



Australian Government

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Outcomes from a Workshop to Explore Approaches to Quality Doctoral Research Training in Our Region

15 – 16 February 2012

Australian Council Deans and Directors of Graduate Studies

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A workshop conducted by the Australian Council Deans and Directors of Graduate Studies (DDOGS), with support from the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE)

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Background

In common with Australia, many of the countries in our region recognise the need for a substantial increase in their PhD-qualified workforce. These countries share many of Australia's concerns about issues of quality in the education of the future research workforce at a time of increasing global demand for highly trained researchers. Several South-East Asian countries have plans to double their number of doctoral graduates by 2020 and envisage that about half of the training will be done in country and half abroad.

Australia has the potential to play a valuable leadership role in enabling the countries of our region to share the information required to develop high quality doctoral training that meets their national needs. This workshop was developed to explore the potential for multi-lateral initiatives to prepare the future research workforce in our region to work in a global environment. The objective of the workshop was '*To improve understanding of best practice in research training in our region*'.

Organising Body

The Australian Department of Department of Innovation, Industry, Science and Research (DIISR); now the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE) contracted the Council of Deans and Directors of Graduate Studies in Australia (DDOGS) to conduct the workshop. The Council is the national forum of representatives of universities engaged in graduate research to discuss matters related to the provision, quality and advancement of graduate research. The Council, which has strong links to similar bodies in several countries of our region, acts as a convening body to bring together academic Deans and Directors with university-wide responsibilities for graduate research in seminars and working groups to facilitate the exchange of ideas and dissemination of information on graduate education. Through such activities the Council promotes excellence in training, research and scholarship and seeks to maintain high national standards for all graduate degree programs. This workshop thus accords with the purpose, experience, expertise and international standing of the Council.

Funding

The Australian Government provided \$40,000 towards the workshop. This funding was used to subsidise the travel and accommodation of 21 delegates from low income countries and to cover some of the costs of organising and hosting the meeting, including the travel costs of most of the plenary speakers. Monash University Sunway Campus provided the facilities and invaluable assistance with the organisation of the workshop. James Cook University funded some of the administrative costs associated with organising the workshop, including the workshop convenor's travel and accommodation (including a reconnaissance trip in August 2012) and her time towards organising the workshop. Delegates from Australia, New Zealand, Singapore and Malaysia funded their own travel and accommodation.

Attendees

Fifty-six people attended the workshop including delegates from the following countries: Australia (11), New Zealand (1), Malaysia (21), Hong Kong (1), Singapore (1), Indonesia (5), the Philippines (10), Thailand (3) and Vietnam (3).

Workshop Arrangements

The two-day workshop was held at Monash University's Sunway Campus, Kuala Lumpur, on February 15-16, 2012. The workshop included introductory talks by representatives from Malaysia and Australia, brief accounts of some recent developments in graduate research education in Vietnam, Thailand, Philippines, New Zealand, Malaysia, Indonesia, Hong Kong, and Australia, and a series of plenary addresses. These were followed by workshop discussions to develop best practice principles for: (1) Critical dimensions of the doctoral experience, (2) Generic/transferable skills, (3) Principles for quality supervisor development and (4) Quality research training in the context of the globalisation of research. These principles were developed in cross-country workshop groups. Delegates also had the opportunity to work in sub-regional groupings to review the principles from a national perspective. The workshop program is at Appendix 2.

The workshop was deliberately designed as a mixture of talks and workshops. The talks were planned as introductory overviews of the topics which the delegates were asked to develop best practice principles. Facilitators, rapporteurs and delegates were pre-assigned to the workshop groups to save time and maximise the opportunity for mutual, cross-cultural learning. The efficiency of the workshop was also increased by employing marshals to shepherd the delegates from the plenary lecture hall to the meeting rooms.

Outputs

The main outputs from the workshop were four sets of best practice principles for research training:

1. Critical dimensions of the doctoral experience
2. Generic/transferable skills
3. Principles for quality supervisor development
4. Quality research training in the context of the globalisation of research

Best Practice Principles 1

Critical Dimensions of the Doctoral Experience¹

These overarching principles address the essential aspects of a quality doctoral experience: excellent supervision, a stimulating intellectual climate, clearly defined roles for the institution and the candidate, professional development opportunities for the candidate, socio-cultural support for candidates and supervisors. Aspects of these principles are further developed in the subsequent sets of Best Practice Principles.

1. *The role of the supervisor is critical and therefore the elements of a good supervisor that could be evaluated include:
 - Respect
 - Mutual trust
 - Knowledge and expertise in the relevant discipline(s)
 - Good interpersonal skills
 - Sufficient time to provide appropriate guidance and support
2. *The Intellectual climate within which candidates research and learn is a valuable resource and evaluative statements and question statements might address:
 - Strong research culture
 - Involvement in cutting edge research
 - Dissemination of research findings encouraged/expected
 - Opportunities for linkage with academic and social communities
 - Enthusiasm for life-long learning
 - Pride in being a researcher
3. Clearly defining the roles of the institution and the candidate assists in the development of candidates and supervisors. Issues such as those listed below could be included in evaluation strategies:

Institution

- Pastoral care
- Infrastructure
- Project support
- Effective administrative staff
- Research integrity

Student

- Research integrity
- Increasing independence and self confidence
- Diligence

¹ The principles that the delegates voted to be the most important are marked with an asterisk.

4. The professional development of students as knowledge workers in a global environment is critical; therefore, questions/statements relating to the following could be considering when evaluating the student experience:
 - Tailored to needs and career aspirations of individual/students
 - Flexible approaches
 - Entrepreneurial
 - Opportunities to develop leadership and management skills.

5. In a globalised, multi-cultural environment , socio-cultural support for candidates and supervisors is important, with some of the following issues being relevant in evaluation:
 - Local context/relevance
 - Non-research related
 - Peer support of sufficient crucial mass
 - Promoting individual growth.

Best Practice Principles 2²

Generic / Transferable Skills

The development of generic/transferable skills is fundamental to best practice doctoral training. Candidates undertake doctorates as preparation for a wide range of careers that require diverse skills in addition to the capacity to undertake independent research. Modern research higher degree candidates commence doctoral programs at a wide range of ages and with diverse skills developed through prior experiences.

The following principles can underpin institutional practice:

1. The objectives of the skill development activities (formal, semi-formal and informal) should be clearly articulated.
2. The program should be revised regularly in response to student feedback and reviewed in the light of longitudinal data from graduates.
3. *The institution should provide opportunities for research students to develop generic / transferable skills during their research program that are relevant to individual needs and career aspirations.
4. The skills curriculum should comprise core compulsory content e.g., ethical research conduct and electives tailored to the needs of individual students as identified in a skills needs assessment.
5. A timetable of when to complete the skills program should be developed.
6. *The content of the skills program may include:
 - Oral and written communication skills (including English oral and written communication skills)
 - Critical thinking
 - Research ethics and responsible research conduct
 - Research tools: IT skills, database, data analysis (statistics + qualitative, data storage and presentation, document management), citation optimization, e-research
 - Research methodologies
 - Entrepreneurship including proposal writing
 - Interpersonal skills
 - Time management, project management, team work and collaboration
 - Career planning
7. Generic / transferable skills may be offered by labs, disciplines, departments, schools, research centres, faculties or centrally.
8. Completion of skills course and workshops should be registered on a central database and made available in portfolio format or as certificates to research students and graduates.

² The principles that the delegates voted to be the most important are marked with an asterisk.

Best Practice Principles 3

Principles for Quality Supervisor Development^{3 4}

Research supervision is provided by a university to assist in the education of research higher degree candidates with the aim of developing them into skilled, knowledgeable, productive, ethical, independent researchers who are engaged in the international research community. The supervisory (advisory) team is central to the candidate's successful completion of the research degree. The team should have academic and research expertise in the discipline(s) of the candidate's research and the relevant techniques. Supervision is a dynamic process that changes during candidature and uses a range of pedagogic techniques including advising, coaching, encouraging, facilitating, inspiring and motivating. The professional development of supervisors assists them to perform this challenging and important role.

To enable quality supervisor development the following principles are considered to be critical:

1. *The institution provides support for a broad range of professional development activities and resources for all individuals actively involved in supervising and supporting the research education process.
2. Participation in professional development both internal and external to the institution is recognised.
3. The institution provides opportunities for professional development for those in leadership and management roles in research student supervision oversight.
4. Excellence in supervision is recognised and rewarded by the institution.
5. An institution's research student policies and procedures form a core element of professional development activities and should be widely available and accessible.
6. Issues related to provision of quality supervision to research students form a core element of the institution's policies and procedures and professional development activities.
7. *Each individual involved in student research supervision, especially those new to supervision, is strongly encouraged to participate in appropriate research training and professional development.

³ The principles that the delegates voted to be the most important are marked with an asterisk.

⁴ Terminology – it is important to recognise differences in terminology and nuances of terminology e.g. training vs. professional development, supervisor/supervising vs. advisor/advising. The greatest differences between nationalities were reflected in the sensitivities regarding this matter.

Best Practice Principles 4

Quality Research Training in the Context of the Globalisation of Research⁵

Research and research training are becoming increasingly globalised. Thus both candidates and their advisory teams come from a wide range of cultural backgrounds with different norms. In order to manage expectations, it is very important for policies and procedures to be well-defined, transparent and easily understood.

1. *The institution is committed to the education and development of Research Students and supporting the role they play in creating and disseminating new knowledge to a wider community.
2. The institution has effective and efficient guidelines and processes to ensure a good match of supervisor, candidate, project, resources, infrastructure and financial support.
3. The institution has effective and efficient processes and criteria for the admission of research candidates including a clear statement of all scholarship conditions.
4. The institution is committed to producing and recognising and rewarding high quality research supervisors for its students and has in place mechanisms for students and supervisors to raise concerns and issues and have them dealt with effectively.
5. The institution has transparent and equitable processes to ensure compliance with the policies and procedures that govern research candidates.
6. The institution has clearly defined milestones for academic progress and completion which it uses to monitor both individual student progress and institutional performance.
7. *The institution is committed to producing a research environment for its research students that is engaging, culturally sensitive, locally and globally relevant and supportive of diversity.
8. *The institution provides professional development and opportunities for skills enhancement for research students, research supervisors and others engaged with supporting research students.
9. The institution has a clear statement of the roles and responsibilities of candidates, supervisors and the institution.
10. The institution adopts an evidence-based approach to improving performance of all aspects of research education.

⁵ The principles that the delegates voted to be the most important are marked with an asterisk.

Outcomes

The workshop stimulated the following outcomes:

1. **An increased regional understanding of the components of Best Practice Principles for research training.** These principles are already informing a project on Quality Research Training being conducted by Professor Joe Luca at Edith Cowan University.
2. **The development of a regional network of leaders in Graduate Education.** The circulation of a contacts list of all delegates who attended the workshop is designed to support networking within the region.
3. **Local meetings to further discuss the issues** including: (1) a meeting of the Filipino delegates in May 2012 to consolidate their approach towards quality doctoral research training; and (2) a national meeting to consider Malaysia's research workforce needs in mid 2012 tentatively titled 'Human Capital Development for an Innovation-led Economy'.
4. **A strong interest in future workshops** to continue discussion and to refine the Best Practice Principles for research training.

Summary of Feedback

The delegates were asked to fill in a feedback form at the end of the workshop. Overall, the delegates rated the workshop as being very well organised, the content very appropriate and the speakers very knowledgeable about their topics. The majority of delegates commented that they would be interested in attending more workshops that focused on improving doctoral research training. Details of the feedback are at Appendix 2.

Lessons Learned

Lessons learned from the workshop include:

1. Monash University Sunway Campus was an excellent venue to hold an international workshop for the South-East Asian region because of the supportive staff, excellent facilities and proximity to a major international hub airport.
2. The workshop helped to develop new networks and to strengthen pre-existing ones. Some countries had pre-existing networks of Graduate Deans. Arrangements were less developed in some other countries.
3. There were visa issues for countries such as China which exacerbated other difficulties regarding their workshop attendance.
4. The workshop format worked very well with respect to hands on participation and networking opportunities.
5. There is a genuine need to hold more regional workshops focused on improving doctoral research training. Such workshops also facilitate networking opportunities within and between countries. Suggestions for future workshops are at Appendix 3.

Appendix 1:

Workshop Agenda

Workshop to Explore Approaches to Quality Doctoral Research Training in the ASEAN region

Wednesday 15 February 2012

Plenary Session 1 (Moderator: Professor Helene Marsh)

Introduction to workshop: objectives, outputs and outcomes (Professor Helene Marsh, James Cook University)

Perspectives on the challenges of training and retaining a doctoral qualified workforce

Prof Dr. Asma Ismail, Deputy Vice-Chancellor (Research and Innovations)

Ms Julia Evans (General Manager, Research Funding and Policy Branch, DIISRTE)

Plenary Session 2 (Moderator: Professor Max King)

Some recent developments in graduate research education (Country contributions):

Vietnam (Prof. Hoang Van Van; Mr. Le Thanh Dzung; Assoc. Prof. Nguyen Viet Ha)

Thailand (Assoc. Prof. Dr. Pornpote Piumsomboon)

Philippines (Dr. Fabian Dayrit)

New Zealand (Dr. Charles Tustin)

Malaysia (Dato' Dr. Anuar Zaini Md Zain)

Indonesia (Prof Hartono)

Hong Kong (Prof. Mee-Len Chye)

Australia (Prof. Paul Burnett)

Plenary Session 3 (Moderator: Dr Gareth Leeves)

Quality research training in the context of the globalisation of research

Professor Emeritus Barbara Evans, University of British Columbia

Plenary Session 4 (Moderator: Professor Joe Luca)

Quality research supervision, the role of supervisor training

Dr Margaret Kiley, Australian National University

10 cross-country breakout groups (5 groups of 6 for each topic) to identify:

Best Practice Principles/Features:

Quality Research Training; (2) Quality Research Supervision

Thursday 16 February 2012

Plenary Session 5 (Moderator: Professor Gary Dykes)

The role of transferable skills training in quality research education.
Professor Mee-Len Chye, University of Hong Kong

Plenary Session 6 (Moderator: Professor Laura Poole-Warren)

Critical dimensions of the doctoral research student experience.

Professor Dr Rose Alinda Binti Alias, University Teknologi Malaysia
Cross-country breakout groups (5 groups of 6 for each topic) to identify:

Best Practice Principles/Features: (1) Quality Generic Skills Training for research students; (2) Quality research student experience.

Cross-country groups (two groups of ~7 or 8 for each topic) Finalise Best Practice Features/Principles from breakout groups on both days

Identification of culturally-appropriate/inappropriate ways of implementing Best Practice Features/Principles (in-country groups)
Australia/NZ, China/Hong Kong, Indonesia, Malaysia, Philippines, Thai/Vietnam

Concluding Plenary Session 7 (Moderator: Professor Helene Marsh, JCU)

Outputs of workshop

How to sustain a regional framework for developing quality research training?

Future agenda for research training in the region (next steps)

Appendix 2

Comments received as part of the assessment of the workshop:

- “This is a very good take off point for universities to review their practices and processes especially in doctoral education in the context of global education. The workshop provided inputs/suggestions and recommendations from varied cultures and situations”.
- “To me it was an excellent workshop. The discussions were very informative and vibrant and the presenters and facilitators were highly qualified”.
- “This is a very useful workshop for us. We will bring back the information and utilise it to lift the standard of our doctoral education”.
- “Great organising”.
- “One of the best workshops I have attended. The participants were all enthusiastic and committed to the cause. [They were] willing to share their experiences which was very helpful”.
- “One of the best workshops I’ve been to. The delegates and speakers were very appropriate to the area, and the content shared is implementable, practical and superb”.

Comments aimed at improving the workshop:

- “...too short discussion time”.
- “The 10 minute country presentations at the start – not too enlightening and uneven in scope/coverage”.
- “We understood most of the English, but some from other countries presentations was difficult to understand”.

Appendix 3

Suggestions for future workshops:

- “I hope there will be more follow-up workshops on this subject. There is a need to improve the training of PhD students”.
- “Hopefully there will be more workshops like this and the networks of those people responsible for quality research can be established to help developing countries”.
- “Try and make it a regular event. Perhaps every two years”.
- “...this should be considered the first of an ongoing series of ‘workshops’ in the region”.
- “Maybe a workshop to draft instruments for measuring research supervision efficiency and effectiveness”.