students in higher education, has traditionally drawn on one of three traditions or disciplines in its support of academic writing. These are:

• applied linguistics (genre, social constructionism, often offered through student support services and units);
• Teaching English to Speakers of Other Languages (TESOL) (which typically informs the work of language centres, student support services and units);
• rhetoric, composition studies (English literature, communication studies, traditionally embedded within disciplines).

These different fields, together with the variety of other disciplinary backgrounds (including genetics, sociology and political science from which the staff are drawn) inform the practice of the UniSA.

Communicating to the public

Education, particularly in the area of doctoral studies, does not take place in a vacuum. It is situated in a highly politicised social environment. The work of the UniSA Research Education Team is situated within an environment characterised *inter alia* by a number of elements including:

• CP Snows’ ‘Two Cultures’ (1957) which we believe is still reflected as part of a dominant discourse in Anglo-American societies;
• an increasing emphasis by government on science (and doctoral education as a key part of science, generally understood in terms of STEM [Science, Technology, Engineering and Maths—or Medicine]) as the engine of economic development;
• the development of ‘popular science’ as a social genre;
• significant coverage of science in the mass media;
• the development of a public policy agenda around the issue of Public Communication and the Understanding of Science;
• the development of an increasing lack of trust in science and scientists and experts more generally;
This environment provides two audiences traditionally neglected in the process of researcher development: firstly, the mass media and, more directly, the general public; and secondly, policy-makers within the different levels of government. Doctoral students, and those who support them, are increasingly expected to be aware of, and prepared to interact and communicate effectively in this wider non-academic context.

A framework for research communication development

In developing a framework to support and inform the development of writing curriculum, we identify two dimensions. These are ‘Audience’ and ‘Stage of Career’.

**Audience**

In any form of communication, audience is crucial and the key audience for academics, at least in the first instance, is other academics. However, as has been suggested above, audiences outside academe are becoming increasingly important. While taking account of the existence of a number of different forms of communication (research papers, conferences, books, posters), we use the dichotomy ‘academic - non-academic’ as our first axis.

**Stage of Career**

We have argued that the policy perception of the HDR student has changed from being one of ‘student’ to being one of what may be termed ‘research trainee’. Over the same period, there has been increasing concern over the transition from HDR student to post-doctoral or early-career researcher and the realisation that these are not separate stages but points on a career continuum. Accordingly, for the dimension of our second axis, we use the ‘research student - early career researcher’. These dimensions give us the outline framework shown in Figure 1.

**Figure 1: A Framework for Research Communication Development**

---

36 In the UK, the terms ‘research training’ has been much used by policy-makers to describe the research degree.

37 In the UK, this shift has been recognised by the development of the organisation VITAE out of the previous UKGRAD. The latter provided support in generic training and its development to HDR students while the former includes Early Career Researchers within its remit. (See [www.vitae.ac.uk](http://www.vitae.ac.uk))
Early career supervisors and researchers

A series of four workshops is open to Early Career Supervisors, Researchers and those intending to work with doctoral students at some point in the future. First offered in 2007, the series builds on Kamler and Thomson’s 2006 work and was originally designed and delivered by Barbara Kamler of Deakin University. In 2009, the series was redesigned and taught by Dianne Bills of UniSA, and has since been further developed and taught by Academic Developers Cassandra Loeser and Alistair McCulloch. The series utilises an interactive workshop approach to develop and enhance the skills of supervisors and researchers in both writing and the provision of feedback.

Currently, the four workshops that form the series are:

- Creating and sustaining a research-writing culture: explores the nature of writing and research writing and the possibility of a writing culture, set within the context of the research degree and developing policy around HDR work;
- Developing authority in writing, which explores what makes a ‘good’ piece of research writing and what makes writing ‘authoritative’ starting with pieces of writing the participants believe to be ‘authoritative’;
- Providing feedback on writing, which focuses on the pedagogical function and significance of providing constructive feedback on research writing (including that of HDR students) and different strategies for doing so;
- Writing for publication, which focuses on the publication process, the writing of abstracts and articles and explores strategies that facilitate a move beyond descriptive writing to engage a strong theoretical argument/position.

Workshop evaluations from 2007 to 2009 show that participants value networking with colleagues from across the University, and they value the space the workshops provide to think, share and discuss general issues with colleagues. Two recurring positive comments refer to the cross-disciplinary engagement and learning that takes place within the workshops, and the encouragement the workshop facilitators provide in the identification and analysis of research writing and feedback approaches from different ‘actor’ perspectives (students, teachers, editors, reviewers).
Research student writing

Writing support at UniSA is offered across disciplines. Specific programs of workshops are designated for disciplines in the humanities and social sciences, and disciplines in the sciences and engineering. In addition, writing support across disciplines is offered to HDR students with English as an additional language (EAL). Inclusive in the writing support programs are sessions tailored for commencing students — with a focus on writing the proposal within the first 6 months of candidature — and sessions catering for mid-late candidature students who are engaged in writing papers and the thesis. The disciplinary support for writing is delivered by Research Education Advisers Wendy Bastalich (humanities and social sciences) and Judy Ford (science, technology and engineering). ‘English for Research Writing’, or ‘Writers’ circles’, are delivered by Research Education Advisers Monica Behrend and Robert Bloomfield. The interconnected structure of these sessions is summarised in Figure 3.

Figure 3: Structure of Research Writing Support Offered to UniSA Doctoral Students

Workshops are informed by English for academic purposes, a sub-field of applied linguistics, which aims to introduce students to the target product of specific discourse communities, and the ideologies, values, beliefs and expectations of those communities (Swales, 1990; Bhatia, 1993; Swales and Feak, 2004). The program aims to induct HDR students into the contexts in which research texts are produced, interpreted and evaluated. Taking a genre approach, these sessions involve providing opportunities for students to explore the different research genres, academic styles and structures within and across disciplines and methodologies within which research findings are conveyed. Specifically, students are introduced to the ‘moves’ within different types of research text — for instance, the rhetorical move from topic and problem to solution. Consideration is also given to author positioning, inter-textual practices (referencing strategies), and variation of verb tense, modality and aspect. One key principle is the clarification and strengthening of the writer’s voice and stance within sections of text, such as the literature review (Feak and Swales...
At the whole text level, the clear articulation of argument within sections and across entire texts is emphasised, including aspects such as assumptions, premises, threads of arguments and counter-argument underpinning the argument.

Building on the concept of writing groups for doctoral students (Aitchison 2009), Research Education Advisers work with students on draft texts and facilitate peer feedback (in itself a necessary doctoral-level skill). Another important principle of these writing sessions is to provide the opportunity for students to network with one another across disciplinary bounds and to encourage students to engage with matters of audience and purpose (Swales and Feak, 2004). A range of writing groups have been established that aim to provide feedback to students from both peers and facilitators, and to promote the development of critical feedback skills within a constructive and supportive (and often interdisciplinary) environment. Such peer feedback processes can improve the quality of student writing (Topping, Smith, Elliot 2000). In addition, the Writers’ Circles examine research writing from the perspective of the range of English language choices that must be made to develop cohesive, well-written research texts. While previously noted principles underpinning the development of writing skills are reinforced within these sessions, the focus ranges from sentence level grammar to enhance communicative meaning — such as building nominal groups — to the use of references and thematic development to enhance cohesion. In addition, these sessions respond to the initial fears and concerns of second language writers, who often report that ‘English is my problem’, by developing productive writing practices and establishing a ‘safe’ environment for peer feedback.

Figure 4: Structure of the Concept of Argument Mapping Approach

A recent development, initiated by Robert Bloomfield, has been a set of workshops aimed at teaching logic to HDR EAL students. This program starts from the premise that, while logical judgment and conclusion may be determined by the goals and values of a given culture (Stojković 1999), the process of
reasoning is universal, and all students, regardless of background, have an equal facility to learn and practice the style of logical thinking prevalent in the west. This is based on research by anthropologist Donald Brown (2004) who includes binary discrimination, classification, and ‘elementary logical concepts’ in his catalogue of human universals. The workshops assume that, in common with many domestic students and others with English as their first language, international HDR students require support in the area of the ‘language of logic’ and the framework necessary to support the proper use of this language. This program of workshops:

- introduces the structure of argument and its characteristic linguistic markers;
- will produce a glossary of the technical terms used in reasoning, with particular emphasis on the needs of the group. (Currently available glossaries often include circular definitions and are prone to unexplained switching of near-synonymous terms. The proposed glossary will progress logically with each term described and contextualised on its first appearance.)
- introduces key elements of traditional rhetoric.

Finally, the concept of argument mapping is introduced to students, the structure of which is shown in Figure 4.

All aspects of writing and language development support are supplemented by individual consultations.

**Communicating research to industry and the public**

The teaching of science communication skills is relatively new. When Turney (1994) reviewed the teaching of science communication in the UK he identified two broad approaches. The first was usually presented to graduates or postgraduates in small groups (12 to 20 people), targeted at how to relate to the media, and usually run by an eminent science journalist. The second included undergraduate university courses that were broader in nature, but focussed on the development of careers in science journalism or science communication. These approaches remain the norm in universities worldwide. There seem to be a lack of programs that teach broad communication skills to scientists who wish to work in research or various professional roles other than science journalism. Furthermore, communicating with the public implies far more than working with the media — public meetings of various types, schools and personal education courses, community access radio and TV, the Internet — all provide venues for direct communication with the public. Increasingly, scientists and researchers will require a wider range of essential skills and competencies than are currently developed. The program developed by Judy Ford seeks to address these needs.

In 2007, an opportunity arose for students to be interviewed for thirty minutes each (“on air” time including advertisements and promotions) on a Sunday evening on a popular commercial Adelaide radio station. The listening audience at this time is thought to be in the older age sector and since the station itself has developed from the previous TAB (the Australian Totalizer Agency Betting for horse and dog racing), the audience is far from academic. Altogether, nine students were interviewed on radio at one month intervals. Recordings were made of each interview. Prior to the interview each student met with Judy Ford who helped them find the ‘story’ in their research and to understand the difference in their own knowledge level and what might be expected from the audience. Strategies for communicating the student-specific complex concepts to a non-academic audience were discussed in some detail. Students were unanimous in their enjoyment of the experience and most said that it made them reflect on the real significance of their PhD projects. They felt that they would like to make their future research more relevant.
Emanating from this initial program, a research project was undertaken in 2009 to determine the requirements for an ongoing course in communicating research to the public and to trial a pilot course. The project identified the stages of teaching students how to communicate with the public as:

- finding the story or stories in the research;
- defining the target audience and outlets for each story;
- discovering the language used by each audience or audiences in each genre;
- assisting students write a background story suitable for use by a marketing or public relations department;
- training students in interview techniques appropriate for use in the public media;
- conducting trial interviews in a studio and having the students give one another feedback on the recorded interviews.

Conclusions

A number of common critical themes or values are embedded in the rationale and framework for writing support developed by the UniSA Research Education Team in collaboration with doctoral students, supervisors and other key research staff in Divisions, Schools and Research Centres and the Graduate Studies Office. Programs designed to enhance skills in the writing and communication of research should:

- build on insights from a number of research traditions and literatures such as rhetoric, applied linguistics, TESOL, and also on the specialist research on doctoral education and academic development;
- address both discipline-specific, but also shared and cross-disciplinary research languages;
- depart from an understanding of the importance of a relatively sophisticated understanding of the notion of audience, including an appreciation of the specific requirements that different audiences place on research communication;
- depart from an understanding of the importance of genre and the way it can vary across different disciplines, or discipline clusters and methodologies;
- be geared to the different and overlapping needs that accompany the early phases of a research career;
- emphasise the importance of the social, political and economic contexts within which students, their universities and other researchers operate. This involves understanding both academic culture and the process of peer review and other forms of research gate keeping; and
- understand that a key part of the development of a researcher is the development and maintenance of a set of networks to support both existing and future research and also more general engagement with economic and social development.

These themes and values are directly relevant to the supervisors of HDR students. As such, they also inform the work that UniSA’s Research Education Team undertakes with supervisors in the area of research writing.

References


DIISR 2009. *Innovation: Inspiring Australia—a national strategy for engagement with the sciences*. Canberra, DIISR.


Stojković, M 1999, ‘Logic and Culture’, *Philosophy and Sociology*, 2 (6/2) 235 - 238


**Corresponding author**

Alistair McCulloch
University of South Australia
Alistair.mcculloch@unisa.edu.au