

# CHAPTER 2

## Nine graduate capabilities, A highly diverse student body, A place to start

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### ABSTRACT

The global higher education environment is becoming increasingly complex with the internationalisation of curricula, development of graduate capabilities and the standardisation of measurement taking priority. This is coupled with increasing demands for employable graduates with sufficiently developed technical and soft skills to ensure workplace readiness. Educators are currently presented with an extremely complex environment. This article showcases a curriculum resource for Accounting that addresses such complexity by building the foundations for developing complex graduate capabilities for a highly diverse student cohort. The context in which the study takes place is described, highlighting the issue of assessment validity for complex graduate attributes that invariably encompass skills, dispositions and values – beyond technical knowledge. The chapter then draws on trans-disciplinary research and principles of best practice to describe and reflect on a framework used for the design and implementation of innovative assessment practice.

**KEYWORDS** graduate capabilities, assessment, accounting education.

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### INTRODUCTION

This article provides a reflective account of a larger project, funded through a Macquarie University Innovation and Scholarship grant. The aim was to create an assessment framework for complex graduate capabilities that would meet the national accounting academic standards and the Australian Qualifications Framework (AQF).

A distinctive feature of study at Macquarie University is the interdisciplinary learning experience where incorporating diverse units (subjects) in study programs is possible, encouraged and often required. The authors have identified a large first-year accounting unit within the Department of Accounting and Corporate Governance (ACG) as an ideal place to commence building the foundations for graduate capabilities. This unit was chosen for its integral position within introductory accounting, acting as a core unit within a number of degree programs and comprising a large student cohort (approximately 1000 students per semester). The

unit was first offered in Semester 2, 2010 servicing Computer Science, Engineering, Actuarial Studies, Applied Finance, Business Administration, Marketing, Creative Arts and Biology.

This unit consists of a diverse student cohort, with backgrounds outside of accounting and individual majors ranging from core business studies such as economics and marketing through to engineering and communication majors. Students comprise both full and part-time, with and without prior work experience, varying GPA levels and a high proportion of international students. Thus, the project provides a unique opportunity to explain the relevance of Macquarie graduate capabilities and emphasises their importance to many students from diverse disciplines at the commencement of their degree program.

While universities in general have provided graduate attributes on their websites, very little guidance is provided in terms of how to develop and assess them (Barrie, Hughes, & Smith, 2009). Thus, there is a need for innovative assessment approaches to address the issue. This project developed an innovative assessment framework that integrates peer feedback, critical self-reflection and proactive formative assessment to promote development of the Macquarie graduate capabilities and to assess student learning outcomes. Innovation is achieved through the incorporation of key educational theories used to support the development of a set of assessment and learning activities that target graduate capabilities.

The present assessment and grading system in ACG is essentially summative in nature and aims mainly at certifying knowledge acquisition. A recent mapping of unit guides, undertaken in 2012 in the department, shows evidence of an over reliance on invigilated assessment such as final and mid-semester examinations. Formative assessment, characterised by activities aimed at enhancing student learning processes through systematic feedback and progressive learning development (Carless, Slater, Yang, & Lam, 2011), is largely lacking. This is not unique to accounting education and has been identified as a prevalent issue in higher education (Boud & Falchikov, 2006).

## **DEVELOPING AND ASSESSING COMPLEX GRADUATE CAPABILITIES**

In general, graduate capabilities subsume knowledge and skills and extend to 'certain kinds of human dispositions and qualities' often making them difficult to develop and assess within degree programs (Barnett, 2006, p. 61). The characteristics of graduate capabilities are highly complex (Jones, 2009) and are to a large extent influenced by discipline context (Jones, 2010). The learning outcomes related to graduate capabilities are usually divergent, indeterminate and can rarely be specified fully (Knight, 2002). It is also posited that the learning of graduate capabilities is a long-term process, usually spanning several years (Knight & Page, 2007).

The accounting curriculum is largely content-based with a strong focus on the certification of knowledge. Sin and McGuigan (2013) argue that accounting academics are not ready to meet the challenge of incorporating graduate capabilities into the curriculum and assessing them validly and in defensible ways. Their view is supported more widely in a national study across disciplines (de la Harpe, Radloff, David, & Associates, 2009) which reports that only a minority of academic staff are able and willing to undertake the complex and sophisticated task of developing and assessing graduate capabilities.

Macquarie University's broad and encompassing graduate capabilities framework integrates the skills, knowledge, values and dispositions that the University aspires to for its graduates. These will enable students to contribute professionally to a rapidly changing environment. There are nine graduate capabilities in the framework and the University and each of its programs are committed to engender these capabilities in students.

While not all of the graduate capabilities can be taught in every unit, each student must be provided an opportunity to develop the full range of graduate capabilities during their candidacy. As of 2012, the unit guide ensures mapping of assessment tasks and learning outcomes to the relevant graduate capabilities. While mapping is important for transparency, there is no assurance that the capabilities are actually developed; furthermore, mapping does not, in itself, constitute sufficient evidence of meeting learning and teaching standards for external quality assessment and accreditation. The concept of graduate capabilities is

both complex and relatively new to the academic community (Barrie et al., 2009; de la Harpe et al., 2009). The authors therefore urge the provision of continuous professional development for staff and research to inform the design and development of quality assessment tasks that emphasise both the developmental process and outcomes (Price, O'Donovan, Rust, & Carroll, 2008).

A theoretical framework for developing and assessing graduate capabilities is presented in Sin and McGuigan (2013). It embraces a social constructivist perspective of learning and essentially requires a shift in the philosophy of learning from 'being taught' to student-centred and self-regulated learning. The framework has two critical elements. The first is student engagement with assessment and with each other in the learning process, whilst the second is the provision of a learning environment that is conducive to cooperation and engagement.

One of the principles adopted in this study is the design of the assessment and the associated learning activities to promote dialogical feedback among peers about the task and feedback on the quality of each other's work (Nicol, 2010). This enables an interactive exchange in which interpretations are shared, meanings negotiated and expectations clarified. The onus therefore, rests not solely on the teacher to transmit feedback, but for the students to critically reflect on and self-regulate their learning in a truly student-centred learning environment (Sadler, 1989). This type of feedback or complex appraisal is particularly relevant for supplementing the indeterminate and divergent learning outcomes of graduate capabilities (Sadler, 2010).

## **INNOVATIVE ASSESSMENT REDESIGN**

In 2012, a group-based assessment task adopting the framework principles was developed and trialled. The task aimed to develop the graduate capabilities of: research capabilities, effective communication, creativity, continuous learning and social and environmental responsibility. Various aspects of the student learning experience are reported elsewhere, however the intention of this chapter is to describe and reflect on the assessment activities and how they can provide a foundation for the future development of Macquarie University graduate capabilities for large and diverse cohorts.

The unit's overall assessment components comprised a series of invigilated tests (consisting 50% of final grade), unit course work participation (10%), group-based assignment (30%) and related oral presentation (10%). The redesigned assessment asked students to conceptualise an investment project that benefits society and/or the environment. Students were then asked to complete an independent loan application requesting funds to finance the project. The topic was interesting and relevant to the diverse student cohort in the unit, regardless of discipline background. In fact, such group diversity enhances the richness of ideas and discussion, with some very interesting and creative ideas emerging. Examples included a project for manufacturing a car powered with garbage fuel, another for growing and processing algae for use in oil manufacturing, convincingly arguing the projects viability and profitability.

A project gaining significant attention and led by a special needs student, discussed the upgrade of hospital facilities through the installation of functional MRI (fMRI) machines, clearly evidencing a vast amount of research completed on fMRIs, patient care and hospital needs. This was most impressive for first-year students and testimony that when educators are able to provide an opportunity and stimulate an area of interest or a passion, the limit for creativity, innovation and student engagement remains boundless.

A key feature of the assessment was provision for interim submissions, which required students to describe their project, the business entity and how they planned to collate diverse sources of information. Critical peer feedback was then sought prior to a classroom presentation. These presentations needed to incorporate that feedback and to clearly articulate the improvements that were made. The presentations were impressive and professionally executed. Students enjoyed this assessment immensely as they had the freedom to discover a common interest amongst group members, guidance and support to engage in constructive criticism, and encouragement to discover and develop their graduate capabilities. This resulted in a contextual appreciation of core business principles and their relation to specific discipline areas. Students were engaged, enthralled

and a sense of excitement prevailed. The authors observed informally a true collaboration and sense of friendship being developed amongst students, laying the foundations for lifelong learning. They are currently undertaking formal evaluation of the assessment tool and its use within the course, in order to make further enhancements and modifications.

## CONCLUSION

The higher education sector is a complex environment and there is enhanced pressure as a result of reforms and scarce resources. There is also the need to comply with detailed standards and guidelines for learning assurance. Attention has been drawn to the challenges associated with developing complex graduate attributes, which are diverse, indeterminate and require quality judgement from multiple perspectives. This case study furthers development of graduate capabilities, illustrating that academics should not succumb to the pressures of the current resource scarcity and demanding education environment. Nor should they compromise professionalism and integrity under the weight of pressing compliance requirements. Perhaps a solution lies in the need to be innovative and think collaboratively to bring out the best in ourselves as educators.

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## REFERENCES

- Barnett, R. (2006). Graduate attributes in an age of uncertainty. In P. Hager and S. Holland (Eds.), *Graduate Attributes, Learning and Employability* (pp. 49–65). Dordrecht: Springer Verlag.
- Barrie, S., Hughes, C., & Smith, C. (2009). *Final Report of the National Graduate Attributes Project: Integration and Assessment of Graduate Attributes in Curriculum*. Strawberry Hills: Australian Learning and Teaching Council Ltd.
- Boud, D., & Falchikov, N. (2006). Aligning assessment with long-term learning. *Assessment and Evaluation in Higher Education*, 31(4), 399–413.
- Carless, D., Slater, D., Yang, M., & Lam, J. (2011). Developing sustainable feedback practices. *Studies in Higher Education*, 36(4), 395–407.
- De la Harpe, B., Radloff, D., David, C., & Associates. (2009). *Final Report of the b-Factor Project: Understanding Academic Beliefs about Graduate Attributes: The b Factor Project*. Strawberry Hills: Australian Learning and Teaching Council Ltd.
- Jones, A. (2009). Redisciplining generic attributes: the disciplinary context in focus. *Studies in Higher Education*, 34(1), 85–100.
- Jones, A. (2010). Generic attributes in accounting: the significance of the disciplinary context. *Accounting Education: An International Journal*, 19(1–2), 5–21.
- Knight, P. (2002). *The Assessment of Complex Learning Outcomes*, keynote address at the 3<sup>rd</sup> Global Congress on Engineering Education, Glasgow, Scotland, UK, from 30 June to 5 July 2002.
- Knight, P., & Page, A. (2007). *The Assessment of 'Wicked' Competences. A Report to the Practice-based Professional Learning Centre for Excellence in Teaching and Learning in the Open University*. Retrieved from <http://www.open.ac.uk/cetl-workspace/cetlcontent/documents/460d21bd645f8.pdf>.
- Nicol, D. (2010). From monologue to dialogue: improving written feedback processes in mass higher education. *Assessment and Evaluation in Higher Education*, 35(5), 501–507.

Price, M., O'Donovan, B. Rust, C., & Carroll, J. (2008). Assessment standards: a manifesto for change. *Brookes eJournal of Learning and Teaching*, 2(3), 1–10.

Sadler, R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18, 119–144.

Sadler, R. (2010). Beyond feedback: developing student capability in complex appraisal. *Assessment and Evaluation in Higher Education*, 35(5), 535–550.

Sin, S., & McGuigan, N. (2013). Fit for purpose: a framework for developing and assessing complex graduate attributes in a changing higher education environment. *Accounting Education: An International Journal*, 22(6), p. 522-543. Special Issue: 2013 RMIT 3<sup>rd</sup> Annual Accounting Educators' Education Conference.

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