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EXPLORING GRADUATE TRANSITION FROM UNIVERSITY TO THE WORKPLACE: EMPLOYER, ACADEMIC AND GRADUATE PERSPECTIVES

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ABSTRACT

This paper presents the findings of the Australian Learning and Teaching Council (ALTC) Professional Education in Built Environment and Design study which explored current key educational challenges facing the built environment and design (BED) sectors. Stakeholders (professionals, academics and students) participated in a seminar (n=35), focus groups (n=22) and an online survey (n=148). The findings highlight the importance of establishing stronger links between academia and practice to ensure BED graduates have the necessary technical and social skills to productively engage and contribute to their discipline during the critical transition-to-work phase of their careers.

Keywords: Professional Education, Built Environment and Design, Transition to Work, Graduate capabilities

INTRODUCTION

This paper summarises the key findings of an Australian Learning and Teaching Council (ALTC) project, Professional Education in Built Environment and Design. The project explored what stakeholders (industry professionals, academics and students) viewed as the key educational challenges facing the built environment and design sectors (BED), focusing on identifying any gaps between academic and practice-based knowledge/experience and understanding
the transition to work phase for new graduates\textsuperscript{1}. A mixed-methods research approach was utilised, with BED stakeholders encouraged to participate in a full-day seminar (n=35), focus groups (n=22) and an online survey (n=148). Specific details about the focus groups (Davis, Savage & Miller, 2009) and online survey (Davis & Savage 2009) are reported elsewhere, with this paper integrating the key qualitative and quantitative research findings and outlining key proposed recommendations. Critically, this research contributes to a national directive for future planning of the Built Environment (Engineering and Design) disciplines, documenting what industry professionals, academics and students currently think about the profession and providing recommendations designed to facilitate the development of a shared vision for the BED sectors.

**BACKGROUND**

Globalisation, technological advancement, global economic pressures, and job shortages only serve to highlight the critical timing of this research for the future planning of BED disciplines. Exploring how BED disciplines will evolve to meet these demands, and appropriately identifying specific stakeholder roles and responsibilities, is difficult.

There have been numerous studies exploring the links between graduate capabilities from both working and academic contexts, most of which aim to better understand student capabilities, lifelong learning development and transition to work strategies (See for example, ACNielsen Research Services 2000; Ahearn et al. 2005; Askew 2004; Barrie 2006; Boles et al. 2006; Bowden et al. 2000; Commonwealth of Australia 2002; Davies, Csete & Poon 1999; DEEWR 2008; Duignan 2002; Frank 2005; Gibb 2005; Hargreaves & Boles 2005; Hutchings, Huber & Golde 2007; Johnston & McGregor 2004; Jolly 2001; Love, Haynes & Irani 2001; Oliver et al. 2007; Savage 2005; Zou 2008).

\textsuperscript{1} In this instance “graduate” is defined as a person who has completed a university qualification in a built environment and/or design discipline since 30\textsuperscript{th} June 2005.
For example, a study by Rogers and Mentkowski (2004) explored the context of ‘learning’ and identified that the ‘multidimensional’ learning that occurs when working with all stakeholders is important. Furthermore, they noted that academics can ‘explicitly articulate liberal learning in the performance and enduring habits of alumni’ (2004, p.371). However, they do acknowledge, that defining how graduates transfer generic capabilities from university to work is difficult. In emphasising the criticality of this issue, Boud (2000) states that only the skilled and flexible learners will be able to flourish in the changing contexts of an increasingly interconnected and complex society. Similarly, Boud and Hawke (2003) discuss the importance of students not only becoming lifelong learners, but also the ‘implicit in the notion of learning-how-to-learn is that of being an assessor of learning’ (p. 3). It seems that the university learning environment is perceived to be the place where students learn all they need too not just to be a skilled discipline-specific worker, but also to prepare students for lifelong careers – instilling capabilities that allow for intrinsic learning. However, understanding the learning that occurs during the transition-to- work phase is complex.

A study by Davies, Csete and Poon (1999) explored employer’s expectations of the performance of construction graduates. This study found that graduates and employers generally agree on the importance of a set of general skills. Interestingly, the study concluded that graduates are not as ill-prepared for the workplace as suggested by anecdotal evidence from employers. A limitation of this study and many others is that they have only surveyed graduates and employers; if universities are highlighted as the predominant environment for capability development, then it is important to ensure that the perspectives of this cohort are included as well. For example, a study of property education by Blake and Susilawati (2009) found that the key is to try to understand how university programs can better aid students in the transitions to the professional environment. The need to better understand the concerns of specific disciplines are important, but so too is it to understand/obtain holistic perspectives of all stakeholders.

Barnett (2004) calls for better understanding of Learning for an unknown future, in which he defines
Generic skills may seem to offer the basis of just such a learning for an unknown future. Generic skills, by definition, are those that surely hold across manifold situations, even unknown ones. I want to suggest, however, that the idea of skills, even generic skills, is a cul-de-sac. In contrast, the way forward lies in construing and enacting a pedagogy for human being. In other words, learning for an unknown future has to be learning understood neither in term so knowledge or skills but of human qualities and dispositions. Learning for an unknown future calls, in short, for an ontological turn. (2004, p. 247)

The problem with Barnett’s statement is that understanding how curriculum should be shaped is not clearly defined. Blake and Susilawati (2009) found that ‘generally students and employers consistently perceived that the ‘transition out’ of university education to the profession was made more seamless by an integration of academic studies and professional work experience from the intermediate stages’ (p. 13). This integration has been acknowledged by a variety of educational literature highlighting ‘an increasing shift to WIL modalities of program delivery, requires a cultural shift to increase the hosting capacity of the industry as a whole’ (Boles et al. 2006, p. 6; see also, Franz 2008).

In order to generate a better understanding of what occurs during the transition-out phase from student-learner to engaged-professional, a better understanding of specific roles and responsibilities of each stakeholder is required. Furthermore, better defining the relationships between capability development, the context in which they are embedded and the subsequent learning that occurs is needed. The problem with this is that the capabilities can vary between disciplines (e.g. technical skills, discipline specific knowledge etc). The literature indicates that better understanding of the specific learning that occurs during the transitional phase is necessary. This is because pressure is directed mostly toward universities as mediums for fostering and creating lifelong, flexible, adaptable learners, has meant there is an ever increasing need for universities to constantly redefine their general education outcomes. However, there seems to be little

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2 Work Integrated Learning. Similar initiatives identified in literature include: collaborative learning, situational learning, lifelong learning, interdisciplinary learning, reflection in learning, work-based learning, and project-based learning

3 Within the first three years of graduation
exploration regarding the type and quality of contribution from the broader discipline (including; professional associations, workplaces, as well as graduates).

Thus, this research differentiates itself from previous work because it sets out to better understand the perspectives of each stakeholder, not just one. Moreover, focusing broadly on all Built Environment and Design disciplines, whilst a challenge, has provided a platform for developing a research approach better suited to defining commonalities between disciplines; as well as avenues for pedagogical development.

METHODOLOGY AND KEY FINDINGS

To better understand the changing nature of professional practice in built environment and design disciplines, and ways to establish a more appropriate and future-oriented agenda in these disciplines, key stakeholders (professionals, academics and students) were encouraged to participate in a seminar, focus groups and an online survey.

**Stakeholder Workshop**

A daylong seminar was hosted at QUT, Brisbane on the 30 July 2008. Representatives (n=35) from each stakeholder group were invited to attend. This included the QUT project team, academics, recent graduates’ as well as academic and industry partners and representatives of Australian Deans of Built Environment and Design (ABDE). This workshop was designed to canvass the views and perspectives of industry stakeholders and to collectively identify an appropriate research framework. All stakeholders agreed it was necessary to research further about how industry professionals, academics and students experience (either directly or indirectly) and understand (from all BED

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4 Participant representation included the following: Queensland University of Technology (QUT), University of Western Australia, Curtin University, Swinburne, University of Technology Sydney (UTS), University of Queensland (UQ), University of Newcastle, University of New South Wales (UNSW), University of Tasmania, Monash, GHD, Sinclair Knight Merz (SKM) and Verge
perspectives) the *transition-to-work* phase of recent graduates. The workshop concluded that generating a common understanding of each stakeholder’s perspective(s) of this *transition* was an important first step. In terms of the specific research methodology, it was concluded that localised focus groups (contextualised to Brisbane), in conjunction with a national online survey, would be the most appropriate research medium to collect empirical data on these issues.

**Qualitative Methodology – Focus Groups**

In late 2008, focus groups were conducted in Brisbane, Australia with each of the three target groups: professionals (n=8), academics (n=8) and graduate/final year students (n=6). Standard good practice qualitative research and ethical protocols were followed, with participants invited to participate in a one hour focus group in return for lunch and a $30 gift voucher. One researcher led each focus group, using a semi-structured approach to investigate how well prepared current graduates are for professional practice and what needs to be done to help better prepare students for this transition.

The ‘Professional’ group comprised of senior managers, representing architecture, urban planning, quantity surveying and engineering/project managers. Half were affiliated with the professional industry partners on the project; half were recruited through personal networks and target emails to local businesses in these disciplines. The ‘Academic’ group were recruited through a general faculty-wide email requesting participation, and included teaching staff (4 females and 4 males) from landscape architecture, industrial design, architecture, interior design, property economics and civil engineering. The ‘final year student/recent graduate’ group comprised of 2 females and 4 males, from industrial design, architecture, civil engineering and urban planning. All were recruited through personal networks, asking final year coordinators and project partners to pass on the focus group details to potential participants.

A Thematic Analysis was undertaken on the focus group data to identify key themes, with the key focus to identify the extent of convergence or divergence in
what stakeholder’s perceived to be the key issues facing built environment and design related disciplines and the role each stakeholder (university, industry and students) can play in meeting these challenges (for further details, see Davis & Savage 2009).

Qualitative Findings: Focus groups
Surprisingly, the three stakeholders (professionals, academics and FYS/RG⁵) held rather different views about the key challenges facing the industry. Recent graduates and final year students focused on the challenge of getting their first job, as well as the importance of social skills and developing specific personality traits such as humility and confidence. Academics focused on the global economic crisis and the importance of graduates developing critical thinking and transferable skills for life beyond university. For professionals, the focus was on the attitude, skills and abilities of new graduates, particularly in terms of critical thought and addressing issues such as sustainability. Despite the different emphasises, however, there were some general commonalities about what these stakeholders perceived as the key challenges facing their professions:

• the development of critical thought and life–long learning was viewed as essential

• specific personality and interpersonal social skills, such as communication, listening, humility and confidence, were identified as critical characteristics to be developed

• the global economic crisis was viewed as a watershed event, profoundly changing the industry

• identifying stakeholder roles and responsibilities regarding professional education was highlighted as an important future development for the disciplines involved

• seeking greater stakeholder value alignment and engagement from students-to-practice and from practice-to-education was seen as essential

⁵ Final Year Student / Recent Graduates
Quantitative Methodology - Survey
The online survey was distributed nationally via the project partners, who forwarded the email link of the survey to their networks. In addition, professional associations (AIQS, AIB, API, PIA, SBQ, EA, BAQ, RAIA, DIA, AILA) were contacted and asked to distribute the online survey to their membership. A total of 148 respondents from across Australia completed the survey; professionals (n=61), academics (n= 24), and final year students/recent graduates (n= 63).

Survey Measures
The 22 item survey contained six main sections of questions covering professional education in built environment and design (BED): Graduate Capabilities – Assessment; Graduate Capabilities – Development; Importance of Graduate Characteristics; Demonstration of Graduate Characteristics; Future Challenges for BED, and General demographics. The majority of questions utilised Likert-scale response categories, with several open-ended questions on specific issues (for further details, see Davis & Savage 2009). The data was analysed using the Statistical Program for Social Sciences (SPSS) and Microsoft Excel, with only the key findings presented here.

Quantitative Findings: Survey
Of the 148 respondents, approximately half identified as either Professionals (41%) or final year student or recent graduates (43%), with few identifying as academics (16%). A profile of participant demographics, including their specific BED discipline, is detailed in Table 1 below.
Table 1: Demographic Characteristics of each participant cohort

<table>
<thead>
<tr>
<th></th>
<th>Professionals (n=61)</th>
<th>Academics (n=24)</th>
<th>Final year students (n=29)</th>
<th>Recent Graduates (n=34)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age</td>
<td>35.1 yrs</td>
<td>42.3 yrs</td>
<td>25.7 yrs</td>
<td>25.6</td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>68.9%</td>
<td>50.0%</td>
<td>44.8%</td>
<td>52.9%</td>
</tr>
<tr>
<td>Female</td>
<td>31.1%</td>
<td>50.0%</td>
<td>55.2%</td>
<td>47.1%</td>
</tr>
<tr>
<td>Discipline (current)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity Surveying</td>
<td>8.2%</td>
<td>0%</td>
<td>6.9%</td>
<td>0%</td>
</tr>
<tr>
<td>Construction Management</td>
<td>3.3%</td>
<td>0%</td>
<td>6.9%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Project Management</td>
<td>14.8%</td>
<td>0%</td>
<td>3.4%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Property Economics</td>
<td>3.3%</td>
<td>8.3%</td>
<td>13.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Spatial Science</td>
<td>0%</td>
<td>4.2%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Planning</td>
<td>14.8%</td>
<td>4.2%</td>
<td>10.3%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>4.9%</td>
<td>12.5%</td>
<td>3.4%</td>
<td>0%</td>
</tr>
<tr>
<td>Architecture</td>
<td>11.5%</td>
<td>25.0%</td>
<td>24.1%</td>
<td>23.5%</td>
</tr>
<tr>
<td>Interior Design</td>
<td>1.6%</td>
<td>12.5%</td>
<td>6.9%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Industrial Design</td>
<td>13.1%</td>
<td>12.5%</td>
<td>13.8%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Landscape Architecture</td>
<td>4.9%</td>
<td>4.2%</td>
<td>3.4%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>19.7%</td>
<td>16.6%</td>
<td>6.9%</td>
<td>23.5%</td>
</tr>
</tbody>
</table>

Graduate Capabilities – Assessment

Participants assessed graduate capabilities against the four key domains – Technical skills (2 items), Personal characteristics (8 items), Workplace skills (6 items) and Professional skills (5 items). Figure 1 and Table 2 present the collective findings of this data for all 21 items in this category. Figure 1 helps to illustrate the commonalities and disconnect between cohorts, with all items weighted on a 5-point Likert scale anchored at extremely poor (1) to excellent (5). There was also the option of ‘unknown’ to ensure all participant perspectives were captured. It was hoped that including this item would highlight any anomalies and/or significant discrepancies (i.e. if primarily academics selected ‘unknown’ then this would show disconnect of their understanding of graduate performance); overall, however, no overt anomaly occurred. There were however, other disparities of interest.

- **Productive from day one** – academics believe graduates to be below Average (2.5), whereas FYS/RG and professionals believe the performance to be Average (3.0)
- **Ambitious** – Both professionals and students rated this above average (respectively 4.1 and 4.0). Academics however perceived graduate abilities to be closer to be in-between (3.5)

- **Prepared to work hard** – FYS/RG self rated fairly high with an above average perception of their abilities (4.0). Professionals thought highly of graduates with a near above average rating (3.9), whereas academics where less generous (3.2).

- **Broad understanding of commercial realities** – both academics and professionals agreed on this item issuing near below average (2.7). FYS/RG however perceived their performance this to be slightly above average (3.2).

- **Technically capable** – interestingly academics attributed a slightly less than average perception of graduate abilities technically (2.9). FYS/RG and professionals were more closely aligned with the general view that graduates performance is closer to above average (3.3 and 3.4 respectively).

- **Information literacy and computing** – professionals believe graduates perform above average (4.0). FYS/RG were fairly confident (3.7) and academics, still positive (3.5), but not as confident as their professional cohort.

As illustrated in Figure 1, in all FYS/RG self rated their performance in professional practice generally higher than professionals and academics across almost all items. On the other hand, academics were generally more critical and rated graduate performance lower than FYS/RG and professionals.
Table 2 illustrates the overall (collective responses) frequency and percentage distribution of each item along a 5-point Likert scale, including all unknown responses as well. This illustrates how Productive from day one (11.5%) and Flexible to a variety of work situations (8.8%) were the two items that participants felt were difficult to measure performance.
Table 2: Overall frequency distribution of student performance in the workplace (n=148)

<table>
<thead>
<tr>
<th></th>
<th>Unknown</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Productive from day one</td>
<td>17</td>
<td>11.5</td>
<td>4</td>
<td>2.7</td>
<td>16</td>
<td>10.8</td>
<td>56</td>
<td>37.8</td>
<td>42</td>
</tr>
<tr>
<td>Flexible to a variety of work situations</td>
<td>13</td>
<td>8.8</td>
<td>1</td>
<td>0.7</td>
<td>10</td>
<td>6.8</td>
<td>34</td>
<td>23.0</td>
<td>61</td>
</tr>
<tr>
<td>Ambitious</td>
<td>9</td>
<td>6.1</td>
<td>1</td>
<td>0.7</td>
<td>2</td>
<td>1.4</td>
<td>23</td>
<td>15.5</td>
<td>55</td>
</tr>
<tr>
<td>Prepared to work hard</td>
<td>9</td>
<td>6.1</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>5.4</td>
<td>26</td>
<td>17.6</td>
<td>48</td>
</tr>
<tr>
<td>Ability to learn new things</td>
<td>8</td>
<td>5.4</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>2.0</td>
<td>21</td>
<td>14.2</td>
<td>63</td>
</tr>
<tr>
<td>Mature</td>
<td>9</td>
<td>6.1</td>
<td>1</td>
<td>0.7</td>
<td>13</td>
<td>8.8</td>
<td>33</td>
<td>22.3</td>
<td>56</td>
</tr>
<tr>
<td>Ability to work autonomously</td>
<td>9</td>
<td>6.1</td>
<td>2</td>
<td>1.4</td>
<td>12</td>
<td>8.1</td>
<td>45</td>
<td>30.4</td>
<td>42</td>
</tr>
<tr>
<td>Ability to present well</td>
<td>7</td>
<td>4.7</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>4.7</td>
<td>37</td>
<td>25.0</td>
<td>56</td>
</tr>
<tr>
<td>Tolerance of others</td>
<td>11</td>
<td>7.4</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>2.7</td>
<td>22</td>
<td>14.9</td>
<td>45</td>
</tr>
<tr>
<td>Ethics and corporate responsibility</td>
<td>10</td>
<td>6.8</td>
<td>1</td>
<td>0.7</td>
<td>9</td>
<td>6.1</td>
<td>42</td>
<td>28.4</td>
<td>47</td>
</tr>
<tr>
<td>Practical approach to a work environment</td>
<td>10</td>
<td>6.8</td>
<td>2</td>
<td>1.4</td>
<td>14</td>
<td>9.5</td>
<td>34</td>
<td>23.0</td>
<td>55</td>
</tr>
<tr>
<td>Broad understanding of commercial realities</td>
<td>10</td>
<td>6.8</td>
<td>7</td>
<td>4.7</td>
<td>35</td>
<td>23.6</td>
<td>46</td>
<td>31.1</td>
<td>35</td>
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<tr>
<td>Articulate</td>
<td>8</td>
<td>5.4</td>
<td>1</td>
<td>0.7</td>
<td>9</td>
<td>6.1</td>
<td>49</td>
<td>33.1</td>
<td>49</td>
</tr>
<tr>
<td>Technically capable</td>
<td>8</td>
<td>5.4</td>
<td>6</td>
<td>4.1</td>
<td>16</td>
<td>10.8</td>
<td>48</td>
<td>32.4</td>
<td>47</td>
</tr>
<tr>
<td>Ability to work well in a team</td>
<td>9</td>
<td>6.1</td>
<td>1</td>
<td>0.7</td>
<td>7</td>
<td>4.7</td>
<td>26</td>
<td>17.6</td>
<td>64</td>
</tr>
<tr>
<td>Skills and knowledge in their field</td>
<td>9</td>
<td>6.1</td>
<td>2</td>
<td>1.4</td>
<td>16</td>
<td>10.8</td>
<td>61</td>
<td>41.2</td>
<td>48</td>
</tr>
<tr>
<td>Critical and conceptual thinking</td>
<td>7</td>
<td>4.7</td>
<td>2</td>
<td>1.4</td>
<td>15</td>
<td>10.1</td>
<td>39</td>
<td>26.4</td>
<td>56</td>
</tr>
<tr>
<td>Analysis and problem solving</td>
<td>8</td>
<td>5.4</td>
<td>4</td>
<td>2.7</td>
<td>8</td>
<td>5.4</td>
<td>46</td>
<td>31.1</td>
<td>55</td>
</tr>
<tr>
<td>Information literacy and computing</td>
<td>8</td>
<td>5.4</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>6.1</td>
<td>24</td>
<td>16.2</td>
<td>59</td>
</tr>
<tr>
<td>Communication</td>
<td>7</td>
<td>4.7</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>4.1</td>
<td>45</td>
<td>30.4</td>
<td>54</td>
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<tr>
<td>Research</td>
<td>8</td>
<td>5.4</td>
<td>2</td>
<td>1.4</td>
<td>14</td>
<td>9.5</td>
<td>44</td>
<td>29.7</td>
<td>50</td>
</tr>
</tbody>
</table>

Interestingly, as highlighted in Figures 2 and 3, it is clear that of the 21 items rated, stakeholders identified 16 (76%) of them to be directly attributed as University developed characteristics. As illustrated, these 16 items include; Flexible to a variety of work situations (42%), Prepared to work hard (38%), Ability to learn new things (71%), Ability to work autonomously (42%), Ability to present well (50%), Tolerance of others (54%), Ethics and corporate responsibility (50%), Articulate (46%), Technically capable (67%), Ability to work well in a team (71%), Skills and knowledge in their field (63%), Critical and conceptual thinking (83%), Analysis and problem solving (79%), Information literacy and computing (75%), Communication (79%), and finally Research (88%).
These visualisations are critically important when considering Stakeholder roles and responsibilities. Of particular interest is the fact that only 24 (16.2%) of survey participants were academics. This means the primary viewpoint presented is from the perspective of FYS/RG and Professionals (83.8%). Overall, as Figure 3 highlights, they feel that most of the capabilities should be developed at University (76%) versus the Workplace (14%) and Self developed (10%). Future research in this area will need to take this response rate into consideration; considering almost 16 of the 21 attributes are thought to be the responsibility of Universities, it is imperative that future studies obtain greater involvement from academia. This will ensure the academic perspective is captured and appropriately integrated into the development of the recommendations outlined in the next section.
CONCLUSIONS & RECOMMENDATIONS

In conclusion, it is clear that each stakeholder has strong views regarding their respective roles and responsibilities and how best to meet the challenges facing BED disciplines. It is generally agreed upon by all that University plays a crucial role in ensuring graduates develop lifelong learning skills and attributes that can carry them onto a long and fruitful career, however, professionals and students feel universities are *not* doing enough to ensure this development occurs. Nor do professionals feel the standard maintained by universities is high enough or equal to the standards expected in industry. Academics on the other hand cite; time, resources constraints as well as changing paradigms in university priority structures to be critical aspects affecting their ability to effectively engage. Students and academics, whilst they cited differing reasons, overall feel it is important for industry to contribute more to assist with the learning process and in particular aid the transition-to-work process. It is clear that these disparities require further exploration to be understood completely.

In all, the research highlighted that closer relationships between academia and practice are needed to ensure better continuity for graduates’ transitioning-to-work. Furthermore, further research needs to be conducted to better understand the disparity that exists between the understanding and expectations of different
stakeholders, particularly the relative importance of specific graduate capabilities for each discipline. From this, the research team have developed the following six recommendations:

1. Develop and implement better **transition to work strategies**
2. Undertake a **national scoping study** to identify and map how current Australian universities support **adaptive learning environments**
3. Establish a **guiding framework** defining BED stakeholder roles and responsibilities
4. Investigate further **academic assumptions** regarding ‘work’ and ‘learning’
5. Devise a strategy to clarify academic and professional **value alignment** with a view to improve graduate productivity, retention and transition continuity
6. Enforce **higher standards** through greater industry and academic engagement

The recommendations listed are not exhaustive; they are an interim conclusion to the research undertaken in this study and contextualizing each recommendation within the field of knowledge of each discipline would provide a better platform for dissemination. Whilst these are not definitive solutions, these recommendations are a means to instigate discussion surrounding such important issues. Defining a way forward is only one step – it is evident that all stakeholders will need to work together to ensure appropriate implementation.
**Research note**

Complete definitions of each recommendation will be provided and workshopped during the designated AUBEA ALTC workshop session. It is anticipated that the outcomes of this workshop will provide platform to not only promulgate the findings but to identify a series of steps to take this research to the next phase ‘action’. Furthermore it is expected that the outcomes of this workshop collated and disseminated to BED disciplines for further feedback and development.

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REFERENCES


Jolly, L 2001, Graduate Attributes Factsheet: Implementing Graduate Attributes, The University of Queensland.


