Achievement Matters: External Peer Review of Accounting Learning Standards

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Acknowledgements

List of acronyms used

AACSB	Association to Advance Collegiate Schools of Business
ABDC	Australian Business Deans Council
ACER	Australian Council for Educational Research
AFAANZ	Accounting and Finance Association of Australia and New Zealand
AHELO	Assessment of Higher Education Learning Outcomes
AIESEC	*Association internationale des étudiants en sciences économiques et commerciales* (International Association of Students in Economic and Commercial Sciences)
ALTC	Australian Learning and Teaching Council
AQF	Australian Qualification Framework
AUQA	Australian Universities Quality Agency
CLA	Collegiate Learning Assessment
CPAA	Certified Practising Accountants Australia
CAANZ	Chartered Accountants Australia and New Zealand (formerly ICAA and New Zealand Institute of Chartered Accountants)
DEEWR	Department of Education, Employment and Workplace Relations
GSA	Graduate Skills Assessment
HE	Higher Education
HEA	Higher Education Australia
HEFCE	Higher Education Funding Council for England
HEP	Higher Education Provider
ICAA	Institute of Chartered Accountants Australia (now CAANZ)
IADC	Independent Assessment Data Coordinator
LTAS	Learning and Teaching Academic Standards project
OECD	Organization for Economic Cooperation and Development
OLT	Office for Learning and Teaching
QAA	Quality Assurance Agency (for Higher Education)
TAFE	Technical and Further Education
TEQSA	Tertiary Education Quality Standards Agency
TLO	Threshold Learning Outcome

Executive summary

This report documents the findings and outcomes of a national study focused on external peer review of accounting learning standards that enhances and assures quality course learning outcomes and develops a model that is transferable to other disciplines.

Need and rationale

In the new standards-based regulatory environment, all Australian higher education courses are required to demonstrate student achievement of course learning outcomes and provide benchmarked evidence that intended standards have been met. This project is a tangible example of an inclusive, reliable, valid and efficient approach suitable for adoption by the accounting discipline – and potentially other disciplines – in the longer term to meet this requirement. It demonstrates to key stakeholders, such as employers and professional bodies, who have a stake in the quality of graduates, that Australian accounting higher education providers wish to self-regulate by going beyond current learning and teaching performance indicators and standardised tests to provide disciplinary-specific evidence of learning outcomes.

The rationale for initiating this project in 2011 included the following.

1. To maintain momentum in the accounting standards agenda (Freeman and Hancock, 2011) following concerns raised by Birrell (2007), Matchett (2009) and Hancock et al. (2009).

2. To provide additional evidence and support for business schools' international accreditation aspirations.

3. To address other broad change drivers that existed nationally and internationally including reduction in government funding, increased competition, stronger accountability demands, greater employment mobility, and shifts to outcomes-based regulation (Freeman and Hancock, 2011)

Approach

The approach adopted in this project was based on the theory of social constructivism. It elevates the process of consensus moderation and calibration events in developing understandings and making judgements about learning outcomes. We see consensus moderation and calibration events as critical in the move towards academic standards being shared and embedded across the sector. To this end, the project compared and evaluated the validity of a range of final year assessment inputs (unit outlines, assessment requirements, marking guides, etc.) and the reliability of marking the outputs (student work) benchmarked against the respective bachelor or coursework master standards developed in

2010. Underpinning the proposed methodology is the concept of a 'cultivated community of practice' model, a proven approach for managing change in higher education (Lave and Wenger, 1991; O'Donovan et al., 2008). The project incorporates external calibration prior to external assurance, by calibrating and benchmarking against explicit discipline statements of learning standards previously developed, and by focusing on academic standards of coursework master as well as bachelor degrees.

Outcomes

This project has achieved the following outcomes.

1. Obtained reliable external peer-reviewed evidence of accounting academic outcomes in all types of higher education providers, benchmarked against the accounting learning standards.

2. Developed an inclusive, reliable, valid and efficient model process for assessing learning outcomes, satisfying external quality assurance needs and motivating continuous improvement. Importantly, academics from all types of higher education providers participated, external reviews took place only after participating in external calibration to discipline standards resulting in a measurable decrease in variability; academics received no financial incentive (honorarium) to participate and major improvements were made to assessment tasks.

3. Provided professional development around assessment for participating academics.

4. Enhanced the understandings in the external environment of the developed model.

Deliverables and dissemination

The project provides recommendations for policy, practice and professional development and has produced the following resources:

- a project website providing the findings and resources relating to the outcomes (achievementmatters.com.au);

- a final report containing the outcomes, overall findings and recommendations for implementation of the model process and its sustainability;

- disseminated findings in academic and professional journals and in the media

The project has strenuously pursued more active approaches to dissemination including:

- over 195 presentations/forums involving more than 6,000 participants;

- over 20 collaborative activities with peak bodies;

- almost 20 engagements as a reference group or project team member on related projects

Recommendations

1. That **deans council, or disciplinary peak body**, provide leadership in the academic standards agenda in relation to achieving shared understandings of standards, taking responsibility for leading external calibration efforts as well as the initial setting of learning standards. If the peak body is also a deans council then it includes extending any lessons learned to other disciplines within their remit. Also, that the deans council, or disciplinary peak body, commit to periodic review of agreed statements of learning standards.

   For the Australian Business Deans Council this relates to supporting the accounting discipline in 2015 with further calibration workshops and sharing lessons learnt with other business disciplines to avoid 'reinventing the wheel'. Also, as the accounting learning standards were developed in 2010 and have been scrutinised since then over eight calibration workshops, it would seem appropriate that the Australian Business Deans Council establish a process in 2015 to review them.

   For the Accounting and Finance Association of Australia and New Zealand this relates to supporting the accounting discipline in 2015 by engaging in the review of the accounting learning standards, disseminating opportunities for external calibration to disciplinary leaders and providing valuable feedback to progress collaborative efforts support both external calibration and peer review.

   Recommendations relating to operational aspects can be found in section 7.

2. That **universities and other higher education providers** commit to external calibration as well as external peer review. To ensure discipline learning standards are applied consistently across higher education providers, effective implementation requires buy-in from multiple levels within universities and other higher education providers, which must commit to: support and fund participation in national calibration workshops; arrange external reviews; continuously improve assessment design and practice via feedback.

3. That **academic leaders in a discipline** commit to supporting the academic standards agenda, including supporting academic staff to participate regularly in external calibration workshops, and, where necessary to ensure learning standards are achieved, refining course curriculum and assessment to achieve them.

4. That **employers and professional bodies, where they exist**, commit to collaborate on the academic standards agenda. Professional bodies can collaborate by participating

in external calibration workshops, hosting national forums, encouraging employer representatives to participate in calibration workshops, and emphasise evidence of achievement of learning outcomes in any accreditation.

5. That **students** be engaged in the academic standards process. Academics with program-wide responsibilities have a key role to play with students as do coordinators of units of study where assessments will be sampled to demonstrate program learning outcomes and standards. Student achievement of the learning standards is more likely if students understand what the standards are and why they are valuable to their development and employment.

External evaluation

The project's highly experienced external evaluator describes the project as "an extremely courageous initiative" and yet an "extraordinary success" and "an exemplar for its kind". "Overall the project achieved way beyond its objectives" and "has delivered excellent value for funds and time invested". He concludes "if the use of processes similar to those developed by the Achievement Matters Project became the norm across the higher education sector, Australia would have a much stronger basis for its claims about taking standards seriously and having the means in place to demonstrate this...My commendation of the AM Project could not be higher and I advocate strongly that interested parties provide as much material support as possible for well-conceived initiatives or entities that will sustain its momentum."

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Chapter 1 │Introduction

1.1 Background

Concerns about academic standards are not new. In the late 1980s, the Australian Vice Chancellors Committee established disciplinary panels to monitor academic standards but abandoned them in the early 1990s when the increased number of universities made them impracticable (Woodhouse, 2010). By the time the Australian Universities Quality Agency (AUQA) was established, there was no Australian university with any systematic means for knowing about its standards (Anderson, 2001). After a decade of asking universities how they determined, monitored and benchmarked academic standards, AUQA found few satisfactory answers (Woodhouse, 2010).

Allied to the lack of systemic means for monitoring academic standards, employer concerns about graduate outcomes had become more frequent as enrolments expanded and public funding reduced. By the time this project was initiated more than one in five employers surveyed reported they would have recruited more graduates had there been a higher number of appropriate graduates available – and the proportion was higher (32.4%) for accounting and finance employers (Graduate Careers Australia, 2011; Blackmore et al., 2014). In a national study, Hancock et al. (2009) identified that employers were dissatisfied most with accounting graduates' skills in communication and critical application. No substantial evidence was available to counter those concerns. In one public disagreement involving a peak professional body, CPA Australia said it was an argument over what was important: an individual's demonstrable competence or his or her record of course completions (Matchett, 2009) following concerns expressed by Birrell (2006).

These concerns coincided with major structural changes to higher education to improve national productivity announced by the Commonwealth Government in May 2009 following the Bradley *Review of Australian Higher Education* (Bradley et al., 2008). An expanded, more inclusive and demand-driven higher education system was flagged, complemented by a stronger centralised outcomes-based regulator, the Tertiary Education Quality and Standards Agency (TEQSA) (DEEWR, 2009). Providers would need to demonstrate achievement of academic standards represented in course learning outcomes appropriate to the award level of the degree. In preparation for TEQSA's role of monitoring providers, the government commissioned the Australian Learning and Teaching Council (ALTC) in 2010 to undertake the Learning and Teaching Academic Standards (LTAS) project to establish threshold learning outcomes in demonstration disciplines for eight disciplinary groups. In accounting, the demonstration discipline for business, management and economics, LTAS developed a set of five learning outcomes considered thresholds for Australian higher education graduates of accounting bachelor and coursework master degrees. Following endorsement by the Australian Business Deans Council (ABDC), Learning and Teaching Academic Standards for Accounting was published by the ALTC in February 2011 (Hancock, Freeman & Associates, 2011).

Following national consensus on accounting learning standards, the remaining challenge was for

higher education providers to assure their achievement. As no national system for rigorously assuring degree standards against national benchmarks existed when the project started, two options were seriously debated across Australia in 2010–11, namely standardised tests and external peer review.

The first attempt at a national system involving standardised tests in Australian higher education was the Graduate Skills Assessment instrument (GSA), developed for Australian universities by the Australian Council for Educational Research (ACER) in 2002. It incorporated a set of generic skills. As well as a set of multiple choice questions it contained two short free-response questions based around a set of generic skills rather than outcomes related to any disciplinary learning standards. It failed to gain wide traction and faced some severe criticism (Moodie, 2004).

The second attempt arose as part of the Commonwealth Government's package of reforms in 2009. Following the implementation of standardised tests across Australia in primary and secondary education (years 3, 5 , 7 and 9) in 2008, the Commonwealth Government announced that the Collegiate Learning Assessment (CLA) would be similarly applied to Australian university students as one performance indicator in all university compacts from 2013 (DEEWR, 2009). The CLA purported to measure several key generic graduate outcomes, had been gaining traction in the US Voluntary System of Accountability and was also used in the OECD Assessment of Higher Education Learning Outcomes (AHELO) international 2011 benchmarking project involving 17 countries (OECD, 2011). Its mandatory use in Australian higher education was subsequently abandoned following feedback and a review. Interestingly, two new standardised discipline-specific tests were also developed for AHELO disciplinary pilots in engineering and economics, with the Australian Council of Engineering Deans taking a lead role in the former (ACER, 2011).

Assessing higher complex learning outcomes, like the ability to communicate with non-experts and the ability to collaborate in diverse teams, is difficult to achieve with standardised tests. Furthermore, standardised tests face perverse potential consequences, such as 'teaching to the test' and gaming strategies (Barrie et al., 2011), both of which surfaced in the Australian primary and secondary school systems (McDougall and Dillon, 2011).

It was in this context that the second option for assuring standards – external peer review – was under close consideration. Under this option, external academics make summative judgements about both the quality of the assessment task and the related learning outcome demonstrated by students. This contrasts to standardised tests where a local academic has no say in the wording of the generic questions assessed (like the GSA). While the UK external examiner systems have been in place for some decades, it was certainly clear, from both a parliamentary inquiry (and the academic research), that consistent standards could not be assumed either across degrees between universities or even between degrees within a university (QAA, 2007).

Calibrating examiners prior to external review was formalised as the key ingredient to improving the reliability of external assessment in Tenet 6 of the "Assessment Standards: A Manifesto for Change" by a group of 30 assessment experts (Price et al., 2008).

> Assessment is largely dependent upon professional judgement and confidence in such judgement requires the establishment of appropriate forums for the development and sharing of standards within and between disciplinary and professional communities.

However, it was Rust (2009a) who proposed a specific trial to calibrate academics in a specific discipline around their judgements of achievement standards, noting that the discipline, not regulators, should take the lead.

> When it comes to establishing standards across the higher education sector, all the arguments above about the need for socialisation processes still apply, but the logistics become much more difficult. And it is blatantly clear that our current processes, such as they are, are woefully inadequate. Numerous studies, some dating back more than 15 years (e.g., Newstead and Dennis, 1994) have shown the weaknesses of the external examiner system and in 2007, as already stated above, the QAA finally made the damning admission that despite all their efforts we have no mechanisms in place that can assure consistent standards between degree programmes. So, logistically challenging or not, something needs to be done .

> To start, I suggest no more than that – a modest experiment, as a pilot, to test the water. Just a collection of markers from the same discipline, drawn from a range of institutions in one region, sharing and discussing their marks and the standards that underpinned their decisions, facilitated by the Subject Network ... Adoption and ownership would be unlikely if such a proposal to create an open approach to assessment standards was to stem from the QAA or HEFCE dictates.

Rust (2009b) subsequently led and reported the outcome of moderation and benchmarking borderline first-class theses in one discipline community. In 2010, 70 Australian assessment experts collaborated to produce *Assessment 2020* reform propositions reiterated the same imperative for calibration (Boud and Associates , 2010).[1]

> Assessment of student achievements is judged against consistent national and international standards that are subject to continuing dialogue, review and justification within disciplinary and professional communities.

Building on this, in early 2011, the ABDC championed a pilot project to obtain external blind peer review evidence around learning outcomes, benchmarked against the five accounting learning standards established in 2010 where calibration workshops would play a critical role in reaching consensus around standards. The ABDC-initiated pilot was also funded and supported by the two professional accounting bodies – Chartered Accountants Australia and New Zealand (CAANZ)[2] and CPA Australia (CPAA). In addition, the peak academic association, the Accounting and Finance Association of Australia and New Zealand (AFAANZ), was invited to play a key support role in the external peer review process. The pilot was limited to accounting departments in only 10 universities. The intention to expand and include more accounting departments from both university and non-university providers was fulfilled after the project received ALTC funding. In

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[1] Proposition 6 iii, *Assessment 2020*
[2] Now Chartered Accountants Australia and New Zealand

total it involved 15 universities, a TAFE and a private provider.

Accounting was the first discipline to collaboratively develop and implement a national model of calibration and external assessment benchmarked against agreed standards. This project sought to build quality enhancement as well as quality assurance into a model that is transferable to other disciplines. Given the uncertainty surrounding TEQSA's approach for determining compliance with academic standards (as part of the Higher Education Standards Framework) when the project was initiated, the project was extremely timely.

This report outlines the development of the project, including its drivers and motivation, basis in the literature, method and outcomes. It highlights the challenges faced and key lessons for the future.

1.2 Project drivers

Although more than three years have passed since the project was initiated, there remains strong interest in assessment and quality assurance of higher education learning outcomes. The following change drivers exist nationally and internationally.

- National productivity ambitions, which have resulted in significant changes to the Australian higher education system (e.g., higher and broader targets for undergraduate qualifications, uncapped demand-driven funding for public higher education providers (HEPs), and an expanded set of private and public HEPs), place pressure on academic standards.

- Establishment of a single national regulator, TEQSA, in 2012, with legislative authority to monitor the performance of all HEPs against a framework, replacing state-based accreditation agencies and AUQA. The legislation requires substantive evidence of academic standards, previously not required, to demonstrate that:

  o HEPs' awards meet the corresponding specifications (including the levels criteria and qualification type descriptors) described in the Australian Qualifications Framework (AQF);[3]

  o HEPs' internal processes for design and approval of each award takes account of external standards and requirements;[4] and

  o the outcomes achieved by HEPs' students are benchmarked against external standards

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[3] Paragraph 1.1, Chapter 4: Qualification Standards, *Higher Education Standards Framework (Threshold Standards) Act 2011*. See <www.comlaw.gov.au/Details/F2013C00169/Html/Text#_Toc330548954>

[4] Paragraph 1.2, Chapter 3: Provider (Course Accreditation) Standards, *Higher Education Standards Framework (Threshold Standards) Act (2011)*. See <www.comlaw.gov.au/Details/F2013C00169/Html/Text#_Toc330548951>. The latter point to the Australian Qualifications Framework. See <www.aqf.edu.au.

(including similar accredited courses).[5]

- 'Brand Accounting' is at risk in the face of a rapid expansion of enrolments in accounting programs over the last decade, exacerbated by attractive migration points for the national shortage in accountants, employer dissatisfaction with the quality of some accounting graduates (Hancock et al., 2009), higher than average inability to recruit suitable graduates and exclusion of international graduates from recruitment (Graduate Careers Australia, 2014; Blackmore et al., 2014), along with professional aspersions that universities put an unhelpful academic emphasis on course completions and credentials rather than demonstrable competence.

- Global competition for students and efforts to demonstrate quality beyond ranking systems through international accreditation. Accreditation standards for some agencies require internal assurance of learning (e.g., Association to Advance Collegiate Schools of Business (AACSB)), while others require external assurance of learning (e.g., European Foundation for Management (EFMD) Programme Assurance System).[6]

- Professional accreditation initiatives. Both CAANZ and CPAA implemented a new accreditation process in 2011 that includes the agreed accounting learning standards and greater pressure is being placed by the International Federation of Accountants to incorporate assurance of learning outcomes.

- Enhanced graduate mobility between countries for employment or further study (e.g., Tuning Europe and OECD's Assessment of Higher Education Learning Outcomes (AHELO) project).

- Various other recent Australian initiatives seeking to provide evidence of external assurance of learning. Several mission groupings of universities have initiated verification systems, notably the Group of Eight and subsequently the Innovative Research Universities. Other initiatives funded by OLT are reported in the *Good Practice Report: Assuring Learning Outcomes and Standards* (Freeman and Ewan, forthcoming), most notably that led by Professors Krause and Scott.[7]

1.3 Project purpose

Five threshold learning outcomes or learning standards for accounting bachelor and coursework master graduates were developed under the LTAS project in 2010. Learning standards related to accounting knowledge, application skills, judgement, communication and teamwork, and self-management – see Figure 1.

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[5] Paragraph 5.5, Chapter 3: Provider (Course Accreditation) Standards, *Higher Education Standards Framework (Threshold Standards) Act (2011)*. <www.comlaw.gov.au/Details/F2013C00169/Html/Text#_Toc330548951>.
[6] See <www.aacsb.edu/accreditation/standards/2013-business/learning-and-teaching/standard8.aspx> and <www.efmd.org/images/stories/efmd/EPAS/EPAS_Standards_and_Criteria.pdf> (page 17).
[7] *Assuring Learning and Teaching Standards through Inter-Institutional Peer Review and Moderation. A sector Wide Model for Assuring Final Year Subject and Program Achievement Standards Through Inter-University Moderation 2014.* OLT. <www.uws.edu.au/latstandards>
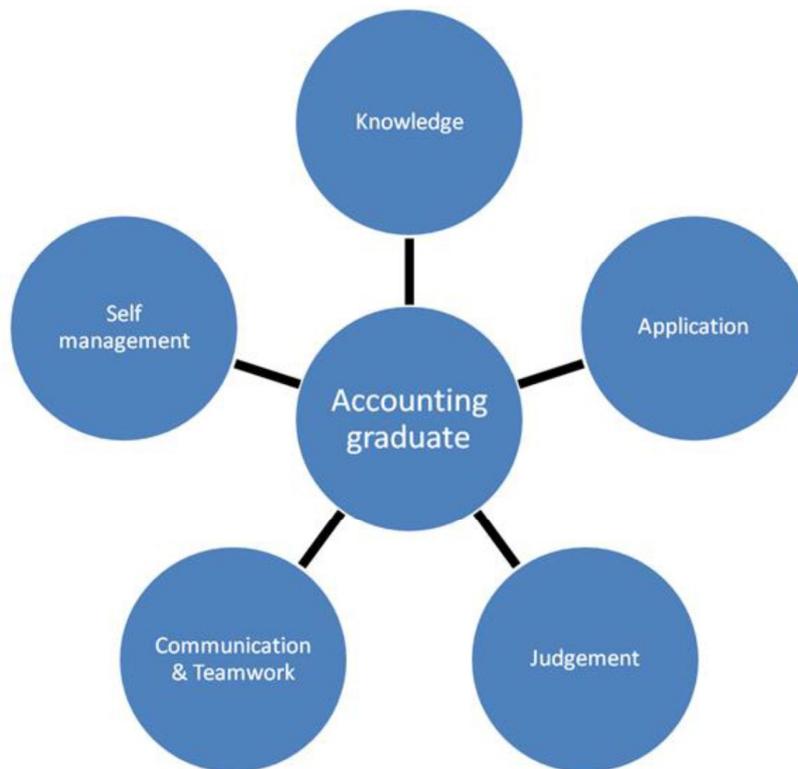
Figure 1
The five learning standards for accounting graduates

Following the development of the learning standards a pilot project involving 10 university accounting departments, appropriately titled *Achievement Matters: External Peer Review of Accounting Learning Standards*, was initiated by the ABDC. With ALTC subsequent funding it was expanded to 17 higher education institutions including several non-university providers.

While the overall project aims were to serve national and international quality assurance requirements and support local quality enhancement, the project had four specific intended outcomes:

1. obtain reliable external peer-reviewed evidence of accounting academic outcomes in all types of HEPs, benchmarked against the accounting learning standards;

2. develop a model process for assessing learning outcomes (that is inclusive, sustainable, reliable and efficient), satisfying external quality assurance needs and motivating continuous improvement;

3. provide professional development around assessment for participating academics;

4. enhance understandings in the external environment of the developed model.

1.4 Significance of the project outcomes

The project outcomes detailed below are significant because they:

- provide a viable alternative to standardised tests for evidencing learning outcomes, thus reducing perverse consequences such as teaching to the test;

- demonstrate to key stakeholders, such as employers and professional bodies, that Australian accounting HEPs wish to self-regulate by going beyond current learning and teaching performance indicators and proposed tests of generic outcomes to disciplinary-specific evidence of learning outcomes;

- further strengthen supportive relationships developed with professional bodies during the LTAS consultation;

- complement program-level planning, management, assessment and assurance initiatives in business that are currently underway, including work on capstones, tools for curriculum planning, assessment and professional accounting and international accreditation, and, in the UK, benchmarking outcomes in hospitality, sport, leisure and tourism.

Chapter 2 | Literature Review

Internationally, there is an increasing focus applied to regulating and assuring comparable standards in assessment (Bloxham and Price, 2013; Bloxham and Price, forthcoming; Watty et al., 2013; Collini, 2012). Drawing on Watty et al. (2013, p. 3), standards refer to "predetermined levels of knowledge, skills and attributes that are explicit and framed with reference to the academic discipline". One approach to assuring standards is the external peer review of assessment. While this approach has been adopted at various HEPs around the world, Australian higher education is only just starting to consider this approach, in response to the demands of a tighter regulatory environment and the external drivers discussed in Chapter 1. The growing body of literature surrounding standards, and specifically the verification of standards, is indicative of its importance to higher education (Sadler, 2007; Krause et al., 2013; Barrie et al., 2014; Coates, 2010). Previous research has investigated current practices relating to how academic standards are devised, constructed and applied by external examiners, and points to the need for HEPs to be more accountable (Bloxham and Price, forthcoming; Dill and Beerkens, 2012), and the need for comparability across universities and countries (Barrie et al., 2014; Krause et al., 2013).

In the Australian context, the development of regulating quality systems such as the AQF, scrutiny of assessment methods and the use of program learning outcomes, criteria and rubrics point to the importance being placed on the assurance of standards (Bloxham and Price, forthcoming). Since the landmark Bradley *Review of Australian Higher Education* (Bradley et al., 2008) was published, there has been a renewed focus on enhancement and accountability concerning graduate outcomes (Bloxham and Price, forthcoming), reflecting concerns about the assurance and comparability of standards using external reference points (Barrie et al., 2014). The Review called for indicators to be developed that explicitly assess and compare learning outcomes (Bradley et al., 2008). As a consequence, "threshold learning outcomes for many subject disciplines have been developed" (Bloxham and Price, forthcoming, p. 4). The Australian Government (2013) also released a consultation document stressing the need for a process for assuring standards integrated with periodical external peer review of assessment. While not yet formalised into policy, the effects of this consultation document in the higher education sector are evident. Notable examples where models of inter-institutional peer review of assessment are being trialled (Deane and Krause, 2012) include the Group of Eight Quality Verification system, the Achievement Matters external peer review of accounting learning standards (Watty et al., 2013), and the Krause et al. (2013) 'proof of concept' project employing an inter-institutional blind peer review of assessment at each grade band methodology.

Within some, though not all, of the methods proposed by these three national projects, lies an assumption "that variation between reviewers can be tempered by the provision of common external reference points such as disciplinary threshold learning outcomes" (Bloxham and Price, forthcoming, p. 4). Barrie et al. (2014, p., 24) claim that these methods can "boost … the objectivity or trustworthiness of external reviewer judgements". Consistent with Tenet 6 in the "Assessment Standards: A Manifesto for Change" (Price et al., 2008), Bloxham and Price

(forthcoming), however, warn that "external reference points alone have limited power to ensure comparable judgement without other community processes to calibrate individual's judgement" (p. 4). Such issues are increasingly debated in Australian universities relating to the balance between a "light touch"' and "more extensive professional learning approaches" (Bloxham and Price, forthcoming) (see also, Barrie et al., 2014).

External examiners, while used internationally for the assessment of doctoral theses, are less commonly used in undergraduate education (Bloxham and Price, 2014) – the United Kingdom, Ireland and Hong Kong being the main exceptions. The benefits of external examination and the effectiveness of inter-institutional peer review are well documented in the literature (Trowler, 2009; Barrie et al., 2014), although others have raised a number of operational criticisms (Bloxham and Price, forthcoming). These relate to a lack of focus on "the capacity of examiners to hold and consistently apply shared knowledge of academic standards" or test "the existence of effective processes to support the development of consensus in standards" (Bloxham and Price, 2014, p. 5) (also see Bloxham and Price, 2013). This is a view echoed in prior studies, which reveal negative findings in relation to the consistency of academic standards in assessment (O'Hagan and Wigglesworth, 2014; Bloxham and Price, 2013). Bloxham and Price (forthcoming), among others (Bloxham, 2009; Brooks, 2012; Elander and Hardman, 2002; Sadler, 1987, 2014; UK Higher Education Academy, 2013), explain that calibration and efforts to ensure consistency of standards are problematised by the very "individualised, tacit, interpretative nature of standards". They further suggest:

> Assessors' judgements are influenced by their experience, values, habits of mind, norms of student work and knowledge of students. They focus on different aspects of students' work and they make limited use of codified standards which, in themselves, pose problems of shared interpretation. Overall, assessors' inconsistency and unreliability is well documented. (Bloxham and Price, forthcoming, p. 6)

The question of consistency was foregrounded recently in a study commissioned in the UK by the Higher Education Academy and Quality Assurance Agency (2013), which found that when six experienced external examiners from four disciplines marked five pieces of student work (i.e., 20 student pieces of work), there was a notable lack of inter-examiner consistency. Nine of the 20 assignments were ranked both best and worst by different examiners (UK Higher Education Academy and Quality Assurance Agency, 2013). These findings echoed those of Price et al. (2008) and resulted in the commissioned study (2013, p. 9) recommending the promotion and facilitation of "disciplinary community processes beyond local practices to include inter-institutional disciplinary processes for sharing, developing and assuring standards". They further recommended that HEPs "actively support external examiners in participating in these processes" (Higher Education Academy and Quality Assurance Agency, 2013, p. 9).

Other studies similarly point to the inherently difficult task of assuring consistency in relation to marking and assessing student work (Brooks, 2012; Hawe, 2002; Krause et al., 2013; Moss and Schultz, 2001; Sadler, 1987, 2014; Yorke, 2007). They attribute the inconsistency to: lack of adequate training of assessors; the varied and subjective frames of reference that inform each

assessor's interpretation of standards (Krause et al., 2013); markers having fixed habits (Wolf, 1995); markers not valuing the outcomes they are meant to be judging (Baume et al., 2004); markers ignoring written criteria in rubrics (Sadler, 2009; Ecclestone, 2001; Price and Rust, 1999; Smith and Coombe, 2006); assessors acting alone (Bloxham, 2009); and a lack of uniformity of assessment standards across HEPs (Bloxham and Boyd, 2011; Colley and Silver, 2005; Hawe, 2002).

Elton and Johnston (2002) reveal that marker reliability is greater where knowledge or technical facts are being tested, as opposed to essay style or problem-based assessment tasks where greater subjectivity can be expected in the student responses. Similarly, Knight (2006) contends that reliability is greater for a calculation type response (in the natural sciences) compared to an essay (in existential philosophy). Discussing the issue in the UK context, Bloxham and Price (2013) explain:

> Reports and inquiries fail to investigate the more fundamental question of whether [external] examiners understand and can consistently apply academic standards in the way required by their, albeit possibly confused, role as defenders of academic standards. This is even though … most concerns about standards can be traced back to the judgement processes of markers and the [external] examiners. (pp. 3–4)

This comes as no surprise to those involved in assessing student tasks over many decades. However, it highlights the need for processes that deal with the challenge of ensuring greater reliability between and among markers across all disciplines. Despite the challenges surrounding the development of a shared understanding of discipline standards, there is agreement regarding the need and value of safeguarding and verifying standards through external peer review (Bloxham and Price, forthcoming; Sadler, 2012; Bloxham and Price, 2013). To this end, there are a variety of moderation models being used to improve inter-marker reliability and reduce inconsistencies between markers (Watty et al., 2013; Bloxham, 2009; Sadler, 2011). Consensus moderation – also known as social moderation, auditing and verification (Sadler, 2012; Wilson, 1992) – is one such model. Consensus moderation entails "multiple assessors judging performances on a specific task, and marking them using a common framework in terms of a common standard" (Watty et al., 2013, p. 8; see also, Linn, 1993).

Sadler (2012), and Bloxham and Price (2013) respectively, propose consensus moderation as an effective way to calibrate academics. The essential aspects of consensus moderation relate to: the development of a consensus of standards; adequate staff development; and the review of discrepancies in marks between multiple assessors (Linn, 1993). Sadler (2011, p. 5) views this approach as a way to clarify, refine and transform specific standards so that ideas about standards move from being "private knowledge" to "collegially held knowledge". Through social interaction and staff development, consensus moderation has the potential to foster a shared understanding of standards and ultimately improve consensus and overall fairness (Linn, 1993).

Writing extensively on the issue, Bloxham (2009) stresses the importance of there being confidence in the reliability of marking amongst all key stakeholders including academics, students

and employers. Consensus moderation and calibration efforts are thus critical to achieving this confidence and tempering variability in the assessment of learning outcomes and assurance of standards. Despite its potential, there is a notable lack of research about the consensus moderation process and its presumed effectiveness (Orr, 2007; Yorke, 2008; Bloxham, 2009).

While there is a large body of research on the so-called deficiencies of the grading processes used in higher education (Smith and Coombe, 2006; Sadler, 2011), with few exceptions (Bloxham and Price, 2013; Watty et al., 2013), empirical and rigorous examination of this area is lacking. Preliminary analysis by the project team[8] reports on an experiment testing a novel calibration approach amongst accounting academics, and proposes a process that may be applicable to assessment in a range of educational situations. They view calibration as an attempt to help academics develop a shared understanding of nationally-agreed learning standards explicitly documented via the LTAS project. In their exploration of calibration relating to accounting learning outcomes, they explain that business schools submit to accreditation systems in order to attain "external assurance of their ability to deliver capable graduates". The increasing importance of gaining 'assurance of learning' and 'outcomes assessment' is evidenced by the fact that 700 business schools in 45 countries around the globe have sought and achieved accreditation with the AACSB (AACSB, 2014; see also, Baker et al., 1994; Apostolou, 1999; Shaftel and Shaftel, 2007).

From a theoretical perspective, Bloxham and Boyd (2011) propose that there are two paradigms relating to assessment of learning outcomes; they are, techno-rationalist and socio-cultural. Techno-rationalism aligns with a positivist view that standards can be interpreted objectively (see also, Bloxham, 2009; Orr, 2007). In contrast, the socio-cultural paradigm is premised on the idea of assessment as a socially constructed activity. While there is little research exploring how academics arrive at their epistemology (O'Connell et.al[9]), Reimann et al. (2010) suggest that learning about standards is connected to research practices and exchanges amongst academics via discussion, debate and moderation. Bloxham and Price (2013) maintain that the socio-cultural perspective supports the idea of assessors learning "not through reference to documentation and explicit standards, but through being part of an assessment community" (p. 10). Bloxham (2009) insists that knowledge of assessment standards should be "created through a social process involving dialogue and experience" (p. 218). In contrast to the regular opportunities academics have to develop shared understandings of research outcomes – for example, by defending draft research papers in seminars and conferences – there are few similar types of opportunities to discuss acceptable learning standards (Freeman and Ewan, forthcoming).

Sadler (2012) similarly speaks of consensus moderation and the need to regularise the assessment of standards, while Rust (2009a) supports the notion of established discipline communities organising and undertaking calibration events. These propositions are premised on the constructivist view that "peer learning enhances the capacity for shared understandings" (Watty et al., 2013, p. 5). According to Cooper (1999, p. 216), "peer learning arises from the conviction

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[8] Paper currently under review
[9] Paper currently under review

that ... [academic staff] can assist one another to build their own understanding, integrate new learning into existing cognitive structures". Peer learning thus has considerable potential in relation to the proposed calibration and consensus moderation discussed above. Drawing on Price et al. (2008), Watty et al. (2013) note that "cultivating a community where dialogue, trust and participatory relationships can occur should result in more consistent judgements and a restoration of confidence" (p. 13). AUQA (2009) also voiced a call for assessors within a discipline to work together in grading processes and outcomes against standards (see also, Dahlgren et al., 2009; Rust, 2009a, 2009b; Boud et al., 2010).

The socio-constructivist paradigm delineated above suggests a useful approach to assessment and grading of non-quantitative outcomes. However, there are challenges to its implementation.

1. This approach relies on some academics changing the way they conceive of the assessment tasks (Biggs, 2001); for example, assessment is often developed by academics in isolation, whereas the constructivist perspective sees assessment and learning as necessarily reciprocal and interdependent.

2. Politics (i.e., power) plays a part in moderation decision making; therefore, a degree of egalitarianism is needed if junior academics are to be partners with senior academics (Bloxham and Boyd, 2011).

3. Use of external assessors may aid the process of consensus moderation considerably, but there is the risk that insistence on the involvement of external people may have a dampening effect on innovation in assessment practices at the home institution (Biggs, 2001).

Assessing and judging student work is clearly a complex and difficult task and consistency amongst and between academics is notoriously difficult to achieve. Despite this, we see calibration and consensus moderation as a way to enact Bloxham's (2009, p. 212) call for a "process for assuring that an assessment outcome is valid, fair and reliable and that marking criteria have been applied consistently".

Chapter 3 | Project Approach

This chapter describes the theoretical and practical approach and processes adopted in the project. It begins by briefly describing the theoretical and conceptual framework that informed the development of the calibration process, then provides an overview of the project design, followed by a detailed description of how that design was implemented. Finally, key stakeholders and their respective involvement in the project are described.

3.1 Theoretical and conceptual framework

The approach adopted in this project was based on the theory of social constructivism and elevates the process of consensus moderation and calibration events. While constructivism recognises learners play an active role in generating their own understandings as they strive to make sense of the world influenced by their context and personal filters, social constructivism goes further, maintaining that the knowledge construction process is facilitated by interacting and dialoguing with other people. In their assessment change manifesto, Price et al. (2008) propose six tenets, including one relating to disciplinary communities collaborating to support the learning outcomes standards agenda:

> Assessment is largely dependent upon professional judgement and confidence in such judgement requires the establishment of appropriate forums for the development and sharing of standards within and between disciplinary and professional communities. (Tenet 6)

Rust (2009a) provides an early example of such a forum based upon social constructivist processes. For standards to be shared and embedded across the sector, Sadler (2012) argues that such social constructivist processes need to move from a focus on repeated consensus moderation, that seek to resolve differences in grading, to the pursuit of calibrated academics applying shared understandings with only periodic checks for calibration.

3.2 Project design: Strategies and processes

3.2.1 Overview

The project developed a process for the calibration of the peer reviewers involved in the project, which is described below. In the pilot phase of the project there were 10 HEPs and 21 peer reviewers. This was later expanded to 17 HEPs and 35 peer reviewers. There were three calibration workshops before a live review of student work from the participating HEPs. In the live review reviewers compared and evaluated the validity of a range of assessment inputs (unit/subject outlines, assessment requirements, marking guides, etc.), along with the reliability of marking the outputs at the final year level. By virtue of overlapping member participation, the project complements the Group of Eight (2010) Quality Verification System and the Krause and Scott (2010) initiative, both of which are limited to academic standards of undergraduate degrees.

Also, the former focuses solely on quality assurance, with the Group of Eight universities using an external peer reviewer to openly verify the mark on one assessment for five per cent of final year students in a discipline. Neither of these existing initiatives aims to benchmark to collaboratively agreed explicit standards such as the national standards developed in the LTAS project, nor include non-university HEPs and professional bodies. Underpinning the proposed methodology is the 'concept of a cultivated community of practice' model, a proven approach for managing change in higher education (Lave and Wenger, 1991; O'Donovan et al., 2008).

3.3 External calibration

Working with accounting academics, employers and professional bodies, this project has taken a staged approach to developing a shared understanding of the standards that students completing an accounting degree must attain prior to graduating. For example, following three successful calibration interventions for the written communication learning standard, the first round of actual pilot university data went through a trial double-blind peer review process in June 2012. This allowed the project team to evaluate the model process and several adjustments were considered to ensure greater rigour and transparency. The processes are detailed below.

Stage 1 Each expert reviewer judged the validity of the task and assessed three samples of student work submitted as evidence of a specific learning standard/s and submitted independent reviews online via SPARK[PLUS] – screenshots are available in Appendix E.[10] Reviews included an opinion and justification on whether the standard had been met. To ensure confidence, the review process was anonymous. Reviewers had the opportunity to view reviews of their peers within their group on SPARK[PLUS] prior to the workshop.

Stage 2 Reviewers participated in a workshop and considered the reviews from other participants. In groups of four or five, discussion focused on judgement and justifications until a consensus was reached within the group on the first sample. This also provided an opportunity for each reviewer to reflect on previously submitted individual reviews.

Stage 3 Reviewers discussed key differences until a consensus was reached across all groups. This three-step calibration process was important in developing a shared understanding of the standards that must be achieved by accounting graduates.

Stage 4 Reviewers repeated the above steps with the second and third sample.

Stage 5 Reviewers repeated the entire process with new samples at the workshop until there was confirmation that the calibration process had been effective, and there was agreement on the standard for an accounting graduate.

Substantial efforts were undertaken at each calibration workshop to assist and ensure peer

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[10] SPARK (2011) Self and Peer Assessment Resource Kit, Available at <www.spark.uts.edu.au>

reviewers provided adequate written feedback in their reviews to accompany their ratings and judgements of whether the:

- assessment tasks were valid and could allow students to demonstrate achieved learning outcomes met or exceeded agreed learning standards;
- learning outcomes achieved in the samples of five pieces of student work met or exceeded agreed learning standards.

There were eight calibration workshops in total with the final one held in Sydney in July 2014. These workshops, summarised in Table 1, are an integral part of the Achievement Matters project as reaching consensus on the meaning of a standard is a necessary condition for making judgements in applying it. Professional body and employer representatives also participated in the calibration workshops and provided access to practising professional accountants who participated in the review process.

Date	Location	Learning standards assessed	Level
July 2011	Darwin	• Written Communication	Bachelor
September 2011	Melbourne	• Written Communication	Master
February 2012	Adelaide	• Written Communication	Bachelor
September 2012	Sydney	• Knowledge • Written Communication	Master
February 2013	Adelaide	• Knowledge • Oral Communication	Master
July 2013	Perth	• Application Skills • Judgement • Oral Communication	Bachelor
February 2014	Adelaide	• Application Skills • Judgement • Teamwork	Master
July 2014	Sydney	• Self-management • Teamwork • Written Communication	Bachelor

Table 1 – Achievement Matters Calibration Workshops

In addition to the workshops noted in Table 1, workshops that simulated the calibration interventions took place at individual universities, including Deakin University, Griffith University, La Trobe University, Monash University, RMIT University, Swinburne University of Technology, University of Southern Queensland, University of Western Sydney, the Universities of South Australia, Tasmania and Western Australia.

3.4 External assurance

The external assurance or live review process used in the initial peer review stage of the ABDC pilot project, and used in the larger project, was carefully developed to ensure reliability and validity. An Independent Assessment Data Coordinator (IADC) position was established, whose responsibility it was to oversee the process to ensure data integrity, confidentiality and an enhancement focus for activities.

The collection of data for the live review required careful attention to confidentiality (similar to the double blind review of research). In addition to two external peer reviewers, the home university reviewed the work against the nationally agreed learning standard. Given participating reviewers had been calibrated, the latter step was undertaken to allow for any difference that may arise between the original grading of the work (and local academic standards) and the national learning standard. Use of the data required attention too, namely that no ex-post changes in student results at any participating HEP should arise from peer reviews. Finally, participating reviewers needed to have dialogue both pre-review (e.g., for training and moderation) and post-review (e.g., for clarifying assessment variances and identifying improvements). Efficiency in assessment needed to be balanced with reliability and validity. Efficiency required a limited number of assessments per HEP, appropriate use of technology for remote peer reviews (e.g., SPARK^{PLUS}), appropriate timing of face-to-face training (e.g., July AFAANZ Conference which many of the reviewers would already attend) and follow-up debriefing at formative sessions.

As stated above, the first round of live review was only held after the third calibration workshop. There have since been five rounds of live external peer review of learning outcome data (May 2012, October 2012, July 2013, February 2014, and July 2014).

3.4.1 Data collection and submission

Participating providers nominated two peer reviewers and implemented processes to identify and collect the relevant inputs and outputs. Five pieces of student sample work for each learning standard under review from each HEP were randomly selected, de-identified and uploaded to the website. There were many examples where one assessment task was able to provide evidence of multiple learning standards such as written communication and knowledge. Related assessment requirements and supporting documentation were also submitted.

Institutions needed to provide the following documentation for the live review data collection process:

1. unit outline that included information on learning standards and degree program;
2. assessment task, including additional learning guide or handouts about the assessment task specifications/requirements to evidence learning outcomes, i.e., assessment criteria or other guidelines assisting students to complete the task and a sample answer to the

assessment task;

3. relevant assessment support resources;

4. five pieces of student sample work randomly selected for each learning standard under review; from the first 100, select 6th, 28th, 38th, 77th, 95th; if less than 100, the same distribution was used;

5. additional grading information, provided to markers but not to students.

3.4.2 Data de-identification process

Data provided for the live review process must have no institutional, unit, department or personal identifiers or markings. This applied irrespective of whether the information was an input or an output, authored by a student, academic or administrator. All data needed to have the following information removed:

- institution – logos, websites, venues, location etc.;

- unit names and codes;

- comments, grades or marks made by markers;

- contact names and details of staff and students.

3.6 Key stakeholders and their involvement in the project

3.6.1 Participating HEPs and peer reviewers

The support of the 17 HEPs and their heads of schools/departments and the 35 peer reviewers has been critical to the success of the project. The financial support for the peer reviewers to attend the workshops was important. The active engagement in the project by all peer reviewers, who devoted significant time and energy and openly shared their views about the assessment tasks, student's work and about the calibration process, was a major contributing factor to the project's success.

3.6.2 Reference group

The project was steered and supported by a reference group of experts consisting of Associate Professor Sue Wright initially, then Winthrop Professor Ray Da Silva Rosa from AFAANZ, Professor Chris Rust, Oxford-Brookes University, Dr Keith Willey, University of Technology Sydney, Professor James Guthrie, CAANZ and Robert Thomason, CPAA . The reference group members were drawn from universities and professional accounting bodies with a significant interest to ensure a wider dissemination of the project's work.

Prior to, and since, the establishment of the reference group, the project leaders have interacted

on an individual basis with project reference group members. There have also been six meetings held (November 2011, March 2012, June 2012, April 2013, August 2013 and April 2014) and these have provided valuable feedback for the project.

3.6.3 External evaluator

The support and steering of the external evaluator has been critical to this project. Facilitated sessions were consistently held with an external evaluator to reflect on and articulate the intended project logic as overarching formative evaluation as well as a reference and prompt for reflection on strategy, methods, issues and progress. These sessions have:

- identified goals, critical success factors, intended outcomes;
- identified and assessed risk and obstacles;
- started formulation of summative evaluation questions and measurements for success.

The project evaluator attended several calibration workshops as well as project team meetings to gauge the progress of the project and provide ongoing feedback. See Appendix B for the Evaluator Opinion.

3.6.4 Professional bodies and employer representatives

Collaboration with the two major accounting professional bodies and employer representatives has been extensive and significantly more than the routine collaboration expected between an accrediting body and the institutions they are accrediting. Evidence of this extensive collaboration includes:

- provision by the major professional bodies of seed funding totalling $80,000;
- encouraging their own staff to participate in the calibration workshops;
- sourcing other practising accountants to participate;
- providing venues for some of the calibration workshops;
- inviting team members with opportunities to share project outcomes through professional body national workshops (5), internal briefings and through articles in blogs, magazines and books.

The involvement of the professional accounting bodies in the development of the accounting learning standards was critical as the Government has been at pains to articulate that neither a provider nor their accounting academics are the sole custodians of such standards – rather, that this responsibility is distributed and shared more widely, including with disciplinary communities and professional associations as well as TEQSA. Following the release of the learning standards, both CPAA and CAANZ were quick to offer both financial, venue and personnel support for

assessing how well graduates meet the learning standards.

In turn, the project team members and their institutions have reciprocated by devoting considerable time and effort to developing and undertaking the assessment of learning standards and to disseminating their findings widely at individual universities, conferences, peak bodies and through various publications.

AFAANZ has also been an important party in the project. The current Australian president of the AFAANZ Executive was on the project team and the immediate past Australian President was on the project reference group. It is through AFAANZ that universities were invited to participate in the project. AFAANZ has supported the project by allocating a panel session during the annual conference where the project leader was invited to be one of three speakers. AFAANZ has also expressed agreement in principle to the idea of responsibility for maintaining a register of calibrated reviewers.

Chapter 4 | Findings

There have been four key outcomes from the Achievement Matters project and these are discussed each in turn.

4.1   Outcome 1

Obtain reliable external peer-reviewed evidence of accounting academic outcomes in all types of higher education providers, benchmarked against the accounting learning standards.

The project has progressed and achieved many milestones, notwithstanding the challenges faced in implementing such significant reform to assessment practice and oversight. The most significant milestone has been the development and testing of a shared understanding amongst the peer reviewers of the five learning standards developed collaboratively across the sector.

Of particular note has been the testing and development of a shared understanding amongst the peer reviewers of the most contentious learning standard, namely, written communication. This was the first standard addressed by the project due to the generally negative comments from key stakeholders about the ability of some graduates to communicate. In fact, due to the diverse views of the standard for written communication that became apparent when the project first started, calibrating understandings (beginning with the standard for bachelor graduates and then moving to master graduates) took much longer than anticipated to achieve. Professional participation in calibration workshops greatly assisted in ensuring that standards also reflected employer expectations.

The development of shared understanding among the reviewers has followed a number of iterative steps, the learnings from which are described chronologically below.

The pilot cycle of Achievement Matters started with the first workshop in Darwin in July 2011, involving participation by 21 experienced accounting academics from 10 Australian universities: The University of Adelaide, Curtin University, Deakin University, Griffith University, Monash University, RMIT University, Southern Cross University, University of Southern Queensland, The University of Western Australia and University of Western Sydney. A number of practitioners, as well as several representatives of the two major accounting professional bodies, also participated.

While it was intended that participants reach consensus on two learning standards (i.e., judgement and communication for bachelor graduates), it became apparent very early on that there were major differences in the interpretation of the standards. Due to repeated employer concerns about communication as noted above, it was decided that written communication would be the first threshold learning standard of focus for reaching consensus. A major learning at the

first workshop was around the design of assessment tasks, specifically how to better design assessment task requirements, both for clarity to students so they could understand what was required and also for validity in demonstrating achievement of the communication learning standard. Examples around validity included the importance of *each* student being able to demonstrate achievement if group assessment tasks were used, and that assessment task requirements addressed both audiences (i.e., accountants and non-accountants), noted in the wording of the communication learning standard. A further learning was that the tool for collecting reviewers' pre-workshop rating and reasons (SPARK^PLUS) was both efficient (i.e., data collection, aggregation, publication and interrogation) and effective (e.g., it ensured anonymity of judgements).

The second workshop was held in Melbourne in September 2011, where the focus was on written communication for master graduates. Validity of the task continued to be a major focus; it was noted, for example, that task length was not necessarily an indicator of quality and that judgements about the achievement of learning standards could be made even with short well-designed assessments that were quicker to mark. A change from the first workshop was the inclusion in SPARK^PLUS of prompting criteria like grammar and spelling before reviewers made an overall assessment of the student work. There was general agreement that the prompting criteria were useful in forming a view as to whether the student work met the learning standard for written communication. In addition to discussing validity issues, participants began to share good practices and resources (e.g., an online tool where students could get automated feedback on their writing with suggestions for improvement). Through an exercise where sample feedback comments were shared and participants queried the rating that matched it, the project began to make inroads on improving academics' skills in giving feedback to their peers about their assessment tasks. Another major learning was that there was no need to assess any student work if the assessment task did not lend itself to having the capacity for students individually to demonstrate the standard.

The third workshop was held in Adelaide in February 2012, where the focus was again on written communication for bachelor graduates with access to better designed assessment tasks; that is, assessment tasks designed to provide the opportunity for students to demonstrate their achievement of the learning standards. Not only were reviewers more confident in assessing the student work against the learning standard, but it became apparent that a shared language was emerging in the discourse. Fortunately, considerable efforts to retain anonymity in pre-workshop judgements, facilitated through SPARK^PLUS, not only highlighted that there were differences in opinions (and therefore judgements) around assessment artefacts, but the process of small group discussion, and subsequently defending arguments to other groups, increased the understanding among the community of participants. Two other important outcomes, namely the absence of 'groupthink' and collegial bantering around shared learning, became strong foundations for ongoing commitment to the cause. This was important because we had not yet been able to have any live reviews, first because participants were not fully calibrated and secondly because they had not been able to implement a revised assessment task and have available evidence. Other learnings emerged to make the submission and calibration process more efficient: that podcast

instructions worked more effectively than written instructions; that it was valuable to reveal pre-workshop responses to participants, still anonymous, so they could gauge their relative position and scrutinise others' reasonings prior to the workshop.

In May 2012, one institution had been able to implement a revised assessment task and submit it for live peer review by two external reviewers. The project team learned from this process: that it was important to have a local reviewer who was also calibrated to undertake the review and feed that information back into the local institution; and that an additional third external reviewer might be required in the event that two external reviewers disagree on a particular task or student work. This is culturally compatible since it involves a similar process used in peer reviewing research manuscripts for publication in journals.

The fourth workshop was held in Sydney in September 2012, where the focus was on knowledge and written communication for master graduates. Broader engagement with the sector saw another five universities, one TAFE and one private provider added, resulting in 35 reviewers now participating in the project. The new participants were distributed among the existing groups to assist with peer learning in the small group work. An important outcome from this calibration workshop was that reaching a consensus of understandings around the knowledge learning standard was much easier and quicker. A large part is likely to be due to reviewers traditionally being more familiar with assessing such learning standards compared to the written communication learning standard in which reviewers had less technical expertise.

In October 2012, the second round of reviewing of live data occurred. By this time three institutions had been able to implement changes and provide data for external assessment for knowledge and/or written communication, two at bachelor and one at master level. One concern emerged as worth addressing, namely that there might be some slippage following calibration events if reviewers assess live submitted data some weeks after calibration whilst back in their own institution. A research paper was produced later that illustrated evidence of this slippage.[11]

The fifth workshop was held in Adelaide in February 2013, where the focus was on knowledge and oral communication for master graduates. Again, there was considerable learning around task design for facilitating students to demonstrate rigorously and independently learning outcomes in relation to oral communication. One task validity issue concerned the requirement for recorded presentations to include subtitles even though they did help reviewers gauge what was being said. Again professional practitioners participating in the calibration workshop assisted in developing understandings of what was required. A key focus to emerge was the importance of students being able to go beyond presenting to being able to demonstrate the ability to respond to client queries. Considerable challenges needed to be addressed for oral communication including: technology (file size, format, quality of the audio) length, and confidentiality.

The sixth workshop was held in Perth in July 2013, where the focus was on application (critical

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[11] Paper currently under review

analysis) skills, judgement and oral communication for bachelor graduates. As with written communication, the sample assessment task used to demonstrate oral communication for calibration was considerably better arising from feedback from the previous workshop. Solutions were largely found for technological issues faced by the participant who had provided the sample artefact (i.e., detailed student guidance) and by the project team (e.g., use of Dropbox). Similarly, issues around confidentiality and length had been addressed in the sample task. Outstanding issues to be addressed adequately include ways for incorporating impromptu questions, scaling and easily identifying and recalling key aspects affecting quality assessments (e.g., major errors in fact or deficiencies in spoken or body language).

As the sixth workshop was the first time participants had considered application skills and judgement learning standards, there were opportunities to leverage previous lessons around reaching a consensus. The two major learnings were that the judgement learning standard required additional scope of information in the assessment specification and that, like knowledge, assessors could more quickly reach consensus.

The third round of live reviews took place on the day immediately following the calibration event. This was scheduled to address the concern about slippage of reviewers' understandings that might arise due to time and immersion back in an uncalibrated context. Eleven institutions submitted evidence this time. This evidence related to both bachelor and/or master degrees and covered learning standards for knowledge, application skills, judgement and/or written and oral communication. Results were reviewed and third reviewers were arranged where the two external reviewers disagreed, before providing the results to the 11 institutions. For those institutions that did not provide data as part of the live review process, a sample letter of results was provided to them so they were aware of the type and scope of information provided through the reviews. This sample provided a form of encouragement for institutions that had not previously provided data as evidence to do so for future workshops.

The seventh workshop was held in Adelaide in February 2014, where the focus was on application skills, judgement and teamwork for master graduates. This was the first time that teamwork was examined and again there was considerable discussion around the assessment task and how to get evidence about how students work in teams. The learning from the workshop was that there was a need to have evidence of how a student contributes to a team and it was not sufficient to use a mark for a group project. For the next workshop it was agreed that SPARK[PLUS], which provides students with a score based on peer feedback, would be tested.

The final workshop took place in Sydney in July 2014 at the University of Technology, Sydney. In addition to engaging the Business Dean and Deputy Dean, there were visits by two senior deputy vice chancellors and observers from the Australian Government Office for Learning and Teaching and the UK Assessment Standards Knowledge exchange. There was strong practitioner engagement both in number (six) and discussion. We also had six practitioners participating in the workshop. The focus was on teamwork, self-management and written communication for bachelor graduates. As agreed at the last workshop SPARK[PLUS] was used to provide evidence of

teamwork skills. It was agreed that using peer assessment was appropriate as long as there were other safeguards against potential bias or inadequacies of student peers. This was also the first time we looked at self-management. The participant from an accounting firm was very helpful in relation to the importance of graduates being able to reflect and demonstrate self-management in a concise manner.

As discussed above, the calibration events have resulted in some excellent learning amongst reviewers, especially around task design to demonstrate evidence of learning outcomes. A number of participants have changed their assessment tasks based on feedback and learning from the workshop process, including the redesign of assessment tasks to reflect better the learning standards. A key benefit of this project process is that in addition to 35 academics, the project involves practising accountants and staff from the professional accounting bodies giving industry feedback – both as workshop participants and through pre-workshop assessment on SPARK^PLUS. These professional reviewers provide an independent industry perspective on the sort of tasks graduates should be able to do and the standards that should be exhibited.

4.2   Outcome 2

Develop a model process for assessing learning outcomes satisfying external quality assurance needs and motivating continuous improvement.

A major contribution of the project has been the development and testing of a model process for assessing learning outcomes against standards. As described in Outcome 1, the model process has evolved over the duration of the project. Initially live review of assessment tasks and student work was staged a month or more after the calibration. Recognising a potential loss of impact the live review took place the day after the calibration workshop.

The model process recommended comprises both external calibration and external assurance, in that order. While responsibility for both were carried out by the project team we recommend that a sustainable process should rely on external calibration occurring on a national basis, for example, under the auspices of a peak body, arrangements for external assurance occur at the discretion of each provider. The model process would need some adjustment if nationally agreed discipline standards do not exist.

4.2.1 External calibration

Stage 1. A peak body appoints a recognised discipline scholar or small project team to lead a national external calibration event. The project team, plan the calibration activity milestones (i.e., which standards to calibrate when; calibration workshop details; pre-workshop submission deadlines), select a discipline expert to take oversight of reviews and to facilitate workshops, and invite HEP participation. If identifiable, relevant representatives of employers and professional

bodies are also invited to participate in the calibration process. National participation is optimised and financial and time costs are minimised when calibration activities are timed to follow immediately an existing disciplinary meeting such as an annual academic conference. As part of the expression of interest each provider nominates at least one experienced academic (Level C or equivalent minimum) to participate in the external calibration process. Two academic participants are preferable to build organisational capability (e.g., the second academic may be a less experienced academic) and to undertake equivalent calibration activities in their home HEP.

Stage 2. The discipline scholar or project team selects an assessment task that is deemed a suitable exemplar for the learning standard(s) in focus. They also select five relevant samples of students' submissions related to that task, ensuring that there is at least one sample that appears to easily meet the standard, one that does not and one that appears borderline. The project team de-identify assessment data, set up an efficient system for anonymously capturing assessors' reviews (e.g., the online tool SPARK^{PLUS}) and develop related instructions and support resources – vodcasts are particularly helpful). These resources and a sub set of assessment data (i.e., task requirements and three samples of student work) are sent to all participants. Anonymity of assessment data, participants' reviews and their respective organisations support engagement: participants are free to share their judgements (and justifications) in their pre-workshop reviews (stage 3); participants can be confident that the aggregated results reflect the possible set of judgements without individual attribution, which facilitates trust during the lively and informed discussions at the subsequent workshop where consensus is reached (stage 4).

Stage 3. Each participant assesses the validity of the assessment and the three samples of student work provided. Participants then submit their independent reviews online. Participants first judge the validity of the assessment task and justify its ability to allow students to individually demonstrate the learning standard. Participants then judge if each piece of student work is good enough (meets the national standard) and justifies why. To optimise understanding and learning, participants should be encouraged to provide feedback on appropriate improvements to assessment task design and student work. To ensure adequate justification is provided, a minimum number of words (e.g., 30 words) must be used before any online submission is accepted by SPARK^{PLUS}. Except for the facilitator (and any support staff) involved in managing reviewers, the entire review process is anonymous.

Stage 4. After the deadline for submission (and prior to the workshop), the facilitator publishes the anonymous individual results by allocated small group as well as the aggregate results of all peers. This enables participants to evaluate their relative judgements. SPARK^{PLUS} enables participants to interrogate easily the justifications given by peers whose judgements agree and disagree. Circulating a vodcast demonstrating this interrogation assists this reflective process.

Stage 5. Reviewers participate in a face-to-face workshop. In groups of four or five, participants discuss and defend judgements and justifications around the validity of the assessment task until a consensus is reached within the group. This also provides a further opportunity for each reviewer to reflect on previously submitted individual reviews. Following this, the facilitator leads a

discussion between groups where participants defend key differences until a consensus is reached across all groups. The existence of discipline standards assists these calibration/tuning conversations. Assuming the assessment task is valid for demonstrating achievement of the standard(s) in focus, reviewers then repeat this consensus-reaching process, benchmarking each piece of student work against the relevant standard. Reviewers repeat the consensus-reaching process with new samples of student work until there is confirmation that the calibration process has been effective, and there is agreement on the standard for a graduate.

Stage 6 (optional). Post-workshop confirmation may also take place. In some calibration activities, a post treatment confirmation check can be undertaken by both a control group of reviewers as well as the treatment group of reviewers who participated in the workshop. In the case of the Achievement Matters project, one study showed that participation in the calibration workshops reduced the standard deviation of the pre- and post-workshop marks of the same students work by 50% and this was highly significant. There was no significant difference in marks for the control group who did not participate in the calibration workshop.

Stage 7. The peak body publishes a list of those who participated in the calibration exercise and their affiliated organisation where permission to do so has been granted. HEPs may view this list to identify a potential external reviewer. It is expected that the same process will be applied to other business disciplines.

This multi-step national external calibration process is important in developing a shared understanding of the standards that must be achieved by graduates of a particular course of study. In the case of Achievement Matters a proposal was submitted to the peak body (ABDC) to give the national external calibration process a life beyond the project.

4.2.2 External assurance

Stage 1. The senior academic responsible for external assurance at a HEP appoints an administrative coordinator to liaise with home and external reviewers to ensure reviews are timely and results subsequently considered, negotiates the timing of external assurance milestones for the HEP's various degrees and determines policies and procedures around external assurance. The main procedures to clarify relate to the systems for collecting and distributing assessment data (e.g., email, Dropbox, homegrown online tools) as well those for capturing, aggregating and publishing reviews (e.g., online tool SPARK^{PLUS}). Examples of the policies to clarify include the number of reviewers (e.g., internal as well as external), degree of anonymity (e.g., limited to students and academics or extended to HEP), sample size and the random numbers for students whose work will be collected for external assurance. Extending anonymity to HEPs is preferable when complete arms-length assurance is required. HEP anonymity may also be preferable when multiple HEPs are partnering in the external assurance process. Random selection of student work removes the potential bias that may arise from stratified sampling (since reviewers may be tempted to rank student work into grade bands). In consultation with the relevant academic discipline leader, milestones (e.g., which standards to be externally assured

when) are communicated to relevant course or program directors.

Stage 2. In consultation with the senior academic responsible for external assurance at the HEP and the relevant academic discipline leader, the coordinator recruits one or more external reviewers and an internal reviewer, if required. Reviewers may come from the published list of previous calibrations or emerge subsequent to benchmarking agreements between HEPs containing previous calibration participants. Using two external reviewers increases the confidence in the feedback. As well as a focal point for localised engagement with external assurance, appointing an internal or home reviewer (who has also participated in calibrations) provides further substance to the engagement with, and implementation of, subsequent external feedback.

Stage 3. In consultation with the relevant academic discipline leader, the internal reviewer selects the assessment tasks to be used to evidence the standard(s) to be externally assured. and the related student work. Integrative, capstone assessments are well suited to external assurance because they typically demonstrate multiple learning standards. It is advisable to record separately the relevant standard the student work previously achieved internally prior to it being de-identified and cleaned of all markings for distribution to reviewers. Electronic assessment submission via a learning management system (e.g., Blackboard) greatly assists this cleaning, de-identification and distribution process. Online tools for coordinating assessment data submission, distribution and review can further assist this logistical process. The coordinator distributes assessment data to reviewers with any relevant instructions and resources (e.g., national learning standards and vodcasts demonstrating how to use SPARK^{PLUS} to submit or interrogate reviews online). The former comprises the relevant unit of study outline, the specific requirements for the selected assessment task, the required sample of student work (that matches the randomly selected student numbers) and grading information supplied to students and to markers in relation to each standard they want assessed.

Stage 4. All reviewers submit (e.g., via SPARK^{PLUS}) their reviews (of task validity and achievement against the relevant standard) by the deadline. Judgements about task validity would consider all information provided. Judgements about student work meeting the explicit national standard should occur only if the task is deemed valid. Judgements about student achievement meeting the standard should not be limited to any marking criteria used by the home provider. Where there is disagreement between the reviewers (if more than one is used), an additional calibrated external reviewer may be recruited to determine the majority. The latter process emulates the research review process and any concerns may be discussed with the coordinator.

Stage 5. The coordinator distributes the anonymous results (e.g., publishes via SPARK^{PLUS}) for reviewers to consider. Together with the program director, the disciplinary academic leader uses the results to determine any improvement strategy and actions that need to take place. It is the prerogative of the home provider as to how the results are used for quality enhancement or even in quality assurance activities such as TEQSA or international accreditations like AACSB. It is helpful for the HEP coordinator to follow up local reflections and improvements actioned arising from the

external assurance. Regular reports summarising and analysis emerging themes can assist the senior academic responsible for external assurance as the HEPs lead organisational improvements.

The Achievement Matters project team advised participants to use the following informal steps in their approach.

1. The home reviewer compares the results of all three reviews (their own with the two external reviewers) with the original grades for the student work as well as the feedback on the validity of the assessment task.

2. The home reviewer discusses the results first with the second home reviewer who has participated in calibration events and then other staff in the discipline involved in teaching into the Accounting major/degree. These conversations act to close the loop and if necessary, come to a consensus about proposed improvement strategy/actions. Using the research metaphor, they are the 'corresponding author' and as such should take a copy of the feedback from the external reviewers and discuss amongst themselves.

3. Both home reviewers (with the relevant program director if not one of them) would then share the overall results with the head of department and the proposed action/strategy – it is entirely their prerogative if they do anything.

4. It would be the responsibility of the department head to report any results further up the line and this would be likely if an improvement strategy required significant funding or structural change.

Repeated live rounds of this process have shown it to be robust and useful. Although the description above is set within the context of tasks undertaken by the Achievement Matters project team, these tasks are transferable to others. It is expected that the same process will be applied to other business disciplines.

While the previous section summarised the timing of the external calibration and the external assurance processes respectively, the following section articulates the recommended stakeholder roles.

4.2.3 External calibration roles

Stakeholders are anticipated to engage in various roles and activities. These are outlined below.

School or department. Provide at least one experienced academic per discipline to participate in calibration events to assist reviewers develop shared understandings of academic standards and pay any additional travel and accommodation costs. Achievement Matters engaged two academics at two events each year. To limit travel and accommodation costs and logistical constraints, workshops will normally be held adjacent to regular disciplinary events (e.g., for Accounting, immediately after the July annual AFAANZ conference and in November after the RMIT Accounting Educators Conference).

Academics. Prepare and complete pre-workshop tasks (i.e., peer review sample evidence and submit reviews online). Non-completion of these tasks voids the ability to participate in the calibration workshop.

1. Attend and actively participate in the calibration workshop.

2. Encourage the school to locally adopt good practices learned from calibration processes and to adopt a similar calibration process using the same exemplars.

3. Identify potential reviewers from their institution to be involved in future calibration workshops to ensure sustainability.

Academic associations (e.g., AFAANZ for Accounting)

1. Select, if necessary in consultation with deans council (e.g., ABDC) or other peak body, and appoint a lead facilitator for the calibration workshop.

2. (Optional) Provide administrative support to the lead facilitator for calibration workshops.

3. (Optional) Publish, with permission, a list of past participants.

Professional bodies (e.g., CPAA, CAANZ for Accounting)

1. Provide practitioners to attend and participate in the calibration workshops. This provides context and assists application, shared understandings and judgements around learning standards.

2. (Optional) Provide financial and/or other in-kind support (e.g., workshop venue).

Deans Council (e.g., ABDC)

1. Select, if necessary in consultation with academic association (e.g., AFAANZ) or other peak body, and appoint a lead facilitator for the calibration workshop.

2. Provide administrative support for calibration workshop

3. (Optional) Publish, with permission, a list of past participants.

4.2.4 External assurance roles

Stakeholders are anticipated to engage in various roles and activities. These are outlined below.

School or department

1. Consider and determine external assurance policy options, for example, frequency of external assurance per discipline, number of reviewers (e.g., internal as well as external), degree of anonymity (e.g., limited to students and academics or extended to HEP), sample size, the random numbers for students whose work will be collected for external

assurance, and type of arrangement (e.g., informal, direct appointment of external reviewer, formal benchmarking and, if reciprocal, strategic).

2. Select and appoint calibrated external reviewer from published list or by contact with peak body.

3. Provide evidence of the work for a random sample of students in relation to one or more learning standards at the bachelor and/or master level, and the related assessment task for external assurance.

4. Consider external reviewer evidence and action appropriate improvements

Academics. (Optional) Review de-identified evidence from a peer provider and/or evidence from home provider if requested.

Deans council (e.g. ABDC) or academic associations (e.g., AFAANZ for Accounting). Maintain a list of participants who have completed a calibration workshop and details of the learning standards that they have assessed in a calibration workshop.

4.3   Outcome 3

Provide professional development around assessment for participating academics.

Participants have been surveyed during each of the eight calibration workshops. It is clear from the surveys that assessor confidence in judging improves from pre- to post-workshop. The following tables report the reviewer responses to a series of questions concerning each of the learning standards covered in one of the eight calibration workshops.

The results generally show a high level of confidence amongst the peer reviewers in applying the learning standards examined in the calibration workshop. The results also show a high level of confidence in providing feedback on both the assessment task design and student work as a result of the calibration workshop. Participants reported the lowest level of confidence for the learning standard on self-management. This is not surprising given that it is not one that academics have traditionally tried to assess in a formal way.

Scale: 1 = Strongly Disagree, 5 = Strongly Agree

Figure 2: Post-workshop participant feedback for each of the learning standards calibrated

The following comments represent views expressed by almost all participants:

Fantastic process – lots of opportunities to provide feedback and draw clarification to increase understanding.

The way the whole workshop and live review process is run is very good and I cannot think of how to improve this.

Appendix C to this report provides additional feedback received from participants in the workshops.

4.4   Outcome 4

Enhance understandings in the external environment of the developed model.

The project team members have been very active in disseminating the model as it has evolved and the project findings. The project leaders, as chair of the ABDC Associate Deans' Learning and Teaching Network and ABDC Discipline Scholar, were extremely well placed to disseminate details of the model and the findings to business faculties across Australia. Through the communication strategies developed by the LTAS project, Professor Freeman built up a strong 'community of practice' with 649 key stakeholders requesting engagement in the standards agenda which has grown to 789. Professor Freeman also disseminated to other disciplines through contacts developed during the LTAS project and the ongoing Discipline Scholars' network. In addition, all team members were regularly invited to speak at research and T&L seminars around the country and remain committed to using every available opportunity to engage others about the project. The result – it is fair to say – is that the vast majority of Australian accounting academics is well aware of the Achievement Matters project and the model used.

One objective of this active dissemination process has been to encourage support for continuing the external calibration and assurance process beyond the life of the Achievement Matters project. There has been some success in reaching this objective. In February 2014 all 35 reviewers voted to continue with the project in 2015 and there was unanimous support for continuing with two workshops. This endorsement was communicated to the ABDC Executive in July and had some influence on their agreement to continue the project into 2015 under its own auspices.

Since its inception, project team members presented or engaged in meeting at more than 195 events with over 6,000 participants where the project approach and outcomes were discussed. Appendix D lists these events along with other dissemination activities around four main areas:
   1. international meetings and workshops;
   2. national meetings and workshops;

3. academic and professional publications;

4. stories and mention in the media.

The reference group members were also drawn from universities and professional accounting bodies with an interest to ensure a wider dissemination of the project's work. The project provides recommendations for policy, practice and professional development and learnings were disseminated through a formal report, presentations at conferences, university and professional forums and journal publications.

Chapter 5 |Project Impact

The four project outcomes detailed in Chapter 4 are important and timely. The impact of the project is foremost evident in the feedback to emerge from workshop participants. There has also been evidence of impact within accounting higher education and professional bodies, other disciplines and the national and international HE communities, and within national and international articles and conferences. This section will provide confirmatory evidence of the project's impact.

5.1 Impact on accounting higher education and professional bodies and other disciplines

5.1.1 Accounting higher education

The 35 participants involved in the project report that they, and their colleagues in their home institution, have made changes to the design of assessment tasks that to ensure they are valid in that they allow students to demonstrate achievement of each learning standard. Academics who have been part of the accounting learning standards project have sought to engage students by explicitly embedding the standards within some assessment tasks and providing evidence of employers' demand for the skills and attributes associated with the learning standards. The project website provides exemplars so that the wider accounting higher education community can benefit.

Universities and other HEPs have also benefited from the project since it has involved active collaboration with the accounting professional bodies (and employers), which has strengthened over the project. This strengthened collaboration has been further aided by a narrowing in the expectations gap – there is a greater sense that accounting educators are willing to work together to ensure graduates meet acceptable minimum standards for entry to the accounting profession.

5.1.2 Accounting professional bodies

The accounting learning standards are now embedded within the accreditation process for university accounting programs by CAANZ and CPAA. Support for complementary professional body activities has expanded as a result of the collaboration with professional bodies in the Achievement Matters project. Other relevant activities include:

- engagement in CAANZ thought leadership forums and related research and publications both nationally and internationally[12];
- supporting professional bodies making submissions to panels or agencies;

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[12] http://www.charteredaccountants.com.au/academic

- encouraging professional bodies to use external assurance of learning evidence for recognising accounting programs as an accredited pathway;

- reinstatement of a joint CPAA/CAANZ approach to accrediting accounting degrees;

- mention in professional body (ICAA) blog: "The specifics of accountability are not outlined in Pyne's speech. However, in this respect, the accounting profession is thinking ahead. An ongoing research project, Achievement Matters, partly funded by the Institute of Chartered Accountants Australia, explores accountability in the teaching of accounting in Australia. It aims to develop and implement a national model of expert independent peer review for benchmarking achieved learning outcomes by students against nationally-agreed learning standards. It is the Institute's view that external assurance of learning is essential to drive both accountability and continuous improvement in quality in the Australian higher education system." From James Guthrie, ICAA blog (3 April 2014).

5.1.3 Impact on employers

The impact on employers arises initially from the engagement in the project by members of the professional accounting bodies and various employers. In recognition of this strong collaboration with industry, the Achievement Matters project team received the 2012 Business and Higher Education Roundtable Award for Excellence in Accounting Teaching Collaboration at an award ceremony in Melbourne on 8 November 2012.[13]

The Achievement Matters project has set a trajectory of actively engaging employers who are collaboratively involved with accounting educators. This collaboration includes not only input into the standards they might expect of graduates, most notably through the calibration workshops, but to also assist academics in conveying the importance of the standards to students. This is particularly important in relation to communication, teamwork and self-management where students appear much less aware of the importance of such skills.

5.1.4 Other business disciplines

- Requests to subscribe to quarterly email updates (n~800) including to those in other disciplines beyond accounting and in central academic leadership roles; plus sharing of email updates to others' networks. After one update, one associate dean wrote "I distribute this to HoS and AHoS. It is very useful and I appreciate the time and effort in getting it together."

- Several project team members have been involved in other standards-related projects. For example, Professor De Lange was part of the Australian Business Deans Council (ABDC) Finance Expert Advisory Group (FEAG) – Finance Learning Standards and Professor Freeman was advisor to five other business disciplines standards projects (finance,

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[13] <www.bhert.com/award-winners/2012-Award-Winners.pdf>.

marketing, tourism, hospitality management and events and economics) and engagement with other peak bodies in business disciplines (e.g., business information systems, MBA, project management).

5.2 Impact on HE

5.2.1 National HE community

There have been many invitations for presentations in Australia beyond project stakeholders and business to peak bodies like Deans Councils (including science, ICT, nursing and midwifery, as well as business), Universities Australia and OLT as well as independent conference organisers. Many have provided positive feedback such as "Your methodology could easily become a national model".

Professor Freeman was a member of the reference group for the OLT-funded Inter-Institutional Review and Moderation project (led by Professor Krause) and has been able to disseminate some of the learnings from Achievement Matters through this membership. One concrete example of this was assisting in leading a pilot calibration experience with law academics in that project. Professor Krause also authored several related discussion papers, widely distributed across the sector, that mention Achievement Matters. The first covered the issues and options for a learning standards framework and the second contrasted the three national initiatives for evidencing learning standards (i.e., Teaching and Learning Standards: Peer Review and Moderation (Krause et al., 2013), Quality Verification System (Go8) and Achievement Matters). Professor Freeman was also commissioned to lead the development of the OLT *Good Practice Report: Assuring Learning Outcomes and Standards* (Freeman and Ewan, forthcoming). Professor Freeman has also played a key role in the Discipline Scholar Network (2011–2013) and the Peer Review of Assessment Network (2014).

A number of reviewers participating in our project were also interviewed as part of the OLT funded project Assuring Graduate Learning Outcomes (led by Professor Simon Barrie).

Finally, the use of SPARK^{PLUS} has been of interest to a number of quarters. This includes OLT Fellows who are considering using it for application in their context. Indeed, the OLT itself is using the software and related calibration and consensus-reaching approach for grant assessment data collation, analysis and decision making.

5.2.2 International HE community

Project team members have had more than 20 interactions with various international meetings and conferences in seven countries. The full list is in Appendix D.

The quarterly email updates include a number of international subscribers with one leading HEA

stakeholder requesting distribution to his 200+ contacts.

5.3 Impact in international media and published research

The project's impact has also been evidenced in national and international articles, conferences, media reports and blogs as detailed below.

In a recent opinion piece in the *Times Higher Education*, Chris Rust (2014, p. 2) wrote

> It doesn't have to be like this. Australia, for example, seems to be taking the issue of comparability of standards very seriously. Commissioned by the Australian government in 2009-10, the Australian Learning and Teaching Council's Learning and Teaching Academic Standards project sought to establish national standards, starting with six broad discipline groups.

> The discipline of accounting, further funded by a partnership between the professional accounting bodies and the Australian Business Deans Council, decided to continue to use a "cultivated community approach" in establishing shared meanings of their standards. A follow-on project in 2011, Achievement Matters: External Peer Review of Accounting Learning Standards, brought together subject reviewers from 10 universities, along with a number of professional accountants. Independently, they sampled student work and submitted their judgement regarding which students met a benchmark standard. Consensus was then achieved through small and whole group discussion of the samples and checked by participants individually reviewing two new samples. In addition, reviewers considered the ability of the assessment task itself to allow students to demonstrate their attainment of the standards.

The project was mentioned in Price et al. (2014), "Another initiative also in Australia, inspired by, and founded on Tenet 6 of the Manifesto is a nationwide project seeking to calibrate and establish common assessment standards used by examiners. The project, 'Achievement Matters', (see <achievementmatters.com.au) started in 2010 and uses a 'cultivated community' approach."

5.4 Dissemination

To achieve the widespread impact detailed above, the project team members have been incredibly active in the dissemination of project findings, as outlined in Outcome 4, in Chapter 4. As a result of the large number of dissemination activities the project is well known throughout Australian business higher education, in other disciplines and internationally.

Chapter 6 │Success factors, challenges, key lessons and sustainability

6.1 Success factors

A number of factors have contributed to the success of the project.

- The commitment and engagement throughout the three years by the participants has been, without doubt, critical to the success of the calibration workshops. While it is not possible to say that all reviewers have a shared understanding across all standards, it is fair to say that all reviewers are now more confident about designing appropriate assessment tasks and assessing student work against the learning standards.

- The financial support and commitment from all 17 HEPs involved in the calibration workshops was another critical factor to the success of the project.

- The involvement of the accounting professional bodies and employer representatives in the calibration workshops was critical. Their perspectives about the types of tasks and performance expected of new graduates were invaluable in helping academics understand the context of the course learning standards under discussion.

- The online tool SPARK^{PLUS} was an important factor in facilitating the submission, aggregation, publication and interrogation of anonymous peer reviews. Its efficiency and features optimised the time and richness of reviewer discussion when benchmarking assessment task and student work during calibration workshops.

- Strong leadership and project management over the duration of the project.
- Highly active engagement and networking with key stakeholders and other peak bodies.
- The project is widely recognised because of the high level of dissemination across broad stakeholder groups on a sustained basis. This recognition has enhanced the awareness and understanding of the work undertaken in this project.

6.2 Challenges

The challenges experienced throughout the project were multiple and varied.

- **Establishing consensus** as to what constitutes a valid assessment task that enables students to demonstrate the learning standard. In some cases, the validity of a given assessment task in assessing a given standard was questioned by some of the participants. This underscored the need to carefully map assessment tasks and requirement against standards.

- **Developing a shared understanding**, across academics from different institutions and with practitioners, of an appropriate standard of student work in relation to a specific learning

standard. We started with the most contentious learning standard, namely written communication. Making progress on this was important also for professional body representatives to have continued confidence that action was occurring. Achieving consensus was often a challenge as participants had differing views as to what might meet a given standard such as written communication. Often, the standard needed to be dissected into sub-components to facilitate this shared understanding. For example, written communication was broken down into sub-components such as grammar and spelling and logic and flow.

- **Finding appropriate exemplars** to use in the calibration workshops. Our aim was to Identify appropriate assessment tasks that not only could allow students to demonstrate the national standard but that are concise and therefore minimise the time busy reviewers needed to accurately assess. Contrary to expectations, there was not a large selection of exit-level assessment tasks to choose from that could be valid, integrative and assured multiple learning standards. Initially they were unnecessarily long. Several learning standards, namely oral communication, teamwork and self-management were particularly difficult.

- **Identifying subject specialists** for the reviewing. When it came to external assurance, few calibrated academics were sufficiently expert in several accounting specialties (i.e., auditing and tax).

- **Finding the right online tool** to support participants' submissions, aggregation, publication and interrogation reviews. SPARK^{PLUS} has been most effective in our project context and it was important to develop appropriate training and support materials including vodcasts. We understand SPARK^{PLUS} has been further improved to facilitate remote collaborative decision making. Utilising this feature could reduce costs by removing the need for reviewers to meet and dialogue in calibration. However, we are reluctant to trial this innovation for the calibration workshops. Face-to-face dialogue was extremely reliably for promoting fast interchange and defence of views when reaching consensus on standards.

- **Ensuring ongoing engagement** by participating universities in the face of tight budgets and project extension.

- **Obtaining adequate live data for review**. Not all providers submitted assessment data for live review at the biannual opportunities to do so. De-identification and removal of all markings was difficult at the beginning of the project. Several strategies to increase that were taken including: using assessment tasks that had been submitted electronically; providing for online submission; encouraging submission of data that assesses multiple learning standards; focusing on learning standards more familiar to academic assessment (i.e., Knowledge); and providing more options for submission, which became more possible as more standards were covered in calibration workshops.

- **De-identification of live data.** Ensuring that the data submitted for the live review had been correctly de-identified of student, academics and provider and clear of any markings was time consuming. As mandatory electronic submission of student work has become

more commonplace in recent years (for text-matching and plagiarism detection purposes), this has become easier to achieve and we believe valuable for removing potential bias and ensuring trust in the process.

- **Interacting with, and learning from, prior research.** Namely, the two other national projects for evidencing learning outcomes (i.e., Group of Eight Quality Verification Project and OLT-funded Inter-institutional Review and Moderation project (led by Professor Krause)) and the UK external examiner system.

- **Providing anonymity** to those who agreed to place their student work under the scrutiny of the team of reviewers during calibration workshops. While the project team ensured exemplars used at calibration workshops were de-identified and clear of markings, there were times where the contributor revealed that it was their own work. It was important to allow participant contributors this choice.

- **Reliably assessing assessment task validity and student achievement** against national benchmarks requires reviewers making judgements about learning standards that exist beyond their own institution. For this benchmarking to be reliable, reviewers need to develop calibrated understandings of the accounting learning standards, both with multiple peer academics and also with practitioners. Reviewers need time and opportunities not only to participate, but also to reflect, digest and implement changes arising from changed understandings in assessment practice and norms. While our research showed that disparity could be significantly reduced by just one calibration workshop (i.e., standard deviation halved), some variation remains and this is particularly important around borderline data. The project team found it useful to have only two real categories (i.e., assessment tasks that are 'acceptable' or 'not acceptable', and, student work that 'meets' or 'does not meet').

6.3 Key lessons

- **Task validity** is critical. Many project participants have redesigned assessment tasks so that valid data is available to assess. A firm conclusion reviewers agreed was that student work could only be assessed against the learning standards if the assessment task was valid for students to demonstrate the standards in the first place.

- **Deep engagement with the wording of the learning standards** agreed nationally in 2010 is essential to designing valid assessment tasks. This is an iterative process of deconstruction and reconstruction of mental models relating to the standard for a learning outcome.

- **Shared learning through collaborative conversations** is a critical part of the calibration process. Without face-to-face workshops this would be a serious challenge. Our participants highly valued this aspect of the project.

- **Reviewers' confidence** in their ability to assess to the standard initially declined but by the third workshop had increased. Reviewer confidence is higher for standards like knowledge but lower for some standards like teamwork where traditionally many academics have not had to assign marks for this skill.

- **Anonymity.** Important to ensure objectivity in the review process and anonymity also excludes the possibility of institutional risk.

- **Crucial to collaborate and learn from prior studies**. Specifically, the efforts of the other national approaches for evidencing learning standards (i.e., Quality Verification System; Inter-Institutional Peer Review and Moderation and UK external examiner system).

- **Unanticipated complexity of calibration** around several learning standards traditionally less in focus (e.g., oral and written communication). This had an adverse effect on timeframes but it was a most worthwhile avenue to pursue as there was such wide variation in understanding in the words contained in the agreed national standard. However, as we gained more experience the process improved.

The workshops provide the forum for the consensus moderation of the inputs (assessment tasks) and outputs (student work) and calibration to the national benchmarks. This has been enormously helpful in:

- **quality enhancement** (e.g., assessment task design as mentioned on the first point);

- **capacity building and professional development** – one of the major benefits of the calibration workshops has been professional development with participants strongly reporting huge personal benefits, which they then disseminate to colleagues at their respective institutions;

- **quality assurance**, which was provided by having calibrated reviewers available to TEQSA to assess anonymous student work from any Australian university or HEP.

6.4 Sustainability

The involvement of 17 institutions, practitioner accountants, professional accounting bodies and over 35 academics has been an integral aspect of this project, and an important ingredient to sustainability. With an eye to the future the project team has developed a sustainable model that has been shared with the ABDC. The ABDC has agreed that the existing process continue under its auspices in 2015 with calibration workshops planned for July and November. The latter includes non-ABDC members.

The model process as outlined in Chapter 4 comprises both external calibration and external assurance in that order. While responsibility for both were carried out by the project team we recommend a sustainable process rely on external calibration occurring on a national basis, for example, under the auspices of a peak body, with arrangements for external assurance to occur at the discretion of each provider. The model process would need some adjustment if nationally agreed discipline standards do not exist.

Chapter 7 │Conclusions and recommendations

Building on a fertile context provided by the development of a set of accounting learning standards as part of the Learning and Teaching Academic Standards project in 2010, Achievement Matters has successfully achieved its intended outcomes of:

- obtaining reliable external peer-reviewed evidence of accounting academic outcomes in all types of HEPs, benchmarked against the accounting learning standards;

- developing a model process for assessing learning outcomes (that is inclusive, sustainable, reliable and efficient), satisfying external quality assurance needs and motivating continuous improvement;

- providing professional development around assessment for participating academics, and;

- enhancing understandings in the external environment of the developed model.

A number of factors were critical to the successful implementation of the project. The three main success factors were:

1. sustained participant engagement, ongoing financial commitment and support from their respective university or HEP;

2. strong engagement and commitment from both professional accounting bodies; and

3. the availability of an online tool to facilitate calibration conversations.

In addition there were a number of unexpected positive outcomes that emerged from this project.

- **Academic staff capacity building.** While professional development was an outcome originally expected of the project, the degree of learning about designing appropriate assessment tasks has far exceed expectations. Examples of assessment artefacts that have evolved from participating in the project can be seen at achievementmatters.com.au

- **Ongoing commitment.** Participants and associated stakeholders have indicated a real desire for the conversation to continue. Given the amount of time and effort to prepare and participate in the calibration workshops it was surprising that after three years all 35 participants want to continue to meet and calibrate.

- **Inclusivity.** Although there was a diverse range of universities and other HEPs, the biannual calibration workshops were fun and enjoyable. Furthermore, for many, if not most, of the university participants it was the first time that they had been actively engaged with colleagues from non-university HEPs. The integration of the TAFE and private providers into the process went very smoothly and the four reviewers were valued contributors at the workshops.

Recommendations

1. That **deans council, or disciplinary peak body**, provide leadership in the academic standards agenda in relation to achieving shared understandings of standards. In addition to thought leadership around achieving national consensus of standards this primarily relates to taking responsibility for leading external calibration efforts, as well as the initial setting of learning standards. If the peak body is also a deans council then it includes extending any lessons learned to other disciplines within their remit. Finally, we recommend that the deans council, or disciplinary peak body, commit to periodic review of agreed statements of learning standards. Although the project has been able to show that the accounting learning standards are robust and that shared understandings of these standards are achievable, it is clear that a periodic review of the learning standards is necessary for both improving the standards and ensuring they remain relevant.

   For the Australian Business Deans Council this relates to supporting the accounting discipline in 2015 with further calibration workshops and sharing lessons learnt with other business disciplines like finance that have recently developed learning standards to avoid 'reinventing the wheel'. Also, as the accounting learning standards were developed in 2010 and have been scrutinised since then over eight calibration workshops, it would seem appropriate that the Australian Business Deans Council establish a process in 2015 to review them.

   For the Accounting and Finance Association of Australia and New Zealand this relates to supporting the accounting discipline in 2015 by engaging in the review of the accounting learning standards, disseminating opportunities for external calibration to disciplinary leaders and providing valuable feedback to progress collaborative efforts support both external calibration and peer review.

   Operational aspects that can facilitate inclusive, reliable, valid and efficient external calibration.

   a. Extending invitations to participate to all types of HEPs in Australia. Representatives of professional bodies and employers should be included.

   b. Timing the calibration events to immediately follow existing disciplinary events to reduce the potential cost substantially and increase the propensity to participate.

   c. Appointing an experienced facilitator to lead calibration events.

   d. Designing calibration events to optimise opportunities for making and defending judgements. This includes: pre-workshop peer review of both input assessment data (e.g., task requirements) as well as output assessment data (e.g., sample student work; distributing de-identified judgements and reasoning for review and interrogation prior to face-to-face workshops; using small group consensus prior to seeking consensus of the entire group at workshops; confirming understandings with new samples of student work that allow individual judgement, small group consensus and large group consensus). To

avoid possible bias all markings and identifiers should be removed from inputs, outputs and reviewers.

   e. Sampling assessment tasks used as exemplars should be indicative of graduate level work (i.e., integrative, capstone and relate to multiple learning standards). Diverse exemplars at successive calibration workshops are beneficial.

   f. Sampling student work should be selected to illustrate a range of learning achievement since this will optimise dialogue.

   g. Hosting a website with exemplars, as they become available from completed calibration workshops. Making these widely available beyond those who participated not only increases the propensity for local calibration workshops' imitating and sharing but increases transparency and accountability. A diverse range of exemplars will also reduce the likelihood that standardisation will occur.

   h. Using an online tool (like SPARK^{PLUS}) to operationalise efficient collection, aggregation, publication and interrogation of assessment data can facilitate the calibration process and the development of shared understandings of the learning standards.

   The main operational aspect to facilitate external assurance is to maintain a list of participants who have completed a calibration workshop with details of the learning standards assessed. Minimising the time lapse between the calibration workshop and the subsequent external assurance phase is also a worthwhile objective to optimise the chances that shared views of standards will be applied.

2. That **universities and other higher education providers** commit to external calibration as well as external peer review. External assurance of course learning outcomes is an additional assessment step required by law. However, to ensure discipline learning standards, such as those developed for accounting in 2010, are applied consistently across HEPs, effective implementation requires buy-in from multiple levels within universities and other HEPs. Leaders must commit : to support and fund participation in national calibration workshops; to arrange external reviews; and continuously improving assessment design and practice by responding to feedback from both calibration and external assurance.

3. That **academic leaders in a discipline** commit to supporting the academic standards agenda. This includes supporting academic staff to participate regularly in external calibration workshops, and, where necessary to ensure learning standards are achieved, refining course curriculum and assessment to achieve them. The evidence gained from this project demonstrates that gains from participation in calibration workshops is significant but such shared understandings may erode over time. It is therefore important that disciplinary leaders promote participation in external calibration workshops beyond initial engagement by a select few. Understandings can be reinforced across a department by participants in national forums subsequently leading calibration workshops locally and by using the exemplars. Encouraging other academics, particularly early career academics, to participate alongside experienced academics regularly participating in national forums, can not only reinforce but refresh shared understandings of learning standards. Curriculum and assessment revisions may need to be

undertaken to ensure learning standards are developed across a range of units of study in a course. As part of this curriculum revision, disciplinary leaders may wish to consider integrative, capstone assessment tasks that validly allow students to demonstrate achievement of multiple learning standards – the latter is also an efficient strategy to gather appropriate evidence of multiple learning outcomes in a single assessment.

4. That **employers and professional bodies, where they exist**, commit to collaborate on the academic standards agenda. Professional bodies can collaborate by: participating in external calibration workshops since their participation can facilitate improved assessment practice as discussions around standards can be grounded on more authentic tasks expected of graduates; hosting national forums; encouraging employer representatives to participate in calibration workshops; and more strongly emphasising evidence of achievement of learning outcomes in any accreditation process and particularly around national discipline standards if they exist.

5. That **peak academic associations** commit to collaborate on the academic standards agenda. This project has benefitted from the collaborative engagement with the peak accounting academic association, Accounting and Finance Association of Australia and New Zealand. These benefits have included: engaging disciplinary leaders; being a focal point for collaborative effort in this space; informing the development of shared understandings; and guiding the project with valuable feedback and suggestions for improvement.

6. That **students** be engaged in the academic standards process. Academics with program-wide responsibilities have a key role to play with students as do coordinators of units of study where assessments will be sampled to demonstrate program learning outcomes and standards. Student achievement of the learning standards is more likely if students also share an understanding of what the standards are and why the standards are valuable to their own development as well as for employment. Some assessment tasks developed by academics who have been part of this project have sought to engage students by explicitly embedding the standards within their assessment task and providing evidence of employers' demand for the skills and attributes associated with the learning standards. Internal calibration activities with final year students could assist in developing shared understandings of standards with students.

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Appendix A

List of workshop participants

Mark Freeman, University of Sydney, Facilitator

Name	Institution/Organisation
Con Abbott	Consultant
Anne Abraham	University of Western Sydney
Caroline Armstrong	CPA Australia
David Bond	University of Technology Sydney
Dorothea Bowyer	University of Western Sydney
Luisa Brown	KPMG
Mark Christensen	Southern Cross University
Mary Clarke	CPA Australia
Kevin Craddock	CPA Australia
Paul De Lange	Curtin University
Katarina Djukic	Kaplan Business School
Lyndal Drennan	James Cook University
Chris Durden	James Cook University
Ian Eddie	Southern Cross University
Elaine Evans	Macquarie University
Shani Ford	Hill Rogers Spencer Steer
Gail Fraser	CPA Australia
David Gilchrist	Curtin University
Debbie Gilchrist	Curtin University
James Guthrie	The University of Sydney/ICAA
Phil Hancock	The University of Western Australia
Dean Hanlon	Monash University
Christine Helliar	University of South Australia
Bryan Howieson	The University of Adelaide
Neil Jackson	Institute of Chartered Accountants Australia
Marie Kavanagh	University of Southern Queensland
Leo Langa	The University of Western Australia
Eric Lee	Monash University
Barry Li	PricewaterhouseCoopers
Tony McMurtrie	The University of Adelaide
John Medlin	University of South Australia

- Clare Milligan   Holmesglen TAFE
- Graeme Mitchell   University of Western Sydney
- Lorena Mitrione   Monash University
- Reza Monem   Griffith University
- Anja Morton   Southern Cross University
- Paul Myers   RMIT University
- John Ngiam   CPA Australia
- Brendan O'Connell   RMIT University
- Berry O'Donovan   Oxford Brookes University
- Brian Perrin   Curtin University
- Michaela Rankin   Monash University
- Maritana Richards   Kaplan Business School
- John Sands   University of Southern Queensland
- Samantha Sin   Macquarie University
- Geoff Slaughter   University of Southern Queensland
- Trevor Stanley   Queensland University of Technology
- Duncan Stevenson   Deloitte
- Morne Swiegers   Deloitte
- Stuart Tooley   Queensland University of Technology
- Johnathan Tyler   University of Technology Sydney
- James Wakefield   University of Technology Sydney
- Desley Ward   CPA Australia
- Kim Watty   Deakin University
- Peter Wells   University of Technology Sydney
- Brett Wheldon   University of Western Sydney
- Graeme Wines   Deakin University
- Ron Woolley   CPA Australia
- Phillip Wong   Holmesglen TAFE
- Jonathan Yeo   Pitcher Partners

Appendix B

Report of the External Evaluation

Achievement Matters: External peer review of accounting learning standards - An innovation and development project sponsored by The Office for Learning and Teaching, Australian Government and the Australian Business Deans Council

Report of the External Evaluation

EXECUTIVE SUMMARY ONLY

Patrick Boyle MAES,
Consultant and Director, Q Associates
& Visiting Fellow, UNSW

External Evaluator
November 2014

Executive Summary

This report concerns the commissioned external evaluation of the project *Achievement Matters: External peer review of accounting learning standards* (the AM Project).

Overarching comments

The AM Project has been an extraordinary success and there is no doubt that it is an exemplar for its kind. While its focus has been on Business Education (BE) in Australia, its effects beyond this field are increasing rapidly. I use the term "exemplar" very rarely so in the third paragraph below I provide a brief description of my rationale for this judgment. Before doing that I simply list what for me are the stand-out merits of the Project in general terms.

1. The AM Project sought to effect substantial change and faced a number of complexities, so it had a very high degree of difficulty. In light of this, it was a very courageous initiative.
2. The Project achieved sophisticated and highly valued results. These spanned thought leadership in relation to standards-referenced assessment, real change in practices at national level and commended contributions to discourse and scholarship.
3. Overall, the Project achieved results well beyond its objectives.
4. Three process characteristics warrant highlighting as critical success factors: outstanding leadership, a very effective overall project implementation strategy and a comprehensive and strategic approach to stakeholder engagement and change.

In relation to the "exemplary" call, it is worth explaining the broad basis for my judgment, in part because of the positive coincidence that the Project is about *standards*. My evaluation, elaborated on in this report, is grounded in clear evidence of the merits of the Project on several dimensions and the value it is continuing to add. This basis is analogous to criteria-referenced assessment of student learning. However, my judgment is also underpinned by an element of comparative or 'norm'-referenced evaluation. Over the last seven years I have been the external evaluator for several OLT-sponsored projects and I have a good knowledge of the merits of many more. As well, for more than twenty five years I have been involved internationally and in Australia with more than one hundred other educational development and change projects that are comparable in scope and context to the AM Project. This experience-based reference frame is helpful for my project evaluation work. In my view only about five of these projects warrant the judgment of exemplary.

Working as the external evaluator for the AM Project provided me with a surprising first experience. Part of my philosophy on evaluation in general is the belief that, in the interest of maximizing the utility value of findings for different people, it's important to be balanced in what is reported. While asymmetry in favor of the positive aspects of a project is always the best outcome, there is a need to provide fair and useful critique as part of an evaluative narrative. For the first time in my project evaluation work, with the AM Project I could only find strengths, mostly exceptional ones, and at the summative level there was simply nothing of significance that warranted critique.

Evaluation overview

Broad context and drivers

My reading of the Project Leaders' motivation and rationale for the Project was that essentially there were two components, intrinsic and extrinsic. Together, these motivations point to the great importance and value of the Project's mission. The intrinsic motivation relates to the leaders' clear ethical concern for good practice in higher education, specifically, in this case, the need for improved enabling practices for and greater confidence in the validity of high-stakes summative assessment of student achievement, particularly at the level of capabilities when graduating. The extrinsic motivation derives from the return to the foreground of a national debate and related activities concerning standards in higher education and the need identified to be actively engaged in this. This most recent round gathered steam around 2009 and has the usual political, philosophical and technical dimensions, as well as several important engaged stakeholders. Leaving aside conjecture about deeper ideological aspects, both Liberal and Labor federal governments continue to have concerns related to international reputation and the export value of higher education (currently > AUD 10 Billion). At the policy and operational levels the Higher Education Standards Panel and the Tertiary Education Quality and Standards Authority (TEQSA) continue to grapple with how to improve the means by which higher education providers will be accountable for learning standards, particularly at the graduating level. Clearly, universities and their schools and disciplines have a stake in the standards debate and the policy, accountability, guidelines and practice changes that will flow from this. Professional associations such as CAANZ and CPAA (for Accounting) are another key stakeholder group. Of course, academics and students in higher education are the people affected most by assessment practices and the aligned learning and teaching that should underpin them. They are very important stakeholders, although their level of engagement overall with the issues around standards has been limited.

Having accurate and informative student achievement results that make sense to relevant people, and which can be compared meaningfully across institutions by reference to clear and agreed standards, is self-evidently very important for students, employers and ultimately the wider community. However, historically there has been very little evidence at a comprehensive level to show that processes exist that satisfy this aspiration. One of the major reasons for this is the complexity of the field of assessment of learning. My own experience and that of several expert colleagues suggest that it can be a mine-field of challenges when seeking to effect change. In short, for assessment practices to be of high quality overall, many process and practice elements, which are often complex in themselves, need to line up and be right. This is the case, regardless of whether the particular difficulties associated with accurate *measurement* are present (as part of assessment methods). If even one of the key elements involved is low in quality (e.g. the definition of a capability being assessed; flaws in assessment instruments that reduce reliability of resulting judgments) then the validity of whole processes and results will suffer. This general requirement is well documented in the vast literature on assessment and evaluation (see for example Balla and Boyle, 1994; Baume et al, 2004; Price et al, 2008; Sadler, 2009).

Purpose and challenges

At the highest level, the AM Project was about effecting real change in embedded university practices, where the need for change as perceived by powerful stakeholders has historically been low and their resistance to it high. The literature on change makes it clear that in complex practice environments it is extremely difficult to know with confidence how to effect change in beliefs, attitudes and practices. This circumstance is the first key indicator of the high degree of difficulty of the Project and the courage behind its mission.

At the next level, the domain of practice where change is being addressed is assessment of student achievement. Within this, the Project's focus was on critical review and improvement of key assessment processes so that achievement results can be accurately derived, referenced to and understood in terms of explicit capability standards (e.g. expected standards for communication skills at the end of an undergraduate degree program).

Along with these two major challenges, like many OLT funded projects the AM Project had a limited budget and was implemented by a part-time project team of very busy people.

Success in the light of challenges and difficulty

My understanding of the significance of these two major challenges led me to view the Project as an extremely courageous initiative. It is worth noting that some of the literature on change facilitation and innovation stresses the importance of courage as a critical success factor.

On the ground, the Project's direct work to date has been in BE, particularly accounting, and it has focused on the development of improved understandings and practices in standards-referenced assessment across Australia, mainly in university business schools. It has achieved much on this front and in light of the complexity and challenges faced, this is certainly an extraordinary result.

Overall, the Project achieved way beyond its objectives and in some areas effects are accruing that could not have been reasonably expected (e.g. the levels of breadth and richness of professional learning and development for business school academics; the depth of penetration achieved into the national and international discourses on standards-based assessment in higher education).

The leadership of the Project has been outstanding. Mark Freeman (USyd) and Phil Hancock (UWA) demonstrated constant passion for its cause, strategic creativity, great ability to facilitate collaborative work with academics and other important stakeholders and exceptional work ethics. Underpinned by this leadership, the Project Team dealt extremely well with the challenges and complexities faced and as a result rich success continues to be achieved that otherwise would not have been possible. The team's collective intellectual capability was very high and members brought a diverse range of talents and areas of expertise. The Project Team, including the people who worked in the important project management-support roles was:

Associate Professor Mark Freeman, USyd, Project Leader Professor
Phil Hancock, UWA, Project Leader
Dr Anne Abraham, UWS
Associate Professor Brian Howieson, University of Adelaide Professor
Paul De Lange, Curtin
Professor Brendan O'Connell, RMIT Professor
Kim Watty, Deakin
Ms Coralie Bishop, UWA
Ms Catherine Vogel, UWA

In addition to the high quality of its outcomes, leadership, strategy and processes, I believe the AM Project has delivered excellent value for funds and time invested. Because of the deep stakeholder engagement and considerable buy-in it has established, there is high potential for more and wider positive effects to be added over the next few years.

Results highlights in brief

The Project has achieved several very valuable results, particularly when a finer grained view is taken. These will be described comprehensively in the reports submitted by the Project's leadership to the Office for Learning and Teaching (OLT). The Achievement Matters website also provides a good summary of the Project's work (http://achievementmatters.com.au/). For me, at the highest level there are three stand-out achievements. Here, I will simply list these and comment briefly on the first of them. Elaboration on all three is provided in the body of my report.

1. Development and implementation of a conceptually sound, culturally appropriate and workable "model" and a set of processes for standards-referenced assessment of student achievement based on calibrated external (academic) peer review.

2. Highly valued learning and development for academics, with positive compounding effects for assessment design and practices* (and curriculum development more generally) in business schools within Australian higher education providers.

3. Substantial enhancement of the discourse and provision of thought and practice leadership and development in Australia* and contributions to international scholarship pertaining to standards-referenced assessment in higher education.

As a result of a sophisticated and comprehensive dissemination-engagement-change strategy, a wide range of key stakeholders in BE (and higher education more generally) remain actively engaged in learning from and applying outcomes of the AM Project. These include, the Higher Education Standards Panel, TEQSA, the OLT, business schools and their academic program teams, and several professional associations, including CPAA and CAANZ.

The first of these major achievements underpins the others. From the early days of the AM Project I held the view that the "model" being developed, while suitably pragmatic, was genuinely leading-edge in nature. The most powerful and distinctive feature of the model is its emphasis on effective (real) calibration of external/independent assessors of student work or performance. This is one of the necessary conditions for being able to claim good validity for high stakes summative assessment results. While regarding the model very highly in conceptual-technical terms, I had concerns about the challenges that would be faced to get it widely accepted and working well in practice.

Evidence of the high quality of the AM model continues to grow. This includes expert opinion that it is clearly superior to current 'next best' approaches for validating summative assessment in higher education (e.g. Rust, 2014; Times Higher Education, UK). The approach often referred to is the traditional *external examiner process*, such as that used in the UK and sometimes in Australia. Historically it has been argued that this enables accurate validation of assessment results and provides a sound basis for comparing standards and awards across institutions. Details of the theoretical basis for and workings of the model were recently published in the peer-reviewed international journal *Assessment and Evaluation in Higher Education* (Watty et al, 2014). While necessarily pragmatic, the model is conceptually and technically sound. Importantly, it has been shown to work well in practice, mainly because it is well grounded in existing academic cultural norms (e.g. affinity and collaboration between discipline-based peers) and its operational processes have been well designed, tested,

implemented and improved based on academic and professional peer critique.

While modest financial cost is a factor in the proper implementation of the model, there is an extremely strong argument that the value added would be well worth the cost. The principal component of this value would be real and much increased confidence that students' university results could be understood by reference to meaningful capability standards and that results from different universities (at discipline level, such as *accounting* or *finance*) could be sensibly compared. The opportunity costs of prospective decrease in reputation and standing of Australian higher education, if this kind of model is not adopted, need also to be factored in.

Concluding comments and the future

Expanding stakeholder buy-in and embedding change on a wider scale, particularly in BE, are likely to be the highest priorities for the people who are enthusiastic about sustaining the effects and momentum of the AM Project.

For addressing these related priorities, the model and processes developed by the Project are great strengths. They are receiving national and international commendations, principally because they are technically sound and have high efficacy for enabling authentic standards-referenced summative assessment and external validation of the standards being achieved. The model provides a credible linchpin, opportunity and clear guidance for facilitating important improvements in three critical components of high-stakes summative assessment.

1) How to accurately assess (judge) levels of student achievement or performance by reference to explicit discipline-level learning standards;

2) Provision of an effective means for the continuing calibration of external assessors, which is acceptable to academics, and which is a necessary condition for achieving suitable accuracy in high-stakes assessment.

3) As a result of 1) and 2), provision of a more sensible basis for comparison of achievement standards across institutions or programs along with consequential learning about how improvements in curriculum and teaching can be made.

In addition, if the use of processes similar to those developed by the AM Project became the norm across the higher education sector, Australia would have a much stronger basis for its claims about taking standards seriously and having the means in place to demonstrate this.

I suspect that 'politics', not the quality of the AM model, will be the biggest longer-term challenge to achieving wider buy-in and action. The politics I refer to relate to the formal government levels and the more circumscribed domains of universities and key stakeholders such as academics. In brief, arguments against significant change will ostensibly hinge on cost (for perceived return), aversion to increasing complexity, more important priorities, the belief that current practices are good enough, workload pressures, and philosophical-ideological strands such as the sanctity of the university's and the academic's roles and judgments.

In the shorter term BE in Australia has a great opportunity to be a trail blazer. Some disciplines in higher education already have quite rigorous means for assurance of graduate capability and performance standards (e.g. Medicine). However, from a technically sound evidence- based perspective, many disciplines have very weak approaches. There is clearly a chance to make a

mark nationally and internationally by adopting the highly credible and more rigorous approach to standards-referenced assessment developed by the AM Project.

The critical mass of people who are currently actively engaged in the Project or with its outcomes bring an enormous body of knowledge and 'how to do' capital. What is needed over the next two or three years to expand effects is high level championing and support by leading entities, particularly the ABDC, professional bodies like CAANZ and CPAA, and the OLT. Enabling financial resources will also be required, but in my opinion, the amounts needed would be modest particularly when the potential for return on investment is factored in.

My commendation of the AM Project could not be higher and I advocate strongly that interested parties provide as much material support as possible for well-conceived initiatives or entities that will sustain its momentum.

Appendix C

Feedback

The following are examples of comments from participants in the calibration workshops

As a result of participation in the Achievement Matters project, what information have you shared in your school/department in relation to:

Assessment tasks:

- Alignment of assessment with key courses to ensure as best where we can that TLO's are met by incorporating appropriate assessment

- In designing tasks, task validity is very important. More collaborative approaches are possible in designing tasks

- I have passed on information to my colleagues as to how better structure their assessment tasks, and encouraged them to make adjustments to their curriculum subtly

Curriculum:

- Use of material to design course mapping of topics and assessment up to program level

- Forum to inform academics how to map development of content and skills across programs

- Develop curriculum focused on learning activities to supplement knowledge

Learning Outcomes:

- Changed learning outcomes in unit to reflect national standards

- Mapping across programs

- Emphasise learning outcomes in units and student discussion

Program Design:

- I have been incorporating lessons learned into revisions at undergraduate and postgraduate levels

- Head of School has incorporated the strategy across the degree. Embedding the requirements from Year 1 to Year 3

- Mapped the learning standards across the Accounting degree so that we develop each at an introductory level, intermediate and meeting the standard by third year.

As a result of participation in the AM project what changes, if any, have you made?

Assessment tasks:

- Remapping of assessment tasks across programs
- Redesign of my capstone unit outline/assessment task to incorporate the standards
- Have the learning standards next to me when writing assignments

Curriculum:

- Used the ABDC workshop experiences in improving curriculum design
- Share learning standards with students
- Include teaching and resources and learning opportunities in my course to help them meet the standards in the assignments

Learning Outcomes:

- Restated learning outcomes to align better with the national standards
- Focus on developing learning outcomes at introductory developing and graduating
- Draft amendments to undergrad learning outcomes to reflect TLOs to Faculty

Program Design:

- Major changes to our undergrad programs to reflect TLOs in associated curriculum and assessment
- Redesign some of our programs
- Working with the MPA program director to embed standards in the program

Please share any thoughts you have in relation to how we might improve the AM calibration or live review processes.

Appendix D

Project dissemination activities

Information is provided about:

1. Major international presentations and seminars
2. Major national presentations and seminars
3. Publications from the project
4. Media stories where the project is mentioned

Major international presentations and seminars

Date	Location	Event type	Conference title	Presentation audience
28/8/14	Spain	Conference Presentation	European Association for Research in Learning & Instruction - Assessment SIG	European Association for Research in Learning & Instruction
6/7/14	New Zealand	Conference Presentation		AFAANZ
22/5/14	Estonia	Conference Presentation	European Accounting Association	European Accounting Association
18/1/13	UK (Skype)	Forum/Summit/Seminar	Development Program for Directors of Learning and Teaching	Association of Business Schools, and Higher Education Academy
21/10/12	Maui, Hawaii	Conference Presentation	24th Asian Pacific Conference on International Accounting Issues	
20/6/12	Amsterdam, Netherlands	Conference Presentation	Mastering Change, Improving corporate reporting and auditing	
20/3/12	USA	Conference Presentation	AACSB Assessment Conference	
14/12/11	UK	Meeting		Oxford Brookes University
14/12/11	UK	Forum/Summit/Seminar	Assessment Standards Knowledge Exchange	HE Academy

Major national presentations and seminars

Date	Location	Event type	Conference title	Presentation audience
30/9/14	Victoria	Conference Presentation	ACPHIS Conference	Deakin University, and Australian Council of Professor and Heads of Information Systems
26/9/14	SA	Conference Presentation	Peer Review of Assessment Network	University of South Australia

Date	Location	Event type	Conference title	Presentation audience
25/9/14	WA	Conference Presentation	Peer Review of Assessment Network	Edith Cowan University
18/9/14	Queensland	Conference Presentation	Peer Review of Assessment Network	Griffith University
17/9/14	NSW	Conference Presentation	Peer Review of Assessment Network	University of Western Sydney
16/9/14	ACT	Conference Presentation	Peer Review of Assessment Network	Australian National University
11/7/14	NSW	Conference Presentation	THE-ICE Roundtable Series VII	International Centre for Excellence Tourism Hospitality Events
10/6/14	NSW	Conference Presentation	OLT Conference	Office for Learning and Teaching
3/6/14	WA	Conference Presentation	Who are the Learning Leaders of Today?	The University of Western Australia
8/5/14	Victoria	Conference Presentation	MBA Directors Forum	MBA Directors Forum
28/2/14	ACT	Forum/Summit/Seminar	Universities Australia Conference - External peer review models for coursework degrees	Universities Australia
28/2/14	ACT	Forum/Summit/Seminar	Universities Australia Conference – Summit of Deans Councils	Summit of Deans Councils, Universities Australia
6/2/14	SA	Conference Presentation	ABDC Teaching & Learning Network	ABDC T&L Network
17/1/14	NSW	Forum/Summit/Seminar	Physiology retreat	University of Sydney
13/12/13	ACT	Conference Presentation	Closing the loop: CUBEnet and the future of biomedical education	
11/12/13	NSW	Forum/Summit/Seminar	Accounting Frontiers Forum	ICAA
26/11/13	WA	Conference Presentation	ANZANG - Leveraging and Harmonising Accreditation Efforts for Multiple Quality Assurance Authorities	ANZANG
18/11/13	Victoria	Conference Presentation	RMIT Educators Conference	RMIT
12/11/13	ACT	Conference Presentation	Higher Education Courses for the Professions in the Digital Age	Universities Australia
7/11/13	NSW	Workshop	Assessment Retreat	University of Sydney
18/10/13	NSW	Conference Presentation	Council of Deans of Nursing and Midwifery	Council of Deans of Nursing and Midwifery
11/9/13	NSW	Conference Presentation	Science L&T Committee	University of Sydney
9/8/13	Victoria	Conference Presentation	National Learning Outcomes Standards Forum	OLT and HESP

Date	Location	Event type	Conference title	Presentation audience
1/8/13	Victoria	Conference Presentation	Transforming Assessment in a Digital Era	
11/7/13	WA	Conference Presentation	Australian Business Deans Council Teaching and Learning Network Conference	ABDC
9/7/13	WA	Conference Presentation	Australian Council of Deans of Information and Communication Technologies Conference	Australian Council of Deans of Information and Communication Technologies
9/7/13	WA	Conference Presentation	AFAANZ Conference	AFAANZ
6/7/13	WA	Conference Presentation	Education Special Interest Group at AFAANZ Conference	AFAANZ Education SIG
5/7/13	WA	Conference Presentation	ANZCA conference	ANZCA
26/6/13	NSW	Conference Presentation	Transformative Higher Education - International Forum for Academics	CPA
2/5/13	Queensland	Conference Presentation	Testing Together	University of Queensland
26/4/13	Queensland	Forum/Summit/Seminar		QUT
19/3/13	Victoria	Conference Presentation	Accounting Educators Conference	RMIT University, and TEQSA
22/2/13	Victoria	Forum/Summit/Seminar	Advancing the Science Threshold Learning Outcome	Australian Council of Science Deans
5/2/13	SA	Conference Presentation	The Virtual University: Impact on Accounting Education	University of South Australia, and ICAA, CPA
31/1/13	Queensland	Forum/Summit/Seminar	ABDC Teaching & Learning Network	Central Queensland University
10/12/12	Victoria	Conference Presentation	Higher Education Research and the Student Learning Experience in Business Conference 2012	Melbourne University
6/12/12	NSW	Forum/Summit/Seminar	ICAA Department Heads Forum	ICAA
5/12/12	NSW	Forum/Summit/Seminar	University of Sydney Senate	University of Sydney
3/12/12	Queensland	Forum/Summit/Seminar	Tourism & Hospitality Education Futures	Council for Australasian University Tourism
25/10/12	NSW	Conference Presentation	Australasian Accreditation Network	AACSB as well as Australian and NZ business schools
24/10/12	ACT	Forum/Summit/Seminar	Professions Australia Accreditation Discussion Forum	AQF, TEQSA
4/10/12	NSW	Forum/Summit/Seminar	Inter-University Collegial Peer Review and Moderation in Law: Implications for Monitoring and Assuring Academic Standards	PR&M Project

Date	Location	Event type	Conference title	Presentation audience
27/9/12	NSW	Forum/Summit/Seminar	Australian Conference on Science & Mathematics Education	
25/9/12	NSW	Forum/Summit/Seminar	Strategic Advance	Australian Catholic University
19/9/12	SA	Conference Presentation	7th ERGA Conference	Adelaide, Flinders, UniSA
17/9/12	Queensland	Forum/Summit/Seminar	informa 3rd Annual Teaching & Learning Forum	
15/6/12	ACT	Forum/Summit/Seminar	The AQF: Implications, particularly for Coursework Masters	ANZAM
12/6/12	Queensland	Workshop	SCU Workshop	Southern Cross University
31/5/12	NSW	Workshop	UWS workshop	University of Western Sydney
23/4/12	NSW	Conference Presentation	Australian Learning and Teaching Fellows Forum	Australian Learning & Teaching Fellows
19/4/12	Victoria	Workshop	Deakin Workshop	Deakin University
23/2/12	Queensland	Workshop	Griffith Workshop	Griffith University
2/2/12	WA	Forum/Summit/Seminar	Teaching and Learning Forum	Murdoch University
31/1/12	SA	Forum/Summit/Seminar	CPA Business in Boardrooms	
9/12/12	Victoria	Workshop	RMIT Workshop	RMIT University
8/12/12	Victoria	Workshop	Monash Workshop	Monash University
14/11/11	VIC	Conference Presentation	RMIT Educators Conference	RMIT University
7/11/11	WA	Forum/Summit/Seminar	Institute for Teaching and Learning: Educating the Professions, New Curricula, New Pedagogies and New Technologies	West Australian Network for Dissemination
2/11/11	Victoria	Conference Presentation	Institute for Teaching and Learning: Educating the Professions, New Curricula, New Pedagogies and New Technologies	Deakin University
2/11/11	QLD	Forum/Summit/Seminar	Promoting Good Practice in Assessment Symposium	Griffith University
20/10/11	Victoria	Conference Presentation	Assessing Higher Education Performance	LH Martin Institute
28/9/11	NSW	Conference Presentation	National Learning and Teaching Forum	
27/9/11	NSW	Conference Presentation	CreatEd National Forum	Network of Associate Deans for Creative Education (CreatEd)
8/9/11	ACT	Conference Presentation	Quality and Standards Conference	ANU
31/8/11	Victoria	Conference Presentation	RMIT Expo	RMIT

Date	Location	Event type	Conference title	Presentation audience
12/8/11	WA	Forum/Summit/Seminar		UWA
11/8/11	NSW	Forum/Summit/Seminar		Academic Standards Coalition
5/8/11	SA	Symposium	UniSA - Property Economics	UniSA – Property Economics
14/7/11	Victoria	Forum/Summit/Seminar	CPA International Academics Forum	
7/7/11	Queensland	Forum/Summit/Seminar	ABDC Associate Deans T&L Network	ABDC Associate Deans T&L Network
4/7/11	Queensland	Forum/Summit/Seminar	TEQSA	
23/6/11	NSW	Forum/Summit/Seminar	Business Higher Education Round Table	
14/6/11	Victoria	Forum/Summit/Seminar		CPA

Academic and professional publications

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Freeman, M., Howieson, B., Hancock, P., Abraham, A., O'Connell, B., De Lange, P. and Watty, K. (2011). "Preparing for the brave new world of higher education", *HERDSA News*, December, 32(3), pp. 15.

Appendix E

SPARK^PLUS screenshots

Figure A. Screenshot - reviewer submission of judgement (orange bar) and justification (white box)

Figure B. Screenshot – small group reviewer results for interrogation prior to calibration workshop