UNIVERSITY OF SYDNEY: GENERIC ATTRIBUTES OF GRADUATES

Proposal to facilitate articulation and coherence between statements of generic attributes of research higher degree learning, and learning at other levels of coursework study, at the University of Sydney

Background: The University's current policy on Generic Attributes of Graduates was approved by Academic Board in Nov 2004. Despite its title – the policy deliberately restricts its “coverage” to undergraduate students in the first instance. In developing this policy it was intended that future amendments might extend the “coverage” through suitable additions to take in postgraduate coursework and research higher degree students.

The structure of the policy was based on research into the development of such generic attributes conducted at the University of Sydney. The resultant policy and faculty statements were developed over two years and included extensive consultation with the university staff and students and key government and employer groups.

The policy identifies Graduate Attributes in terms of two levels of attributes. The top level attributes are very broad outcomes that the university community espoused for graduates (Scholarship, Lifelong Learning & Global Citizenship). The second level attributes are a reformulation of these top-level attributes as more discrete clusters of skills (Research & Inquiry, Personal and Intellectual Autonomy, Communication, Information Literacy, Ethical social & Professional Understanding). While these five clusters have been adopted as a common framework of across the institution, each faculty (and in some cases School) has developed their own version of the skills that contribute to each of these five clusters.

The development of the policy was part of the University’s project on Generic Attributes led by the ITL. (see http://www.itl.usyd.edu.au/GraduateAttributes/). The project has identified that the undergraduate coursework attributes apply equally well to postgraduate coursework settings – though the standard of attainment is higher. In 2005 this project foreshadowed the need to liaise with the University research community to develop an articulated statement of attributes for Research Higher Degree students. As such the development of the ‘Magnificent 7’ is most timely. Indeed there is an international group, led by the University of Sydney that has recently agreed to collaborate on research in relation to national statements of RHD Generic Attributes in Australia and the UK.

Proposal: It would seem helpful to ensure a clear articulation between the attributes of research higher degree students (the Magnificent 7) and those of undergraduate and postgraduate coursework students who may be working towards such study. This would highlight the coherence and articulation between learning at different levels of degree study. One way of achieving this might be to reorganize the magnificent 7 under the same clusters of attributes identified in the existing policy. This would not only ensure coherence and articulation for students as they move through their degree but would help staff in planning learning experiences for students at all levels. What follows is an exploration of this reorganisation.

This mapping indicates that the Magnificent 7 do fit under the existing policy structure. The policy structure also allows for a degree of disciplinary contextualization of the attributes which may also be helpful to consider at the RHD level.

There is additional information on the research that underpins the University policy and the project itself on the website http://www.itl.usyd.edu.au/GraduateAttributes/).

Simon Barrie, ITL Generic Graduate Attributes Project. January 2006
Research Student Attributes: The Magnificent 7

This is presently arranged under seven clusters which have many parallels to the five clusters used in the coursework attributes

1. the acquisition of research skills (Research & Inquiry)
2. a range of effective communication skills (Communication)
3. an appreciation and understanding of the research environment (Research & Inquiry)
4. an understanding of the management of research
5. enhanced personal effectiveness (Personal and Intellectual Autonomy)
6. team working and leadership skills (Ethical Social & Professional Understanding)
7. planning, career development skills, introspection (Personal and Intellectual Autonomy)

A more detailed mapping based on the descriptions under each of the Magnificent Seven and the five coursework attributes follows. This mapping indicates the correspondences and highlights some differences.

RHD Attribute Clusters Mapped to Undergraduate Clusters:
1. the acquisition of research skills (Research & Inquiry)
2. a range of effective communication skills (Communication)
3. an appreciation and understanding of the research environment (Research & Inquiry)
4. an understanding of the management of research
5. enhanced personal effectiveness (Personal and Intellectual Autonomy)
6. team working and leadership skills (Ethical Social & Professional Understanding)
7. planning, career development skills, introspection (Personal and Intellectual Autonomy)

Detailed RHD Attributes reorganized and mapped to existing (UG) Generic Attributes

Policy:

The RHD attributes have been colour coded (see above) to aid in mapping

1 Research and Inquiry: Graduates of the University will be able to create new knowledge and understanding through the process of research and inquiry. This might be understood in terms of the following:

• be able to identify, define and analyse problems and identify or create processes to solve them to be able to recognise a research problem (and to establish its significance); be able to plan and develop a potential solution
• be able to exercise critical judgement and critical thinking in creating new understanding In particular, they must critically evaluate, not uncritically follow, advice.
• be creative and imaginative thinkers They should be self-motivated, curious, creative and innovative, flexible, and receptive.
• have an informed respect for the principles, methods, standards, values
• and boundaries of their discipline and the capacity to question these be skilled in good research practice, be able to justify their selection of techniques and methodologies (used and not used) in their research
• be able to critically evaluate existing understandings and recognise the
limitations of their own knowledge critically and independently evaluate the literature of their own and related research fields,
to execute, critically evaluate and report (in several formats) on that solution (including critical reflection on progress), to understand the theory, operation and appropriate application of relevant techniques, instrumentation and methodologies,
understand how research is funded and evaluated (including government- and contract-funded research).

2 Information Literacy: Graduates of the University will be able to use information effectively in a range of contexts. This might be understood as:
recognise the extent of information needed
locate needed information efficiently and effectively
evaluate information and its sources ensuring the security of their data, developing skills in accessing and manipulating bibliographic resources, archives and databases
use information in critical thinking and problem solving contexts to
construct knowledge
understand economic, legal, social and cultural issues in the use of information
use contemporary media and technology to access and manage information develop IT skills for database management, manipulation, recording, retrieving and presenting information.

3 Personal and Intellectual Autonomy: Graduates of the University will be able to work independently and sustainably, in a way that is informed by openness, curiosity and a desire to meet new challenges. This might be understood in terms of the following:
be intellectually curious and able to sustain intellectual interest
be capable of rigorous and independent thinking
they must learn to strike the right balance of self-discipline, thoroughness and rigor.
be open to new ideas, methods and ways of thinking Students should be informed risk-takers.
Students need to recognise when and how to draw upon the experiences and expertise of others.
be able to respond effectively to unfamiliar problems in unfamiliar contexts
be able to identify processes and strategies to learn and meet new challenges Students should develop and exhibit initiative and self-reliance, the ability to identify the need for extra skills or training and a willingness (and the ability) to learn new knowledge, techniques, etc.
be independent learners who take responsibility for their own learning,
and are committed to continuous reflection, self-evaluation and self-improvement Students must be able to manage their own research, setting goals, milestones, priorities, An important element of these skills is recognising the need for, and means of obtaining, further skills (through various forms of professional development).
have a personal vision and goals and be able to work towards these in a sustainable way During their candidatures, students should be refining their abilities to set realistic and achievable career goals and to evaluate (and if necessary reprioritise) progress towards these goals. Students need to be able to take care of their own careers. They should understand that they have developed a set of transferable generic skills and be able to recognise how these skills can be
applied within and outside the research environment, and be alert to the exploitation of career opportunities. They should have thought about (hopefully, but not always, planned) their career possibilities and progression, and should be effective as their own advocates through CVs, applications and interviews.

4 Ethical, Social and Professional Understanding: Graduates of the University will hold personal values and beliefs consistent with their role as responsible members of local, national, international and professional communities. For example:
- strive for truth, honesty, integrity, open-mindedness, fairness and generosity
- acknowledge their personal responsibility for their own value judgements and behaviour
- understand and accept social, cultural, global and environmental Responsibilities
- Students should understand and appreciate the ethical, OH&S, and IP issues of their and related research,
- be committed to social justice and principles of sustainability
- have an appreciation of and respect for diversity
- hold a perspective that acknowledges local, national and international concerns
- work with, manage, and lead others in ways that value their diversity and equality and that facilitate their contribution to the organisation and the wider community
- Students must learn to work as, and to adopt leadership roles in their team, working effectively with supervisors, peers and less experienced colleagues. They must understand how their behaviour impacts on others with whom they must meld into a team, and how to best use the skills within that team
- Throughout their candidature, students should be developing their research management skills from the management of their own research towards the next step of taking a role in the management of a group and having the capability (with additional training) to ultimately lead a group themselves (be it in research or elsewhere).

5 Communication: Graduates of the University will use and value communication as a tool for negotiating and creating new understanding, interacting with others, and furthering their own learning. This might be understood in terms of the following:
- use oral, written, and visual communication to further their own learning formally and informally, orally and in writing, using a variety of techniques (from the blackboard, through to conference presentations or an oral thesis defense).
- make effective use of oral, written and visual means to critique, negotiate, create and communicate understanding. Students should be able to write clearly and concisely for a variety of audiences (thesis examiners, journal editors and readers, patent examiners, research contractors, etc) and to be able to coherently articulate and defend their ideas, arguments, interpretations and research outcomes.
- To be effective in their future careers, they must learn how to convince a lay audience of the merit of their research and that of their field, whether or not they aspire to an academic position, be able to teach and mentor others (students, support staff, the public, etc) by doing, telling, showing, etc.
- use communication as a tool for interacting and relating to others. Students need to be able to listen, to give and receive feedback and to provide a considered response to the comments of others.