

## What do planners do? Define Your Discipline to drive undergraduate curriculum renewal

Marita Basson, University of Southern Queensland, Australia

David Dowling, University of Southern Queensland, Australia

The debate about the nature of planning continues as the profession seeks to maintain currency in an ever changing world, where environmental, educational, societal, and technological changes are rapid and often unpredictable. In these dynamic contexts, universities are expected to ensure that planning education programs continue to produce competent professional planning graduates who can adapt their practice to cope with change. The question is: how should universities decide what planning reality to prepare students for? Is it one where planners are scarce and graduates need to be job ready or is it a reality where planners are change managers who use higher order thinking skills and systems theories to guide their practice? Or, is it a mix of these separate realities? To prevent a skewed definition of the nature of the discipline it is important that all of the stakeholders have an opportunity to freely and equally contribute in any process used to define the planning discipline. The authors used the inclusive Define Your Discipline (DYD) Stakeholder Consultation Process in a pilot study in Queensland to create a draft Graduate Capability Framework for planning degree programs. Once complete, the Framework could be used to inform not only curriculum renewal, but also professional accreditation processes.

**Key words:** capability frameworks, graduate attributes, Define Your Discipline, accreditation, planning education

### 1. Background

#### 1.1. Changing Higher education contexts

In Australia, the Tertiary Education Quality and Standards Authority (TEQSA) was established in 2012 to oversee the quality and standards of higher education programs and the service provided by universities and other providers. The Tertiary Education Quality and Standards Act 2011 also established the Higher Education Standards Panel (HESP), an advisory body that works independently from TEQSA, the regulator. HESP's functions are:

- To advise and make recommendations to the Commonwealth Minister(s) responsible for tertiary education and research on the Higher Education Standards Framework; and
- To advise and make recommendations to TEQSA on matters relating to the Higher Education Standards Framework (HESP, 2012).

HESP is currently reviewing the Tertiary Education Threshold Standards legislated in the 2011 Act (HESP, 2013). The Panel is consulting widely and reporting its findings in regular communiqués. Importantly, it is proposing to include the following components in the revised Threshold Standards:

- *Learning Outcome* and *Course Design* standards; and
- *Reference Points*, which are not standards but national codes and frameworks (including discipline specific materials) that will be of value to providers thinking about demonstrating achievement of particular standards (HESP, 2013). For example, PIA's accreditation documents may be listed as a Reference Point for planning programs.

It is therefore expected that the definition of learning outcomes will become an important component of course (program) design. This would mean that discipline groups would have to develop learning outcomes for their disciplines, preferably at the national level.

One option for the planning discipline would be to fully develop the draft Graduate Capability Framework for planning degrees discussed in this paper, so that it becomes a nationally recognised framework. Then, if appropriate, PIA could recommend that HESP list it as a Reference Point for planning degrees. It would then become an important tool for universities undertaking reviews of their curricula and pedagogies.

### 1.2. Educational context

The educational context of the Graduate Capabilities defined by the DYD Process is illustrated in Figure 3, which shows the four phases of a policy-driven cyclical process for the review, design, delivery and evaluation of the curriculum for a program (Dowling, 2005). The cycle may be completed annually, or it may be aligned with an accreditation cycle, which in the case of the Planning Institute of Australia is five years.

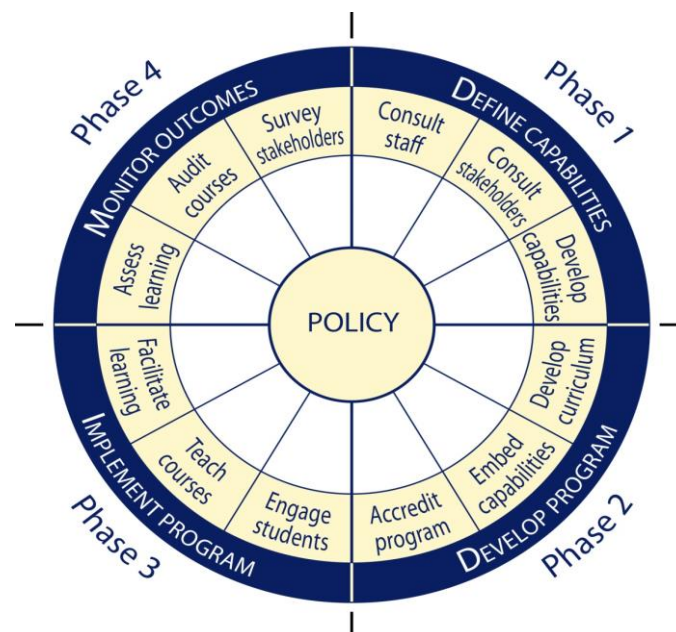


Figure 1: Title of Figure 1

Figure 3: A graduate capability driven curriculum design and delivery process  
(Adapted from Dowling, 2005)

The four phases of the cycle are:

**Phase 1:** A set of Graduate Capabilities is defined for a program, or an existing set is reviewed.

**Phase 2:** The Graduate Capabilities are used to inform the development of the curriculum for a new program or to review the existing curriculum for a program.

**Phase 3:** Students acquire the Graduate Capabilities through their engagement with learning and teaching activities.

**Phase 4:** Student capabilities are assessed and the stakeholders evaluate the program.

The DYD Stakeholder Consultation Process can be used to inform Phase 1 of the cycle, i.e. the definition or review of the Graduate Capabilities for a program.

### **1.3. Changing planning contexts**

Both planning practice and theory have evolved substantially from their nineteenth century reformist roots due to the fact that the intellectual basis of planning is exceptionally flexible and fluid (Davoudi, 2010). Planning now facilitates economic, social and environmental change in our cities, and planners are working in jobs that did not exist a decade ago or in jobs that were not considered to be part of the planning discipline in previous decades, for example: writing climate change policy for a local authority; assessing development loans for property developers; or finding sites for hard infrastructure for energy companies (Coiacetto et al., 2011). Not only are planners doing novel jobs, but the complexity of what they do has also increased due to socio-political changes and government responses to those changes (Dredge and Coiacetto, 2006).

One of the broader changes impacting on planning practice has been the return to an emphasis on the global perspective of planning, leading to an increasing focus on international content in planning programs (Yigitcanlar et al., 2009). This brings with it certain challenges in terms of maintaining a focus on local planning contexts (Whitzman, 2009). The expansion of the domain of the planner has led to the criticism that the boundaries of planning have become too diffuse due to the increased breadth of the profession (Siftel, 2009). Other scholars argue that planning has been reduced to solving current problems rather than creating a vision for the future (Meng, 2009). The debate about the nature of planning is impacted by the fact that the complexity of planning as a profession is further compounded by the highly political contexts within which planning occurs (Planning Institute of Australia, 2012).

## **2. What is planning?**

### **2.1. Planning as a profession**

Planning as a discipline is a social construct that has evolved through historical processes and involves both objects and methods of study (Davoudi, 2010). Planners have a common set of knowledge even though they might specialise in other substantive areas (Association of Collegiate Schools of Planning, 2012). Reeves' (2009, p.30) definition of an excellent planner suggests what these common elements might be:

*An excellent planner is someone skilled at envisioning the future and communicating the possibilities; showing an outstanding understanding of how the environment (both built and natural) impacts on different groups of people; expert at thinking and acting strategically, highly effective at making connections, looking to the long term. An excellent planner interacts with other professionals, works effectively with the community, comes up with creative solutions and builds the evidence base to plan ahead.*

Planning as a profession does, however, have local geographical and political contexts as well and for the purpose of compiling an Australian framework of graduate capabilities for planners, the Australian context is important.

Of course, the question is, how will this vision, or another vision, be translated into the curricula and pedagogies that will equip graduates with the knowledge and skills to practice in this manner?

### **2.2. Planners and planning in Australia**

The planning specialisations currently recognised by the Planning Institute of Australia (PIA) are: social planning; environmental planning; economic planning; planning law; transport planning; and urban design (Planning Institute of Australia, 2012). Although the critical skills shortages experienced in these fields over the last decade appear to have abated because of government cutbacks and the global financial downturn, historically there has been an

almost perpetual imbalance between supply and demand in the profession (Planning Institute of Australia, 2012, March et al., 2012).

Gurran et al. (2008) suggest that periods of planner shortages generate greater pressure for job ready graduates. A focus on providing staff to fill critical skills gaps results in less focus on pedagogy: the teaching of planning and the development of excellence in planners (Reeves, 2009, Gurran et al., 2008). Reeves argues that the time has come to consider how to best develop excellence in planning education while ensuring an adequate supply of job ready planners (Reeves, 2009).

The persistent shortage of planners in rural and regional areas was investigated using online surveys of planners (85 respondents) and PIA members (50 respondents) (Miller et al., 2011). In their report, Miller et al. (2011) stated that the shortage of planners can in part be attributed to people leaving the profession. They also found that empirical research into the actual experience of 'being a planner' is almost non-existent.

DEEWR (2012) reports that nearly ten percent of the professional group that includes planners leave their profession each year (DEEWR, 2012). In particular, there was a leakage of women from the planning workforce into allied professions and a leakage of graduates with one to five years' experience (Planning Institute of Australia, 2004). The leakage of recent graduates has been attributed to firstly a mismatch between planning education and the roles graduates undertake in their first years of practice, and secondly the lack of practical professional development activities, including the development of the coping skills required by young planners (Planning Institute of Australia, 2012). Stress and burnout are evident in some areas of planning practice according to a national inquiry into planning education and employment (Planning Institute of Australia, 2012, Bosman et al., 2011). It is evident that these trends and the trends in planning education need to be researched concurrently so that evidence based solutions can be developed and implemented (Bosman et al., 2011).

### 3. Planning education

#### 3.1. A international perspective of planning education

Australian planning educators should be conscious of, and informed by, international trends (Budge, 2009). For example, what impact will the 1999 Bologna Accord have on planning education in Australia? With 29 European countries as original signatories, the Accord recommends a three year undergraduate course followed by a two year master's course, with the minimum planning qualification being a master's degree (Whitzman, 2009). Internationally, there is evidence to suggest that planning schools are yet to find an optimal home in universities, a place where they can reside comfortably with a compatible mix of cognate disciplines. This is because, in different universities, planning schools are found to be residing with different mixes of disciplines such as architecture, engineering, surveying, geography and the social sciences. Some schools have also shifted one or more times within their university. The result is that the content and focus of planning programs is variable and has often shifted over time due to the influences of the co-habiting disciplines (Bosman et al., 2011).

In the nineteen eighties, plan implementation tools were core components of the curricula and course work included zoning and subdivision regulation, impact assessment, site plan review, and conflict resolution (Siftel, 2009). Since then the focus has shifted because of a renewed interest in design, particularly New Urbanism, walkable communities, and urban design, driven in part by the emphasis in European policy on spatial planning (Siftel, 2009). More recently, planning and education schools have been pressured to adopt a one-world focus and address issues such as rapid urbanization, mega-city growth, and climate change. The question is how do planning schools prepare graduates who can skillfully operate in these contexts and address all of these competing issues and stresses (Siftel, 2009). Over

all, there appears to be a lack of research into the impact these changes are having on planning education. This needs to be addressed (Budge, 2009).

### ***3.2. An historical perspective of planning education in Australia***

Although there is little research on planning education in Australia (Bosman et al., 2011) it is known that undergraduate planning programs are the most important source of professional planners in Australia (Dredge and Coiacetto, 2006) and that the number of planning schools is at an all-time high, as are student numbers and the rate of growth in student numbers (Siftel, 2009). The fact that universities are the main source of planners, necessitates the consideration of how professional attributes are developed in the university setting (March et al., 2012).

In the early days, university planning cohorts were small and planning education was mainly problem-based studio-learning (Bosman et al., 2011). In the late nineteen forties planning education at the South Australian School of Mines and Industries (now the University of South Australia) and the University of Sydney were very much focused on the traditional design topics. During the nineteen fifties there was an adoption of applied social science theories and techniques to the extent that, by the late nineteen seventies, planning school curricula covered a range of Australian policy matters that impacted on the settlement of people (Siftel, 2009). Coinciding with the broadening scope of planning education and the sharply increasing student numbers in the nineteen sixties and early nineteen seventies, was criticism that too much technical content had been lost from planning curricula (Siftel, 2009). This era partly coincided with the modernist acceptance of greater stakeholder participation in planning following the social unrest of the nineteen sixties (Siftel, 2009).

The recent shortage of planning academics impacted on teaching styles and led to mergers with allied disciplines resulting in common and core subjects being taught by academics with diverse 'home' disciplines (Heywood, 2006). A fundamental question planning educators face when school mergers are proposed is: what are the competencies that distinguish planners from geographers, architects, environmental scientists or professional mediators, i.e. the competencies that no other professions can legitimately claim as their own? It is only when they can answer this question that planning educators can ensure that planning programs continue to enable graduates to acquire these core competencies.

The shortage of planners and planning academics also led the Planning Institute of Australia to undertake a review of planning education in an effort to determine the underlying causes of the shortages. The review covered topics such as the skills and capabilities of planners, teaching methods, and the role of accreditation and the responsibilities of the various stakeholders in planning education. The results were reported in the publication: 2008 Planning Education Discussion Paper (Siftel, 2009). The key findings related to: the tension between the needs and expectations of industry and the broader role of planning education; the possible role of the TAFE sector as well as online and distance education and training; and the need for a greater convergence between higher education quality assurance processes and PIA accreditation requirements (Gurran et al., 2008).

### ***3.3. What should planning schools teach?***

So, how can planning schools decide where the emphasis should lie in their programs when both the breadth and depth of the planning profession continually change and grow in response to the needs of urban and regional communities in an ever-changing world? What importance should be attached to the following topics: the technical planning skills (e.g. statutory knowledge, strategic planning and urban design skills, computerised modeling); the soft or generic skills (e.g. communication, conflict resolution, project management, leadership); the emerging fields (e.g. social planning, economic planning, transport planning); and the wicked problems such as climate change, population growth, sustainability, and food security (Budge, 2009, Miller et al., 2011)?

Miller et al. (2011) have suggested that planning schools should start with the question: What knowledge, skills and abilities do planning graduates need to pursue a rewarding and successful career as a planning practitioner?

Certainly, the planning industry is eager to have job-ready applicants (Whitzman, 2009) and young planners express the need to be job-ready (Gurran et al., 2008). They have good reasons to expect this, as the Department of Education, Employment and Workplace Relations reported that for the majority of graduates who were rejected for planning positions in South Australia in 2012 the reason was the fact they had insufficient experience in assessing development applications (Australian Government, 2012). Employers want proof of more than students' credentials, they want to see evidence of competence (Reeves, 2009).

However, Bosman et al. (2011) argue that there is an overemphasis on the needs of the planning industry, and that the education discussions should be balanced against the wider education context. Budge (2009) picks up from Davoudi's (2010) statement that moving beyond disciplinary boundaries is important, and argue the very diversity and adaptability of planner education is increasingly valuable. For example the range of subject matter that: promotes the development of skills; promotes inquiry; and that develops the capacity to deal with new agendas and conflict. This diversity is required because planning is a way of thinking, acting and operating in a political economy that produces spatial outcomes (Budge, 2009). Budge (2009) also emphasises the need for planners to be able to cope with change by stating that: if planning schools do nothing else, they should equip students with skills that will enable them to adapt to change (Budge, 2009), who are resilient, innovative and can cope with diversity (Yigitcanlar et al., 2009).

This "creative tension" between the needs and expectations of industry and the broader role of planning education may, in future, lead to the division of the current role into two roles: planning technicians and professional planners. Professional planners would use their critical thinking skills and interdisciplinary knowledge to complete complex tasks and to address non routine strategic and other planning issues. Planning technicians would apply codes and standard techniques to undertake routine tasks such as development assessment activities. Whitzman argues that such a split might be a positive development (Whitzman, 2009).

In the meantime, planning educators need a good understanding of the roles that current and future graduates will undertake in future planning environments. This paper describes how the simple, but elegant, Define Your Discipline (DYD) Stakeholder Consultation Process (Dowling and Hadgraft, 2013a) was used during a Planning Institute Australia (PIA) sponsored pilot study in Queensland to shed light on the nature of the planning discipline by focusing on the perceptions of different stakeholders about the tasks planning graduates are expected to undertake in industry (Dowling and Basson, 2013).

### **3.4. The PIA Accreditation Policy**

The National Education Committee of the Planning Institute of Australia developed an Accreditation Policy following a consultative program during the period 2009-2010 (Planning Institute Australia, 2011). The Policy was intended to assist PIA accreditation panels in conducting accreditation reviews of tertiary education planning programs.

The Policy defines three components, or knowledge domains, and a series of Competency Areas for each domain (see Table 1). The policy also lists:

- a set of *Performance Outcomes* for each of the three Competency Areas in the *Core Curriculum Competencies* domain (B); and
- a *Competency Statement* and set of *Performance Outcomes* for each of the five Competency Areas in the *Supporting knowledge areas* domain (C).

**Table 1: PIA Accreditation Policy: Competency areas**

Knowledge Domains	Competency areas
<b>A. Generic Capabilities and Competencies</b>	1. Problem identification
	2. Research
	3. Analysis
	4. Self-Reflection
	5. Spatial thinking and application
	6. Strategic thinking
	7. Problem solving
	8. Communication
	9. Team work
	10. Work readiness
<b>B. Core Curriculum Competencies</b>	1. Professionalism, Practice and Ethics
	2. Plan making, Land use allocation and management, and Design
	3. Governance, Law, Plan implementation and Administration
<b>C. Supporting Knowledge Areas</b>	1. Urban design
	2. Economic planning
	3. Social planning
	4. Environmental planning
	5. Transport planning

It should be noted here that the seven PIA Practice Contexts (see above) are related to seven of the *Competency areas* (B2, B3, C1, C2, C3, C4, and C5).

#### 4. Methodology

##### 4.1. The DYD Stakeholder Consultation Process

The Define Your Discipline Stakeholder Consultation Process is an efficient, effective, and inclusive consultation process that can be used by a discipline to define, at a national level, a Graduate Capability Framework for programs in their discipline at each of the relevant AQF levels (Dowling and Hadgraft, 2013a). It is designed to capture the views of all relevant stakeholders (such as practitioners, recent graduates, and academics) about the tasks graduates undertake in their first few years of practice. Since 2010 the DYD Process has been used to define Capability Frameworks in six disciplines and at three AQF levels (levels 6, 7 and 8). For example, a Graduate Capability Framework was developed for four-year environmental engineering degrees (Dowling and Hadgraft, 2013b). That project was sponsored by the Environmental College of Engineers Australia and the published Guide includes the accreditation requirements for environmental engineering programs.

When applying the DYD process a national or state approach is recommended because:

- It is more efficient for a discipline to undertake this work at a national level rather than at the single institution level;
- It provides a discipline with the opportunity to develop a shared understanding about the capabilities of graduates from the various programs offered in their field; and
- It overcomes the risk of a School's locally-defined Graduate Capabilities not being aligned with the views of the members of an industry accreditation panel that are from other states or territories (Dowling and Hadgraft, 2013a).

A nationally agreed set of detailed Graduate Capabilities for a program would be a valuable resource for discipline leaders tasked with reorienting their undergraduate programs to meet current and emerging trends in their discipline (Dowling and Hadgraft, 2013a).

#### 4.2. The Queensland Planning Pilot Project Workshops

During 2012, the DYD Process was used to develop a draft Graduate Capability Framework for planning degree programs from data gathered during a pilot study undertaken in Queensland. The capabilities were based on data gathered during six DYD Workshops: three in Brisbane, two in Toowoomba and one in Cairns at the PIA Queensland Conference.

During one of the workshop activities participants are asked to write down up to 20 tasks that they would expect a graduate to undertake in their first three years of practice. The 42 planners (3 academics, 21 practitioners and 18 recent graduates) who participated in the workshops provided more than 600 task descriptions and comments.

The number and type of participants that attended each workshop are shown in Table.

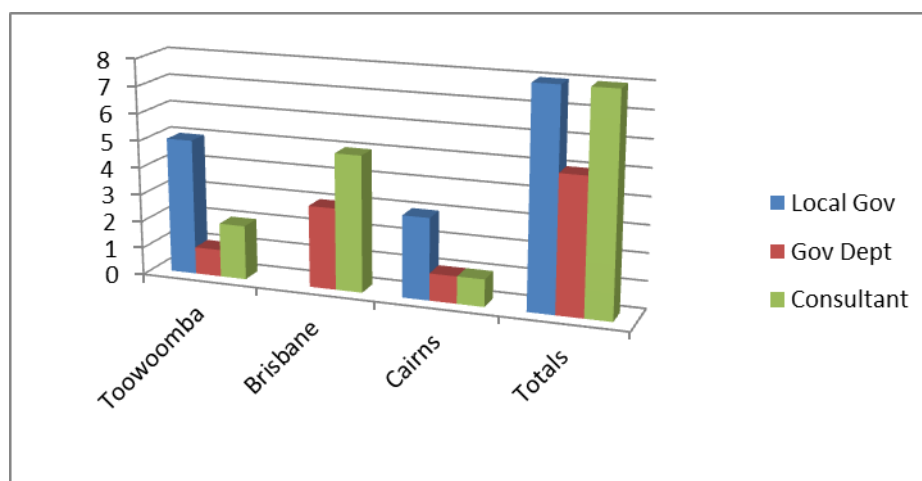
**Table 2: The number of participants at each workshop by category**

Participants at DYD Planning Workshops				
	Toowoomba	Brisbane	Cairns	Total
Practitioners	8	8	5	<b>21</b>
Recent graduates	4	9	5	<b>18</b>
Academics		3		<b>3</b>
Total	12	20	10	<b>42</b>

Forty three percent of the participants were recent graduates, ensuring that the view of this group was well-presented. One cause for concern was the poor representation of academics at the workshops, as only three academics attended a workshop.

The rural-urban split was 52:48, ensuring a balanced view of tasks expected of recent graduates in different geographical contexts.

Figure 1 shows the employment category of the practitioners. It can be seen that local government and consultant planners were equally represented at the workshops while planners from government departments had a lower representation rate.



**Figure 1: The number of practitioners by employment sector and city**

Figure 2 shows the employment category of the recent graduates. It can be seen that government, local government, and consultant planners were well represented at the workshops.



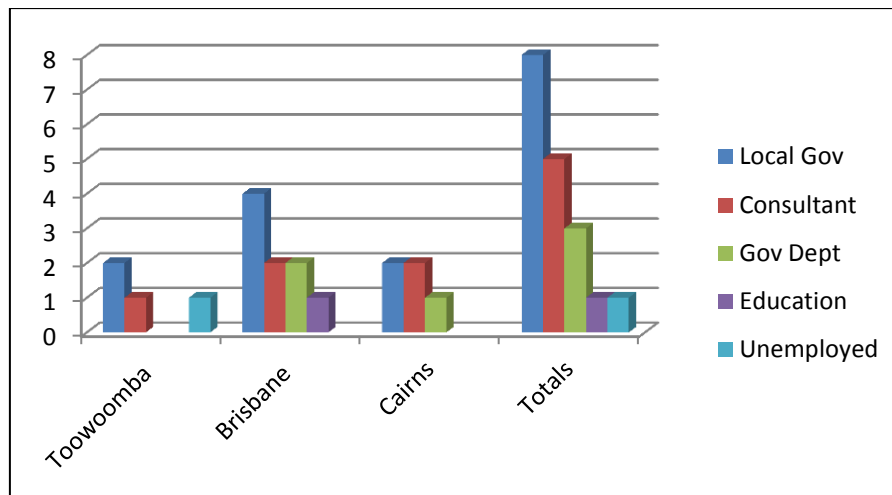


Figure 2: The number of recent graduates by employment sector & city

#### 4.3. Post workshop methodology

The task descriptions and comments were numbered and then entered into a database along with relevant metadata. The tasks were then sorted using the cluster headings supplied by the participants during the convergent phase of each of the workshops. The cluster names nominated at each workshop were compared and it was found that the only name supplied by all of the groups was 'Legislation'. This would appear to indicate that the participants do not have a shared understanding of the profession, or a clear understanding of the knowledge framework defined by PIA.

Initially the Project Team allocated each task to the most appropriate PIA Competence Area (Knowledge Domain A) or Performance Outcome (Knowledge Domains B and C). A summary was also prepared for comparison purposes. The Project team then began the process of developing a Graduate Capability Framework for planning degree programs. Firstly, the clusters names nominated by the participants were synthesised to form a draft set of Capability Clusters and a set of Domains within each Cluster. This process was informed by the PIA Competence Areas and Performance Outcomes.

Each task was then allocated to the most appropriate Cluster and Domain. Normally, the tasks in each Domain would then be synthesised to develop the final set of capabilities. However, this process will not be undertaken until a DYD Planning Project Reference Group reviews, refines and then adopts a draft set of Clusters and Domains. The timing of this will also depend on whether the Pilot Project is extended so that it becomes a national project.

## 5. Findings and discussion

The key findings from the DYD Queensland Planning Pilot project were:

- a. **Sample size:** The fact that only small numbers of tasks were identified and allocated to some of the key PIA membership areas, such as Transport Planning and Social Planning, highlights the fact that the sample size for the study is too small to adequately represent the breadth and depth of planning as it is practiced in Australia.
- b. **Variations in the size of the Competency Areas:** There are significant differences in the size and complexity of the PIA Competencies and Performance Outcomes. Many could be split into a number of sub-categories, for example: A10: Work readiness; A8: Communication; B1: Ability to use planning tools; and Self-management, teamwork and professionalism.

- c. **Overlaps:** Many of the tasks could have been allocated to two or more Competency Areas due to the similarity of the PIA competencies or statements. For example: Spatial ability in A5 and B1; Teamwork in A9, A10 and B1; and Problem solving in A1, A7 and B1. While it is recognised that the emphasis of the competencies in each Knowledge Domain (A and B) is different, the differences may not be obvious to PIA members.
- d. **Inconsistency of approach:** Some of the PIA Performance Outcomes refer to a knowledge requirement rather than a performance criteria. It is suggested that, for consistency, these should be rewritten as performance outcomes.

For these reasons the DYD Planning Project Team believes that the Pilot Project should be extended into a national study. The key outcomes from a national study would be:

- a nationally authenticated Graduate Capability Framework for planning degree programs at Australian universities which could be used to inform future PIA accreditation requirements; and
- a shared understanding of the breadth and depth of planning as it is currently practiced in Australia. From this perspective, the DYD Stakeholder Consultation Process may be viewed as an educative process because it engages the members of a discipline in informed discussions about their profession. This is particularly so for the DYD Workshop participants.

## 6. Application

It is expected that the members of each stakeholder group may use the Graduate Capability Framework in different ways:

- **Planning Schools** will use it to support the review and revitalisation of the curriculum in their programs, and to prepare for accreditation reviews by PIA.
- **PIA** members may use it as a companion resource to the PIA accreditation requirements when they participate in a PIA accreditation panel.
- **Planning students** may use it: to gain a better understanding of planning practice; to inform decisions about their career and specialisations; and to help manage their learning so they acquire the knowledge and skills required to commence practice in their chosen specialisation.
- **Employers** may use it: to define graduate roles in their organisation; to assess capabilities during the recruitment process; and to prepare staff development and training activities.

## 7. Conclusion

The shortcomings in planning education have been apparent in the planning education literature over the past decade. In spite of this, there has not been a coordinated and well-funded attempt to further investigate and report on a capability framework for planners. Projects such as the ALTC project Generating Academic Standards in Planning Practice Education (Jones et al., 2009) have shed much-needed light on certain aspects of planning education, in this case planning practice education, but they do not fulfill the need for a more holistic investigation of planning graduate capabilities.

Jones et al. (2009) remind the profession that the professional accrediting body “plays an important role in achieving a more conjoint and coherent approach between the university and the planning industry”. PIA, on the other hand, acknowledges the need to continually review planning education within Australia (Planning Institute of Australia, 2012a) and hence supported the DYD pilot study.

## References

- ASSOCIATION OF COLLEGIATE SCHOOLS OF PLANNING 2012. Guide to undergraduate and graduate education in urban and regional planning. 18 ed. Tallahassee, Florida: ACSP.
- AUSTRALIAN GOVERNMENT 2012. ANZSCO 2326-11 Urban and Regional Planner South Australia. *In: DEPARTMENT OF EDUCATION, E., AND WORKPLACE RELATIONS, (ed.). South Australia Australian Government.*
- BOSMAN, C., COIACETTO, E. & DREGDE, D. 2011. The shifting ground of Australian Higher Education through the lens of reflexive modernisation: compromising the quality of planning education? . *Australian Planner*, 48, 72-83.
- BUDGE, T. 2009. Educating planners, educating for planning or planning education: the never-ending story *Australian Planner*, 46, 8-13.
- COIACETTO, E. J., JONES, M. & JACKSON, J. T. 2011. How to best assess students' learning in work placements:moving beyond current practice. *Australian Planner*, 48, 270-280.
- DAVOUDI, S. 2010. Planning and interdisciplinarity *In: GEPPERT, A. & COTELLA, G. (eds.) Quality issues in a changing European Higher Education Area* Leuven Heverlee: Association of European Schools of Planning.
- DEEWR 2012. ANZSCO: 2326 Urban and Regional Planners. *In: DEEWR (ed.) Occupation trends.*
- DOWLING, D. 2005. The Qualities of a USQ Graduate Attribute Policy. *Academic Board Discussion Paper*. Toowoomba.
- DOWLING, D. & BASSON, M. 2013. A Graduate Capability Framework for Urban and Regional Planning Programs: A Guide for Australian Universities. Interim Report Queensland Pilot Project.
- DOWLING, D. & HADGRAFT, R. 2013a. The DYD Stakeholder Consultation Process: A User Guide. Sydney: Office of Learning and Teaching, Department of Industry, Innovation, Science, Research and Tertiary Education.
- DOWLING, D. & HADGRAFT, R. 2013b. A Graduate Capability Framework for Environmental Engineering Degree Programs: A Guide for Australian Universities. Sydney: Office of Learning and Teaching, Department of Industry, Innovation, Science, Research and Tertiary Education.
- DREDGE, D. & COIACETTO, E. 2006. Planning as a career choice: first year students' knowledge of and attitudes towards planning. *Australian Planner*, 43, 26-35.
- GURRAN, N., NORMAN, B. & GLEESON, B. 2008. Planning education discussion paper. Planning Institute of Australia.
- HESP. 2012. *Welcome to the Higher Education Standards Panel* [Online]. HESP. Available: <http://www.hestandards.gov.au/> [Accessed June 2013].
- HESP. 2013. *Communiqué 8 - HES Reference Points and update on Organising Framework* [Online]. HESP. Available: [http://www.hestandards.gov.au/engagement#\\_Communiqués](http://www.hestandards.gov.au/engagement#_Communiqués) May 2013].
- MARCH, A., HURLIMANN, A. & ROBINS, J. 2012. Accreditation of Australian urban planners: building knowledge and competence. *Australian Planner*, 2012.
- MENG, L. L. 2009. Megatrends drive planning education: How do we future-proof planners? . *Australian Planner* 46, 48-50.

MILLER, E., SAHAMA, T., GRACE, P., WILSON, C. & HEFFERAN, M. 2011. Motivations, expectations and experiences of Australian rural and regional planners *Australian Planner*, 48, 305-312.

PLANNING INSTITUTE OF AUSTRALIA 2012. Pro forma for SOL2012 Submission *In: AUSTRALIA, S. (ed.)*.

REEVES, D. 2009. Future scoping - developing excellence in urban planners. *Australian Planner*, 46, 28-33.

SIFTEL, B. 2009. Planning the paths of planning schools. *Australian Planner*, 46, 38-47.

WHITZMAN, C. 2009. Reinventing planning education 46, 1.

YIGITCANLAR, T., MAYERE, S., MCCARTNEY, R. & MOHAMED, M. Providing innovative planning education experience: teaching regional planning in an international context. Australian New Zealand Association of Planning Schools 28-30 August 2009, 2009 Brisbane.