

Realising the potential: Assessing professional learning through the integration of ePortfolios in Australian business education

Final Report 2016

Deakin University – Lead Institution

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Project Website <http://www.buseport.com.au/>

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List of acronyms used

AACSB	The Association to Advance Collegiate Schools of Business
AAEEBL	The Association for Authentic, Experiential and Evidence-Based Learning
ABDC	Australian Business Deans Council
ADTLs	Associate Deans of Teaching and Learning
HE	Higher Education
HEI	Higher Education Institution
T&L	Teaching and Learning
TEQSA	Tertiary Education Quality and Standards Agency
AQF	Australian Qualifications Framework

Executive summary

This report presents the findings of a significant OLT-funded Australian study on the use of ePortfolios in business education in Australian universities. The project explores the potential of ePortfolios as a learning paradigm and pedagogy to meet the challenges that business education faces. These challenges include the necessity to continuously innovate and cater to the educational expectations of a generation of tech-savvy students, and the recruitment expectations of graduate employers. This report highlights the implications for ePortfolio pedagogy moving forward, and the potential of ePortfolios to enhance student learning outcomes in the 21st century business education context. Importantly, while the focus is on business education, the resources, findings and recommendations may be applicable in other disciplines.

Below we list our key recommendations, followed by an overview of key outputs that have informed these recommendations.

KEY RECOMMENDATIONS

1. Given that business education is a diverse and eclectic field, it is essential to scope the implementation of ePortfolios by designated program and/or discipline major.
2. Greater emphasis needs to be given to ePortfolios in the context of business education to define and deliver quality learning experiences designed to enhancing students' career preparation and employability prospects.
3. ePortfolio adoption should be seen in relation to the increasing expectations of external stakeholders for higher quality business education.
4. ePortfolios need to be strategically designed into curricula in ways that maximise student motivation to create high-quality learning artefacts/exhibits. An ideal time to consider the strategic adoption of ePortfolios is when programs are undergoing new development, review or renewal.
5. The value of ePortfolios for internal and external stakeholders needs further investigation, with particular focus on how ePortfolios might assist the recruitment process of business graduates.
6. Effective use of ePortfolios is as much about mindset as it is about the mechanics of use. Promoting the potential of ePortfolios as a key strategic professional learning and career-development strategy, with students holding 'personal brand equity', holds great potential in promoting the benefits of use to such an audience. A significant part of this is the need to convey to academics the value of ePortfolios to enhanced student learning and further, to educate business academics about the nature and value of ePortfolios.

Derived from an extensive review of the literature and the design and implementation of the major ePortfolio case applications at three partner institutions, the project has produced a number of key deliverables that have informed our recommendations, in addition to this formal report.

1. The *Business Education ePortfolio Professional Learning Capabilities Assessment Framework*

This framework enables the realisation of the full potential of ePortfolios to enhance the student learning experience in business education. The development of the Framework was an iterative process informed progressively from the literature, case studies as the project evolved, stakeholder surveys and feedback at two Academic Leaders' forums held in Melbourne (2014) and Sydney (2015). The Framework is provided, in full, in Appendix D. Below we provide the principles of ePortfolio implementation derived from the Framework.

PRINCIPLES OF IMPLEMENTATION

1. ePortfolios need to engage students in learning important business education professional capabilities.
2. ePortfolios need to be integral to the design of business education curriculum.
3. The preparation of ePortfolios for assessment must be explicitly factored into teaching and student workload relating to curriculum design, development and actual teaching and learning processes.
4. ePortfolios need to be developed by students in partnership with their learning facilitators and support staff.
5. Students and learning facilitators need to be properly inducted into the purposes and mechanics of developing their ePortfolios.
6. Learning facilitators need to have a strong commitment to the value of ePortfolios in professional learning, employability and career development.
7. ePortfolios should encourage students to develop a strong sense of personalised ownership of their learning through constructive reflective assessment processes.
8. Students' ePortfolio contributions should receive constructive, timely, reflective, and fair formative and summative feedback.
9. ePortfolios need to be valued by students in the process of securing graduate employment.

2. Institutional Case Studies

A significant aspect of this project was its canvassing of ePortfolio implementation across three case studies at two HEIs and a Portfolio (not electronic) in one further case study at one HEI (Macquarie University). These variations in context consisted of:

- a whole-of-program approach in a management degree (Deakin University)
- a whole-of-major approach (in Accounting at Deakin and Accounting at the University of Southern Queensland), and
- an Accounting capstone unit approach (Macquarie University)
- a capstone Work Integrated unit (University of Southern Queensland)

This broad approach has enabled the project to not only flesh out the nuances across implementation approaches, but also to develop a suite of recommendations for educators and HEIs keen to adopt an ePortfolio pedagogical approach. To enhance dissemination, the cases have been used to highlight various aspects of the Framework, and contain links to relevant professional development resources. Further, websites have been developed for each case study with the view to providing timely and engaging access to practical

resources, including templates for those considering ePortfolio implementation in business education.

3. Stakeholder Findings

The analysis of the four case studies across the three institutions was based on a variety of data collection sources that included student focus groups and surveys, and in-depth interviews with academic staff and employers. In addition, the project conducted a baseline business education sector-wide survey of academic leaders' perspectives relating to ePortfolio benefits and implementation issues. This collection of data from all stakeholders (students, teachers, academic leaders, employers) has elicited a wealth of quantitative and qualitative data that can be used to enhance student learning experiences and outcomes. The findings are summarised below:

- ***The Academic Leader perspective.*** While academic leaders highlighted the importance of properly developing and assessing professional capabilities in business education and the benefits of using ePortfolios to help do so, they also highlighted a number of barriers to effective large-scale implementation: the need for more general eLearning adoption; accessibility issues with technology; the anecdotal evidence that ePortfolio purposes may be carried through social media/networking technologies rather than institutionally supported, formally designated 'ePortfolio' solutions; concerns with assessment; lack of commitment to embedding systematically graduate attributes across Faculty programs; and, the lack of an across-the-board institutional view on the deployment and use of ePortfolios.
- ***The Employer perspective.*** While the majority of employers interviewed did not have knowledge of ePortfolios, once explained to them, all employers saw their potential in the recruitment process. This potential was seen to lie in offering a better 'feel for the person', 'bringing the graduate to life', and providing greater insight into graduate attitudes and experience, and overall insight into graduate capabilities and employability. They viewed ePortfolios as a way to extend and enhance traditional recruitment processes to some extent. Importantly, none of the employers had *in-depth* knowledge of ePortfolios before the interviews which points to a clear need for awareness-raising amongst employers.
- ***The Teaching staff perspective.*** The staff experience with the implementation of ePortfolios reveals that while ePortfolios have the potential to innovate, enhance and transform education, implementation is not without its challenges. Staff pointed to a raft of challenges but the key message relates to the capacity building of both staff and students; with capacity building in all aspects necessitating both a willingness and the ability to engage in change. Adequate training and support was seen as critical by all interviewees. The academics agreed with the need for ePortfolio implementation to be embedded across a course as opposed to just a unit, and they also stressed the importance of a whole-of-team approach.
- ***The Student perspective.*** Half the students were found to be resistant and expressed negative feelings toward the ePortfolio implementation. Students indicated they found them difficult to use, time-consuming, and that not enough instruction was provided. Their feedback points to a need for greater explanation about the

pedagogical underpinnings of ePortfolios and greater capacity building. Half of the students, however, did enjoy using ePortfolios. ePortfolios were found to help students understand themselves better as learners and they saw the benefits of ePortfolios over a traditional teaching approach. While recognising the benefits of reflection, the majority of students commented on how difficult self-reflection was. Students also generally failed to see the benefits of ePortfolios to employability and this points to the need for greater explanation surrounding the benefits and purpose of the ePortfolio approach.

4. The Project Website - www.buseport.com.au.

Though not an initial deliverable, the value of providing readily accessible, practical resources for educators considering ePortfolio implementation was quickly realised. The project team have produced the *ePortfolio in Business Education* project website with practical resources, templates, discussion papers, staff capacity building guidance and further information for educators who seek ePortfolio implementation. While business discipline-specific, the resources are relevant across other disciplines and contexts.

In summary

Across this two-year project we have witnessed increasing interest from educators about the potential of ePortfolios to enhance student learning and employability prospects in business education. We are under no illusions that there are challenges ahead. However, the evidence-based key recommendations, principles for implementation, case studies, stakeholder feedback and website presented in this report provide resources and support for those with the foresight to embrace ePortfolios in education.

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Table 1 Summary of Framework *Page 14*

1 | Project Overview

The *ePortfolios in Business Education* project sought to explore and realise the transformative potential of ePortfolios in business education. In the current higher education (HE) context, educators¹ and higher education institutions (HEIs) are increasingly looking for innovative ways to enhance education through technology, and the importance of advancing change and innovation in teaching and learning (T&L) cannot be overstated (Johnson et al., 2015). Given their potential to develop engaged, reflective lifelong learners, and develop and showcase employability, it is not surprising that ePortfolios are increasingly being used in HEIs around the globe. For example, 54 per cent of students in the U.S. and 52 per cent of students in Canada report having used them in their studies and recent reports indicate a consistently growing trend in the uptake and use of ePortfolios since 2010 (Educause, 2013; Brown, Chen & Gordon, 2012).

In the Australian context, increasing attention is being paid to ePortfolios in education and their potential to enhance student learning (Coleman, McKenzie & Wilkinson, 2015). While ePortfolios are used extensively in some disciplines, business has traditionally been slow to embrace and realise their potential. Using ePortfolios in business education not only helps students prepare for careers in the knowledge economy (AAEEL, 2014), but also equips them to operate in the new, complex 21st century business world. Fundamentally, the ePortfolio pedagogy has the potential to be a transformative approach to promote integrative and holistic learning as well as a powerful showcase tool of professionalism and employability.

This project is the first national Australian study investigating the comprehensive integration of ePortfolios in business education. Given the large and diverse student populations undertaking business courses, and the growing desire to secure international accreditation for business programs, the fundamental benefit of this project lies in its advancement of the design and use of ePortfolios, focused on enhancing the professional capabilities of business graduates.

ePortfolios are labelled as Learning and Employability Portfolios. The focus is on the scaffolded learning of personal and professional capabilities through the formative stages of a course, then transitioning to a focus on employability in later stages in preparation for graduate employment.

Through the use of ePortfolios, business students can be provided with a more integrated and holistic learning experience, which enhances decision-making and professional judgement abilities of future business leaders operating in the complex 21st century business world. These enhanced judgement and decision-making capabilities take on special significance given the complex current social context within which business finds itself.

The resources from this project can support academics in business education to design into the curriculum, and effectively use, ePortfolios and associated technologies in assessing

¹ This report refers to staff, academic staff, teaching staff, support staff, educators, and learning facilitators throughout. These labels are used interchangeably and represent both academic and non-academic staff.

student learning and developing and showcasing professionally-based capabilities. The project outcomes provide benchmarks for best practice and provide practical resources for intentionally and meaningfully embedding ePortfolios into the curriculum. ePortfolios are a key means for integrating student learning across the curriculum and, therefore, creating a holistic learning experience.

With a focus on practical outcomes, the project has produced a range of resources and publications that will be of use to those considering ePortfolios in their teaching and learning. It has developed a practical assessment Framework to assist academics considering using ePortfolios. This Framework was rigorously tested through project team and reference group feedback, and two national Forums attracting a broad representation of relevant parties in the sector. The Framework both informed, and was informed by, the development of the case studies that detailed ePortfolio implementation across three HEIs and across a range of contexts.

1.1 Deliverables

This project has developed a practical *Business Education ePortfolio Professional Learning Capabilities Assessment Framework*, with supporting professional development resources and illustrative case studies, to realise the full potential of ePortfolios in enhancing the quality of student learning in business education. One of the most significant aspects of this project was its ambitious canvassing of ePortfolio implementation across three HEIs and various contexts consisting of three major curriculum integration approaches: a whole-of-program approach; a whole-of-major approach; and, a capstone unit approach. A cornerstone of the framework was the identification of the following 13 professional capabilities that can be developed and assessed with and through ePortfolios: professional judgement, problem solving, communication, teamwork, leadership, digital literacy, self-management, creativity and innovation, entrepreneurship, social responsibility, cultural awareness, sustainability, and ethics. The full details of these capabilities can be found in Appendix D.

The project team collected extensive data from a range of key stakeholders involved and affected by ePortfolio implementation: employers, academic leaders, academic teaching staff and students. This report provides the data to emerge from these sources. Importantly, the project has developed a website (www.buseport.com.au) to provide others with a range of practical resources to assist them in the implementation of ePortfolios.

1.2 Methodology

The project adopted an action learning/action research methodology involving a broad range of data collection methods and participants. The data collection and analysis approach for each of the stakeholder groups are outlined below, as is the methodological approach used to develop *The Business Education ePortfolio Professional Learning Capabilities Framework* and case studies.

1.2.1 The Framework (see Appendix D for full details)

The starting point in developing the *Business Education ePortfolio Professional Learning Capability Framework* was identifying seven key issues related to the project's purposes and scope:

- 1) *Why ePortfolios?*
- 2) *How should ePortfolios be integrated in the business education curricula?*
- 3) *Where and when should ePortfolios be integrated in the business education curricula?*
- 4) *What should be in ePortfolios?*
- 5) *How should ePortfolios be judged and valued, including who should do it?*
- 6) *How should ePortfolios use be supported institutionally?*
- 7) *How should ePortfolios use be supported at the program level?*

The seven issues were then examined in four major position papers:

- *Position Paper 1: The Nature, Scope and Aims of Business Education: Towards Transforming the Student Learning Experience through ePortfolio Assessment*
- *Position Paper 2: Educational issues in integrating ePortfolio assessment in business education*
- *Position Paper 3: The "e" in ePortfolios*
- *Position Paper 4: Pedagogy and ePortfolios: Purpose aligned to design (or the why and how).*

These papers informed the development of the first draft of the Framework and full abstracts are available on the project website (www.buseport.com.au). The Framework, in turn, informed the development of the institutional case studies. The first major iteration of the Framework was considered at the first major national project Forum held at the end of the first year of the project (September, 2014). In the second year, the case studies continued to inform the development of the Framework, with an advanced version of it considered at the second major national project Forum near the end of the project. Throughout the project, the Framework shaped and was refined by the developing descriptions of the case applications of ePortfolios in the field and the ongoing contributions of team and reference group members, and the independent evaluator.

1.2.2 Institutional Case Studies

Using the Framework as a guide, each senior member of the team trialling the ePortfolio approach at each of the three institutions prepared site case studies to document their experiences of mainstreaming ePortfolios. The original intention within the project was for the Macquarie Accounting Capstone unit case study to make use of ePortfolio technology and implement this within its unit. However, based on the unit's pedagogy, its assessment design and requirement for physical interaction between students and facilitators (as evidenced through the creation of artwork, sculpture design and classroom discussion) it was deemed at this stage that the 'e' was not a significant driver in the use and creation of portfolio-based assessment. Whilst the intention to move to an 'e' platform is still very much in the mind of the project partner it is interesting to note a strong student reaction to the physical creation of a more tangible portfolio of work. As evidenced in the student

interviews, students appreciated that it was a portfolio and not an ePortfolio in that it required students to 'put something together' and was 'a different way of thinking'. Some students said they 'hate things online' and preferred having something 'tangible to work on.'

These variations in context (reported in each of the case studies in Section 5) provided a richness to the project and consisted of:

- a whole-of-program approach in a management degree (Deakin University)
- a whole-of-major approach (in Accounting at Deakin and Accounting at the University of Southern Queensland), and
- an Accounting capstone unit approach (Macquarie University).
- a capstone Work Integrated unit (University of Southern Queensland)

Each team member was provided a list of sub-headings drawn from the Framework which provided an organising structure for their case study. These included: Purpose, Context, Stakeholders, Design, Implementation, Assessment, Evaluation, Improvements, and Reflections.

1.2.3 Survey of Business Academics

An online survey of 100 Academic Leaders of business courses was carried out across Australia to gauge their current views and activities relating to ePortfolios in the business curriculum (see www.buseport.com.au). The survey targeted three major academic leadership groups in the business education sector: Associate Deans, Teaching and Learning (or equivalent); Program/Course Directors; and Subject/Unit leaders. Survey respondent selection and administration was facilitated through the Australian Business Dean's Council (ABDC) Teaching and Learning (T&L) Network. Once potential participants were identified, they were contacted via an email inviting them to participate in the project survey, and to identify seven academic colleagues. Academics who were nominated by their Associate Deans were sent a recruitment email and Plain Language Statement inviting them to participate in the anonymous online survey. We received 54 usable responses, representing a response rate of 54%, against the number of surveys administered.

1.2.4 Employer Interviews

Telephone interviews were carried out with 14 employers broadly guided by a question schedule (see Appendix H). The employers were drawn from Faculty and School Advisory Board Members and personal contacts. Employers were sent a recruitment email inviting them to participate in a 15 minute telephone interview.

1.2.5 Academic Teaching Staff interviews

Interviews with eight staff involved in the teaching of units in which ePortfolios are used, selected from the three institutions, were also undertaken, broadly guided by a question schedule (see Appendix F). These staff were identified by course directors or their equivalent and directly sent a recruitment email.

1.2.6 Student focus groups and online survey

Using a mixed-methods data collection approach, both focus groups and online surveys were carried out with students. A Focus Group was undertaken with eight students from

Macquarie University which was guided by a broad question schedule (see Appendix J). These students were business students who had been involved in the Capstone Unit in which portfolios were being trialled.

Given a lack of uptake for focus groups at Deakin University and the University of Southern Queensland, online surveys were developed using SurveyMonkey and carried out at Deakin and USQ. Eight students who participated in the trial of ePortfolios at the University of Southern Queensland completed the online survey, while 156 students participated in the Deakin survey. Both online surveys used the same question schedule as that issued in the Macquarie Focus Group (see Appendix J). The analysis of the data adopted a general inductive approach delineated by Thomas (2006). Themes and categories were checked by the project leader to ensure validation of inductive coding and data analysis.

2 | Literature Review

The literature review provided in this report is informed by the four position papers developed for the project. It draws on the wide body of literature surrounding ePortfolios in higher education, and draws on pertinent studies from a range of disciplines, not those just limited to business.

2.1 What is an ePortfolio?

Pedagogically, ePortfolios are used to enhance student learning and teach students to become self-reflective, critically engaged lifelong learners. An ePortfolio is an electronic collection of meaningful artefacts which provides evidence of learning, competencies and employability. According to Light, Chen and Ittleson (2012), ePortfolios are a 'process of reflecting on the growth of one's knowledge and capabilities over time with an emphasis on metacognition ... by intentionally providing structured time and space for learners to consider and document the process of their learning and not just the product' (p.11). The learning potential of ePortfolios, however, is not their only benefit; they are also useful in showcasing and developing employability. That is, ePortfolios allow for the personalised curation of artefacts to evidence skills requirements and competencies to potential employers. While definitions surrounding ePortfolio differ (see Chen & Black, 2010; Johnsen, 2012; Rowley & Dunbar-Hall, 2010; NLII, 2004; ePortfolio Portal, 2004; The E-Learning Framework, 2004), they are described by The Australian ePortfolio Project (2008, p.3) as having the following characteristics:

- A repository for artefacts
- A means of accessing personal information, perhaps held in distributed databases
- A means of presenting oneself and one's skills, qualities and achievements to others
- A means of collecting and selecting assessment evidence
- A guidance tool to support review and choice

- A means of sharing and collaborating
- A means of encouraging a sense of personal identity

Globally, there is debate on both the type of software that can or should be considered as an ePortfolio technology as well as which is the most effective for achieving the learning outcomes. The debate surrounding the latter will be affected by numerous factors including the complexity of the outcomes, the proposed focus (internal, external or industry) and institutional constraints. The debate has become more complex with the advent of social/professional media networking tools that can, at least in part, fulfil some of the purposes of ePortfolios, albeit such environments cannot be closely controlled by the educational institution.

Business education disciplines can prioritise the acquisition of technical, procedural knowledge. ePortfolios serve as a vehicle to powerfully broaden this thinking and, ultimately, grant business graduates greater ability to engage in critical thinking, self- and peer-reflection, and creative problem solving. ePortfolios can allow teachers and learners to approach business education in a new way. The need for this has been brought to light in recent studies surrounding employer perceptions of business graduates and their suite of skills. In the Australian context, the BIG4 corporate accounting giants (that is, KPMG, PWC, Ernst & Young, and Deloitte) have indicated that soft skills are now, in fact, 'valued more than technical ability' (Elder, 2015). The national managing partner for KPMG observes, 'Because the internet provides a great storehouse of easily accessible knowledge, 'having big parts of your brain storing technical stuff is going to be less valuable in the world of the future,' she says. 'How you collaborate, solve problems creatively and authentically lead people will matter more' (Elder, 2015).

The ePortfolio paradigm thus offers a unique approach to developing and showcasing a range of employability skills that employers are currently seeking. More than that, it has the potential to transcend the technical focus of traditional business education approaches.

2.2 ePortfolios in education

ePortfolios continue to grow and evolve in a variety of ways and across countries all over the world (AAEEBL, 2014). Their increasing popularity in higher education is seen in the growing number of networks and organisations designed to promote their use (AAEEBL, 2014), and they are already widespread in some disciplines, including Medicine (Wald et al., 2015), Arts (Wuetherick & Dickinson, 2015), Teaching (Oakley, Pegrum & Johnston, 2013), and Nursing (Andrews & Cole 2015). The Vocational Education and Training (VET) sector has gone so far as to adopt a national ePortfolio approach to assist students to pursue educational pathways with ePortfolios being a way to manage evidence of student learning (National VET E-learning Strategy, 2013). While popularised in many contexts, their use remains limited in business education (Coffey & Ashford-Rowe, 2014).

2.3 Why ePortfolios?

The research on ePortfolios builds on a large body of work promoting portfolios as both a formative and summative assessment tool in higher education (Wuetherick & Dickinson, 2015). This prior research points to the many benefits of portfolios, including their potential to track learning over time, promote and deepen self-reflection, encourage student-centred learning and foster connections between process and product (Shulman, 1998).

Recent years have seen growing interest in electronic learning portfolios (e-portfolios) as a tool to support student learning across higher education. The concept of an e-portfolio is multifaceted — it is a technology, a pedagogical approach, and a process, as well as a product. Its purpose can range from tracking development within a program to finding a job or monitoring performance. (Chen & Black, 2010, p. 1)

The literature around the transformative potential of ePortfolios reveals varying perspectives all aligned to improved student learning experiences and outcomes. These include: making the shift from teaching-directed to student-directed learning (Cochrane et al., 2012); creating a multi-centric learning space (Ramirez, 2011); creating an opportunity for work to be continually and meaningfully revisited, revised, and reflected on (Goldsmith, 2007); archiving learning and progress; and, teaching students to curate for an audience (Hughes, 2008). These factors constitute a powerful shift in education – and business education particularly.

The following section provides a broad overview of the literature around the key transformational aspects of ePortfolios including: skills and competencies; reflection; identity; active learning/student-centred engagement; employability; and assessment.

2.3.1 Skills and competencies

The literature points to a broad range of skills and competencies fostered by ePortfolio use. According to Kabilan and Khan (2012), and others (Goldsmith, 2007; Meyer et al., 2011; Lowenthal, White & Cooley, 2011; Mummalaneni, 2014; Barrett, 2007; Perry, 1998; Zellers & Mudrey, 2007) ePortfolios facilitate a range of competencies and benefits including:

- Active learning skills
- Goal setting (education and career)
- Independent learning/autonomy
- Collaborative learning
- Cross-curricular competencies
- Interpersonal communication skills
- Self-assessment skills
- Self-evaluation skills
- Self-regulating skills
- Computer skills
- Work readiness
- Lifelong learning
- Self-management
- Higher order thinking
- Self-awareness

2.3.2 Reflection

Reflection is seen as the “central pillar” of the ePortfolio learning approach (McAllister et al., 2008). Lopez-Fernandez and Rodriguez-Illera (2009) claimed that ‘the main role of

ePortfolios is to enhance learning through reflection' (p. 609). Research points to the difficulty of reflection for students and the need for appropriate guidance and instruction to help students through the reflection process. As Kabilan and Khan (2012, p. 1018) explained, reflection is not a skill that students 'learn or gain automatically'; rather, it 'has to be fostered systematically'. Buckley et al. (2009) shared this view, claiming that while ePortfolios 'encourage students to engage in reflection, the quality of those reflections cannot be assumed' (p. 341). In order for the ePortfolio approach to reach its full potential, Granberg (2010) insisted that students need the appropriate training and support in their reflections. Guidance by teachers in terms of reflection is thus critical to enhanced learning and successful use of ePortfolios (Duque et al., 2006; FitzPatrick & Spiller, 2010).

Beyond just the appropriate instruction, teachers also need to ensure reflective exercises are scaffolded in terms of degree of difficulty. Kabilan and Khan posited (2012), 'Each reflection should be more difficult, critical and insightful than the previous one, and as such, those reflections will demonstrate their progressive effort' (p. 1017). As Johnsen (2012) attested, 'students do not always make new or productive connections that lead to knowledge. Simply depositing artefacts in a space does not represent learning. This has been an important point to make with students at all stages of creating the ePortfolio' (p. 144). Johnsen (2012) concluded that a lot of support and time must be given to students.

2.3.3 Employability

ePortfolios are an ideal method of assessing professional development and allow for matching of the student's progress against professional criteria over time (David et al., 2011). They also allow professional development post-graduation to be assessed progressively and at different stages of their career. Jarvinen and Kohonen (1995), like many, saw portfolios as a way to promote professional development in higher education. Smith and Tillema (2003) argued that all portfolios—whether dossier, training, reflective or personal development portfolios—enhance professional development. However, they also found that the 'higher the stakes of assessment of the portfolio, the less valuable it becomes for professional development purposes' (p. 646).

2.3.4 Lifelong learning

Research points to the importance of lifelong learning in the current HE sector. Whittle and Poole (2015) went so far as to suggest, 'We are now in the era of "lifelong learning." Lifelong learning refers to the continuous building of skills and knowledge throughout one's life (Bozorgmanesh et al., 2012). In its promotion of the processes of collection, curation, continual review and reflection, ePortfolio as a learning approach has been found to fundamentally support the educational vision of lifelong learning (Cambridge, 2010).

2.3.5 Identity

Johnsen (2012) suggests that while the technologically savvy learners entering higher education are *au fait* with social media and technology, they may need to be taught the difference between their academic and personal selves—'specifically the academic self that asks them to move beyond short, personal posts or responses...to integrate new information in a critical or thoughtful way' (Johnsen, 2012, p. 146). Ideally, instructors should 'continually guide students in thinking about how they represent themselves' (Johnsen, 2012, p. 146). Clark (2010) suggests that ePortfolios offer a platform from which

students can consider questions surrounding digital identity, ownership of their identities, and the nuances of crafting an identity with a particular audience in mind. This enables students to think about how they operate within different communities, and their identities across course, college and the world (Clark, 2010) (also see Bauer, 2009; Clark, 2010; Johnsen, 2012; Ramirez, 2011).

Personal branding has featured prominently in the literature and populist commentary since the 1990s (Cupid & Wallace, 2013), and is seen as a vital tool in self marketability and promotion, particularly in relation to employability. Many, such as Lair, Sullivan and Cheney (2005), view personal branding as a market-appropriate response to contemporary communication and employment climates. While developing ePortfolios, students are required to reflect on their personal and academic identities, the public/private nature of their information, and consider their audience (Clark, 2010). It is not surprising therefore that ePortfolios are increasingly seen as a way to develop and explore issues of professional identity (Johnsen, 2012).

2.3.6 Assessment

According to Klenowski (2000), ePortfolios are one of the most effective tools in understanding a model of assessment that can foster independent learning, self-evaluation, reflective practice, organisation, meta-cognition and teacher-learner partnerships. These processes, according to Kabilan and Khan (2012), provide a 'lucid set of criteria for evaluating actual learning outcomes' (p. 1009) (also see Carmean & Christie, 2006). Self-analysis and self-reflection, they suggest, are the two 'most integral characteristics in e-portfolios' (Kabilan & Khan, 2012).

ePortfolios importantly lend themselves to authentic assessment. This means that rather than just tests with questions, they have the potential to evaluate students 'on how well they perform messy, real-world, intellectually challenging tasks' (Goldsmith, 2007, p. 33). By replacing or complementing traditional assessment methods (tests, etc.) with ePortfolios, the learning becomes a 'search for knowledge' and 'an element of ongoing enquiry', 'rather than simply a means to an end' (Harland, 2005, p. 336); that is, to achieve a certain mark.

No longer are students tempted to glance at their graded paper and, seeing a big red C at the top, toss the essay into the trash along with the teacher's careful comments. Rather, feedback on graded essays becomes formative, providing information about possible future revisions for including that essay in the final portfolio (Desmet et al., 2008, p. 16).

Assessment which requires students to continually and meaningfully (re)engage with their portfolios enhances the learning process and allows ePortfolios to be utilised as authentic assessment (Goldsmith, 2007). Others have similarly pointed to the advantages that ePortfolios offer as an assessment tool. For example, ePortfolios enable teachers to tie 'several disparate assignments together' (Mummalaneni, 2014, p. 45). They also 'provide an extremely powerful means for developing stories of deep learning through an increased range of evidence such as text, audio, narration and digital video when compared with the more limited paper-based forms of assessment evidence' (Finger and Jamieson-Proctor,

2009, p. 69). They are said to offer ‘value well beyond the assessment process’ (Poot and Austin, 2011, p. 1017).

Reliability of assessment is a complex and ongoing challenge for all (Driessen et al., 2005; David et al., 2001), especially when using educational technologies as is done with ePortfolios. In order to enhance the reliability of portfolios as an assessment tool, Meeus, Van Petegem and Engels (2009) suggested: using a common assessment protocol (i.e. prior moderation) and a common checklist of assessment criteria; holistic marking; adequate training of assessors; and the use of various assessors (retrospective moderation). Each of these factors is important in establishing the reliability of all types of assessment, not just those involving an ePortfolio.

2.3.7 Student-centred learning

ePortfolios cater to a generation of students who are ‘more contented with physical or virtual experiential activities that engage them and, maximise their rich sensory that encourages learning by doing rather than by telling or reading’ (Kabilan & Khan, 2012, p. 1010). Through the use of ePortfolios, students develop a self-awareness of their strengths and weaknesses. They are prompted to take ownership of their learning, be able to set goals, understand their achievements, and take responsibility; ultimately encouraging students to be passionate and self-directed learners.

Rather than the teacher doing so much of the work and therefore learning more than anyone else in the class, many teachers have found ways to transfer initiative and responsibility to students ... Once the student has more responsibility for her own learning momentum, she’ll need a place to store cumulative work over time. Portfolios fill that role (Batson, 2010, p. 1).

ePortfolios have the potential to transform ‘students’ capacity to synthesise, interpret, theorise, and create new cultural and historical knowledge’ (Weis et al., 2002, p. 153). The digital storytelling in ePortfolios authorises students to ‘lay claim to their own histories, their own voice, and to use primary sources in authoritative ways’ (Weis et al., 2002, p. 154).

While the literature informs our understanding, the practical issues to consider in designing and implementing any new pedagogical approach are paramount.

2.4 The practicalities of ePortfolios

The literature also points to a range of key considerations in the practical implementation of ePortfolios. One of the key factors relates to the technological considerations outlined below.

1. **Useability.** The technology chosen needs to be user-friendly.
2. **Accessibility.** Educators need to consider an appropriate level of accessibility for learners with special requirements.

3. **Sharing capabilities.** Does the ePortfolio only allow a private space for students? Or does it provide functionality to be used as a showcase tool?
4. **Can the ePortfolio be used post-graduation?** Many institutional learning management systems (LMSs) cannot be used once the student graduates.
5. **Portability.** The portability of different ePortfolio products and systems beyond the higher education environment needs to be considered.
6. **Privacy and Security.** Students may be concerned that the information they include in their ePortfolio which could be personal could be viewed by others.
7. **IT training and support.** The implementation of ePortfolios should be seen as a process rather than just a product, and therefore training and development of online support resources for all users in the purpose and use of ePortfolios needs to take place.
8. **Embedding mixed media.** Students should be able to publish a range of multimedia to evidence their learning and showcase their capabilities.
9. **Pre-populated Templates.** Provide opportunities for pre-populated templates to provide guidance for students and staff in support of the ePortfolio work.
10. **Storage capacity.** There should be appropriate storage capacity to allow students to develop their ePortfolio and showcase their work.
11. **Assessment, feedback and peer review.** The ability for assessment and feedback to be incorporated in the system such that teachers, student peers, employers and other external bodies can be added to the ePortfolio system.
12. **Curation.** Capability for students to easily curate (easily store, organise and display) their evidence.
13. **Personalisation.** The ePortfolio system and tool should allow students to personalise/customise during the process and product for 'branding' themselves.

3 | The ePortfolio project website

The project team has developed an informative and practical website to not only showcase the output of this project, but to serve as a useful source of information for those academic leaders and educators considering implementing an ePortfolio approach in their teaching and learning. The website has added considerable value to this project in its capacity as a communication tool. It has been updated regularly, documents are downloadable, and it has been promoted internationally and nationally to generate interest and best promote ePortfolios in business education (see Appendix L). To date, the hits on the website (3859 since December 2014) attest to the overall impact of this deliverable and its value-add to

the project. Providing a project overview and information about the project team, the website also provides information the following key deliverables and resources:

- Position papers, contributing to the academic underpinnings of the project.
- Case study overviews, with links to each case study Weebly site.
- Assessment, with specific examples of assessment using ePortfolios.
- Survey results, academic leaders, employers and students.
- Project resources, including: presentation and documentation provided at the Academic Leaders' Forums held in Melbourne (2014) and Sydney (2015); a *Stakeholder Flyer*, designed as a tool to promote ePortfolios to a variety of key stakeholders; videos, and *The Assessment Framework* detailed in full.
- External Resources, purposely kept to a minimum and targeted at those judged as having practical application.
- Final Report.

The website can be accessed at: www.buseport.com.au.

4 | The Framework

This section provides further detail on various aspects of the Framework which was overviewed in Section 1.2. For the full version with complete commentaries on Framework questions, please refer to Appendix D or www.buseport.com.au.

4.1 Purpose

ePortfolios have various purposes but, for the most part, their potential lies in:

- Enhancing graduate employability.
- Prompting students to reflect on their learning.
- Providing a repository of student work, achievement and continuous and meaningful feedback.
- Providing evidence of student achievement of professional capabilities (including, but not limited to, professional judgement, leadership, digital literacy, self-management, creativity and innovation, entrepreneurship, social responsibility, cultural awareness, sustainability and ethics).

The primary purpose of ePortfolios is to provide students with a broader, scaffolded, and more integrated learning experience which represents a stronger preparation for their professional life, and in a form they can continue to access after graduation.

A range of drivers currently exist which encourage the use of ePortfolios in business education. These include: 1) external drivers in HE (i.e. widening access in HE, changes in funding, competition, maintaining quality and standards, catering to a new generation of students); 2) external drivers in business education (i.e. softening in demand from international students, technology, increased competition, employers' focus on graduate

capabilities, internationalisation, increased accountability and transparency, external accreditation); and, 3) internal drivers within business education (i.e. curricula issues, diverse student cohorts).

While the purpose of an ePortfolio is context-relevant, the following principles should apply:

Learning and employability portfolios focus on the scaffolded learning of personal and professional capabilities through the formative stages of a course, then transition to a focus on career and employability in preparation for graduate employment or further studies.

4.2 Benefits

The potential benefits of Portfolios (be they 'e' or not) to students are:

1. Enhanced learning experiences and outcomes.
2. Enhanced employability.
3. Enhanced career development.
4. Enhanced professional identity and judgement making.

Further, ePortfolios provide an opportunity to evidence some of those generic or soft skills that are often difficult, if not impossible to 'measure', (yet every university lists them as being achieved by their graduates). For example, how do we effectively measure self-management or self-awareness? This is particularly relevant in accounting and other business disciplines where threshold learning outcomes (or skills) are prescribed with universities striving to evidence that exiting graduates have acquired them.

With a generation of students that are always connected, communicating, collaborating and clicking, the value of the 'e' in ePortfolios reflects an increased focus on the value of connection and networking through social media to build and promote one's brand equity, e.g. LinkedIn. ePortfolios provide an opportunity for students to learn to develop and promote their brand equity, or professional digital identities as a key digital literacy-related employability capability. Increasingly this information is accessed as part of the recruitment process used by graduate employers.

4.3 Challenges

Being aware of the potential challenges associated with ePortfolio design and implementation can assist staff when deciding whether this is an approach that they think is appropriate for their course or unit. Challenges may include:

- A lack of resources and support for the adoption of the technologies.
- Lack of staff engagement in the pedagogy of ePortfolios. This may be impacted by a lack of recognition, reward and allocation of suitable workloads.
- Staff concerns about the functionality and reliability of the technologies.
- The need for a holistic rather than ad hoc design and development approaches.

- Lack of evidence of ePortfolios making a significant difference to student learning.
- A lack of understanding of the ‘why’ and ‘how’ of ePortfolios, i.e. the best ways of introducing and positioning them in the curriculum.
- A more general lack of cultural readiness for the adoption of learning technologies.
- Staff who are not comfortable or confident in their own use of educational technologies.
- Lack of institutional support for the platform.

4.4 Key questions and perspectives

The project team has found that ePortfolios are being designed and implemented in different parts of the curriculum, with a focus on evidencing professional capabilities through:

- Capstone or project units;
- Work-integrated learning experiences and placements;
- Course-wide scaffolded view; and
- Major sequence professionally focussed.

The key questions provided below are addressed in the full Framework provided in Appendix D.

4.4.1 Leadership roles

- *Who should lead the implementation of ePortfolios in the business education curriculum? Should it be a faculty or institutional decision?*
- *What approaches can be adopted to lead change management around the implementation of ePortfolios?*
- *What incentives, workload allocations and training can be provided to support effective implementation of ePortfolios? Where and how is staff capacity building facilitated?*

4.4.2 ePortfolios as an approach to learning and development

- *Why choose an ePortfolio over other approaches?*
- *How do academics design ePortfolios for specific purposes, i.e. aligned to pedagogy and/or in addressing different professional capabilities in different areas of the curriculum?*
- *How do we evaluate the benefits and costs of using ePortfolios in the business education curriculum?*
- *How do we identify and navigate/mitigate the challenges of using ePortfolios in the business education curriculum?*
- *How do we facilitate students transporting their ePortfolios to accommodate their ongoing personal learning, employment and career development?*

4.4.3 Assessment design using ePortfolios

- *What to assess in the business education curriculum through ePortfolios?*
- *Where can we best assess through ePortfolios in the business education curriculum?*
- *How can we use ePortfolios to best assess professional capabilities in the business education curriculum? (Teacher, Self and Peer assessment approaches)*
- *How do we establish assessment regimes to judge the quality of student work in ePortfolios in the business education curriculum?*

- *How do we provide feedback, based on assessment regimes, on the quality of ePortfolio work to students?*

5 | The Case Studies

The case studies that have been developed by using the Framework as a guide are significant in the way they provide a nuanced view of ePortfolios across uses, users, aims and contexts. For the full version, the institutional case studies have been developed using media-rich and engaging technologies and are available at:

Macquarie University – www.portfoliosinaccounting.weebly.com

Deakin University, Bachelor of Management – www.bmgt.weebly.com

Deakin University, Accounting Major –
www.deakinaccountingportfolio.weebly.com

University of Southern Queensland – www.usqaccountingportfolio.weebly.com

A decision was made to provide these case studies in this way, as the project team are mindful of the scarce resource of 'time'. Presenting these case studies using available technologies will better enhance the potential for stakeholder engagement.

An overview of the case studies is provided below (sourced from the project website: www.buseport.com.au).

5.1 Deakin University - Bachelor of Management

The opportunities for students to develop their ability to self-reflect on their own learning and to recognise that learning within their community, profession and as a global citizen is key in undergraduate generalist business education. It is therefore pertinent to ensure the students have a holistic view of their learning, their experiences and be able to develop a clear future view of their career and employability. In the Bachelor of Management program this is achieved through a scaffolded portfolio of evidence produced at the end of each year. These three end-of-year portfolios scaffold learning from a focus on assessment evidence demonstrating achievements towards their course learning outcomes, to the consideration of potential careers to a final portfolio-based resume (e.g. LinkedIn profile) which can be used to connect or present to potential employers. It is expected (and encouraged) that students will use both evidence from their assessment tasks as well as evidence from their wider lives creating a rich and comprehensive portfolio of evidence.

5.2 Deakin University - Accounting Major

The type of portfolio designed for the Accounting Major is a mixture of developmental, assessment and showcase portfolios. The purpose of the developmental component is to provide learners with the opportunity to develop their learning through regular self-reflection, communication and feedback between the learner and the teaching team. The purpose of the assessment component is to allow learners to demonstrate their performance against the nationally agreed accounting threshold learning standards. The purpose of the showcase component is to allow learners to demonstrate their achievements and exemplary work for employability. An important part of a learner's portfolio

development is self-reflection, and learners are asked to regularly reflect on their learning and evidence that learning by creating artefacts that they add to their portfolio in all three of the initial Accounting units in this pilot. Further, the portfolio provides an opportunity for academics to start considering how and why portfolios can be used in an Accounting major for the benefit of student learning and employability prospects.

5.3 Macquarie University - Accounting Capstone

Curricula associated with professional vocations, such as accounting, have suffered from a primarily procedural approach, where technical and regulatory content take precedence over any social and political context. This has often resulted in an entrenched student perception of accounting as objective, formalised knowledge. Consequently, learners fail to fully comprehend the role accounting plays within a 'real-world' context, in which there are often varying degrees of subjectivity. Portfolios were introduced into the accounting capstone unit, ACCG 399: Accounting in Context, at Macquarie University, to open up the curriculum to expand learner conceptions of accounting beyond their immediate academic environment. The portfolio, delivered over a 13-week semester, aims to remove learners from their norm through provoking them, inducing their creativity and embracing their imagination. In doing so, the portfolio aims to provide students an opportunity to visualise accounting in different ways and facilitate the integration of their learning across their degree program. The use of portfolios has enabled educators to facilitate a deeper, more integrated conceptual awareness amongst their student cohort of how accounting is positioned in the world around them.

5.4 University of Southern Queensland (USQ) - Accounting Major including Work Integrated Learning (WIL)

The approach taken at USQ is to use ePortfolios to underpin a scaffolded approach to developing Threshold Learning Outcome skills across the Accounting major program. For the purposes of this project, the use of student ePortfolios was appropriate to support the career development modules and assessment already in place. In the first year accounting course, students are asked to evaluate and record across skills their level of ability on entry to the program. Students are also trained in the development and use of their ePortfolios so that they can integrate learning and build skills levels as they progress through their program. At the other end of the spectrum, students engaged in the Work Integrated Learning capstone course in business and accounting linked learning to practice using their ePortfolios to support self-reflection, feedback and communication with teaching staff and assessment through the reflective diary and project assessment items already in place in the course. In this course, students were encouraged to reflect from a program learning outcomes focus, to consider potential careers and how assessment evidence (and other evidence) can be used to demonstrate their knowledge and skills to potential employers. Staff training modules for academics have already been developed at USQ and these were used to train staff involved in the implementation of student ePortfolios in accounting and business courses.

6 | The Stakeholders

6.1 Academics

6.1.1 Academic Leaders Survey

A selection of key findings from the analysis of the academic survey data is outlined below. These findings provide insight into academic perceptions about how, where and when ePortfolios are useful to promote the student learning journey and assist with the development of relevant professional skills and capabilities.

- When considering the listed professional capabilities, Communication and Problem Solving were rated significantly higher in terms of their importance in business education, than all other factors, with the exception of professional judgement. Entrepreneurship was significantly lower than any of the other capabilities.
- In terms of satisfaction with how the listed professional capabilities are being developed and assessed in their institution: On average, academic leaders are only likely to be 'Somewhat satisfied' (median rank) that the professional learning capability factors are being effectively developed and assessed within their educational institutions. Specifically, 'Problem Solving', is seen as likely being more effectively developed and assessed when compared to most other professional learning capability factors. On the other hand, when compared to several other professional learning capability factors, it is possible that 'Creativity and Innovation' is seen as being the least effectively developed and assessed factor.
- The goal to 'Improve student reflective learning' is seen as having significantly more importance than most other factors in the adoption of ePortfolios, whereas 'the imperative to use the technology given the nature of the institution' is seen as being significantly less important than many other factors.
- When adopting ePortfolios, academic leaders thought it was important to 'Allow students to better demonstrate the achievement of learning outcomes' resulting in 'Enhancing student work placement experience'.
- Teachers or tutors are more likely to be involved in the ePortfolio assessment process compared to any of the other review or assessment processes considered.
- There was insufficient evidence available to detect a difference in the perceived effectiveness between the six types of guidance and support considered for students: guidance on the purpose of the ePortfolio; guidance on how to use the ePortfolio; a workshop alongside to support the ePortfolio process; tutor/mentor support; and IT helpdesk support for the learner.
- There was insufficient evidence available to detect a difference between the 7 types of factors considered for teaching staff: guidance on the purpose of the ePortfolio; guidance on how to use the ePortfolio; a workshop alongside to support the

ePortfolio process; tutor/mentor support; IT helpdesk support for the teacher; support for producing media files; and seeing and discussing exemplars.

6.1.2 Academic Teaching Staff Findings

In-depth interviews with eight academic staff involved in the implementation of ePortfolios in the partner institutions were carried out from 2014–2015. The findings from these interviews are presented in detail in Appendix G.

6.1.3 Summary

In summary, the staff experience with the implementation of ePortfolios reveals that while ePortfolios have the potential to innovate, enhance and transform business education, implementation is not without its challenges. Staff pointed to a raft of challenges but the key message relates to the capacity building of both staff and students; with capacity building in all aspects necessitating both willingness and the capacity to engage in change. Adequate training and support was seen as critical by all interviewees. While this is recognised as critical we are mindful that contextual factors will dominate the level of support and training provided and indeed, the willingness and capacity of individual academics to engage. These are issues that should be discussed in context. The academics agreed with the need for ePortfolio implementation to be embedded across a course as opposed to just a unit, and they also stressed the importance of a whole-of-team approach.

6.2 Employers

A total of 14 interviews were carried out with business employers. Respondents varied in terms of the types of organisations in which they worked (ranging from large sized organisations, medium-sized organisations, sole enterprises, BIG 4, retail, consulting, and marketing).

Full details of the employer data can be found in Appendix I.

In summary, while employer respondents did not have knowledge of ePortfolios, once explained to them, all employers saw their potential in the recruitment process. This potential was seen to lie in offering a better ‘feel for the person,’ ‘bringing the graduate to life,’ and providing greater insight into graduate attitudes and experience, and overall insight into their capabilities and employability. They viewed ePortfolios as a way to extend and enhance traditional recruitment processes to some extent.

6.3 Students

The diversity of contexts across the three HEIs provides rich data for analysis. However, it precludes combining student responses in a meaningful and informative manner. For this reason the analysis of responses from students are analysed for each participating HEI.

6.3.1 Macquarie Focus Group

A focus group of eight students was run at Macquarie University with students who had participated in the Accounting Capstone unit in which portfolios were trialled. Students were asked a series of questions outlined in Appendix J.

The focus groups revealed that while some students did initially feel resistant to the portfolio task, they ultimately enjoyed it, appreciating that it was 'different' in relation to other assessment tasks and it fostered a 'different way of thinking'.

I got what they were trying to do, and I liked it, I liked how different it was, and I was impressed as a capstone for accounting.

They appreciated that it was a portfolio and not an ePortfolio in that it required students to 'put something together' and they seemed to value being able to have something 'tangible' to work on, as opposed to having it online. Other positive feedback included:

I found it valuable as in the reflective tasks and having to write about yourself, and think about yourself and then as it went along, the different types of accounting, and issues within accounting.

I know one subject can't really shape your ethical standpoint but what it did do is ... it encouraged you to sort of pinpoint it and ... define it.

All students pointed to a variety of challenges that they experienced while developing the portfolio and these included: understanding what the task required, the difficulty of group work and participation, and a lack of understanding about the purpose and benefits of reflection. One student said it was 'knowing exactly what to do and how to do it'. Others indicated it 'could have been made more explicit what was required – one paragraph outlining the task was not enough'. There was also some confusion surrounding the breakdown of marks, and students indicated that they felt the reflection exercises were repetitive. Some felt their friends in other units were getting a 'lot more hands on sort of experience out of a capstone unit' and they had expectations of something more 'practical' for a capstone unit. Because of this, they thought the 'subject was a bit of a free pass'.

Despite the challenges, students seemed to have a good understanding of the purpose of Portfolios as a pedagogical approach; namely, learning, reflection, and how to be a professional.

I think the main purpose is just to find a deeper understanding of accounting, just like...more background about it, knowing how it affects our lives in the future as well.

They also saw some value in the employability potential of portfolios.

..where else in the subject would you get to start looking, asking the question like why am I employable? Why do I deserve this job? Why am I more than just a certificate?

6.3.2 Deakin Online Student Survey of experiences with ePortfolios

A total of 156 students participated in the online survey at Deakin University on their use of ePortfolios in the Bachelor of Management course and Accounting major. Of the 156, 73 per cent were in third year, 18.5 per cent were in second year, 6 per cent were postgraduate students and 2.5 per cent were first-year students. Survey participants were comprised of 60 per cent domestic students and 40 per cent international students. The majority (81 per cent) were full-time, while 19 per cent were part-time students. On-campus students comprised 72.5 per cent, off-campus 22 per cent, and 5.5 per cent of students were a combination of both on-campus and off-campus. Below is a summary of the key findings

from that survey. Full details of the analysis can be found on the project website (www.buseport.com.au).

How students felt about using ePortfolios

A total of 115 students provided a response to the question of how they felt about using ePortfolios. Thirty-eight per cent (44) respondents provided positive statements and 49.5 per cent (47) were negative in their responses. Interestingly, 10.5 per cent (12) of respondents were both positive and negative in their statements and the remaining 2 per cent (2) were neutral.

The majority of students expressed negative feelings towards ePortfolio use. Reasons for these feelings included that it was 'confusing', 'hard to use', that a 'lack of information about it' was provided, it was not 'helpful in learning' and that it was 'irrelevant to the unit'. Some of the key points were:

Why talk about what you have learned, the assignments and exam are demonstration enough. We don't know how to write them and the lecturers don't know how to assess them.

I felt that it was irrelevant to the unit ... I understand the purpose of utilising the portfolio is to expose ourselves to a medium where we can showcase our skills and experiences. However, I personally think it should not be made part of the assignment that contribute marks. In fact, assignments that involve more relevance ... will boost our knowledge to the unit, not the eportfolio.

Weird at first. I'm old (53). I don't do social media, and I'm uncomfortable with the whole US-style 'sell yourself' approach to life.

I'm a bit sceptical about the aim of it being something you can show future employers.

Thirty-eight per cent of students did, however, like ePortfolios and expressed equally strong sentiments in favour of their use. Their comments were attributed to the benefits of reflection, the ability to store multiple items in one place, it was something 'new' and 'different', and that they are something which future employers can be shown. Comments included:

It is a great opportunity to really reflect on learning and opportunities and identify the challenges and advancements you have made.

At first I was very daunted by the idea, although by completion gained valuable insight as to where my weaknesses lied [sic].

What students found challenging about using ePortfolios

Students identified a wide array of challenges in relation to ePortfolio implementation and use. The most frequently cited response related to issues with technology and the ePortfolio tool itself with 55 per cent of students indicating it was 'not user friendly.' The second most frequently cited challenge was 'reflection' with students stating it was repetitive to have to reflect on everything and difficult to know what exactly was expected in a reflective piece. One student stated:

It is challenging to have to spend my time writing about my feelings and in the back of my mind feeling guilty and worrying about not studying for an exam or completing a real assignment.

Other challenges alluded to by students, included the time required to complete the task, and the fact that instructions were not always forthcoming or adequate. Students also pointed to the fact ePortfolios were 'too new' and 'unfamiliar', language issues and difficulty of critical thinking as key challenges.

What students found beneficial about using ePortfolios

A total of 107 students responded to the question of what they found beneficial about using ePortfolios in their learning. The most frequently cited response provided by 16 students (15 per cent) was 'reflection', with the second most common response being that it served as an online repository where their work was 'all in one place' and this was provided by 13 students (12 per cent). Other students also saw the benefits of ePortfolios providing a 'record of learning' (8.5 per cent) and enhanced digital literacy skills (6.5 per cent).

Other students indicated that ePortfolios were also beneficial in terms of being portable and accessible, a showcase of learning and employability, something 'different' and 'unique', and that they helped 'keep track of goals' and overall 'saves time'.

ePortfolios helping students understand themselves as learners

A total of 109 students responded to this question, and of these students, 55 students indicated that using ePortfolios helped them understand themselves better as students, while 48 indicated that they had not. Some of their comments are provided below:

It assist[ed] me to learn and begin to practice a process that might be used in ... lifelong ... learning pursuits.

When being asked to reflect on what I had actually learnt, I begun [sic] to think deeper and relate what I had learnt to more general situations. This allows me to apply my new skills and knowledge to real world situations.

Did not help in my learning. I do wonder if I am doing a commerce degree or a tech degree.

How ePortfolios differed from a more traditional business learning experience

A total of 78 students responded to this question. While 11 students (14 per cent) indicated that ePortfolios were of 'no use', 'no benefit', 'illogical', and a 'waste of time', the majority of students expressed positive views towards the ePortfolio learning experience compared to a more traditional approach. Self-reflection was seen as the main benefit and difference by 13 per cent of students, while seven students (9 per cent) indicated that the ePortfolio approach created a 'greater focus on learning', 'deeper learning' and 'continuous learning'. Other students suggested it was a 'more creative' approach to learning, and 'was easier'. Students also indicated they helped build technical skills, were a 'personalised' learning tool, and had the 'convenience' of having everything 'all in one place'.

Student perceptions of the ePortfolio purpose

Only 80 students of the 156 responded to the question of what they saw as the purpose of ePortfolios, and whether the purpose was adequately explained to them. Their responses are provided below in order of those most commonly cited:

- Self-reflection (18)
- To show learning, a record of learning (16)
- For future use/employability/prospective employers (15)
- They serve no purpose (7)

The skills that were developed creating an ePortfolio

While 16 students (20 per cent) indicated they had not learnt anything, the majority provided a good range of skills developed through the ePortfolio approach. The top three skills mentioned by students include reflection/self-awareness (57 per cent), communication (37 per cent) and digital literacy/technological skills (14 per cent). Other skills included time management, critical thinking, creativity, problem solving, and self-management, to name a few.

The advantages and disadvantages of the technology used to create the ePortfolio i.e. the learning management system (Desire2Learn)

While 13 students pointed to a variety of advantages—including, ease of use, 24/7 access, reflection, convenience—the vast majority of students concentrated on the disadvantages. The main disadvantage referred to by 23 students, was the technological tool itself with students commenting it was ‘difficult to use’, ‘cumbersome’, ‘clunky’ and ‘complicated’. Other students suggested it was ‘time-consuming’ to use, ‘dull’, and there were concerns around ‘privacy issues’.

Choosing their own ePortfolio tool

A total of 76 students responded to this question. When asked whether students would prefer to choose their own ePortfolio tool to use, 31 students indicated they would not, 20 said they would, 11 students were ‘unsure’, while 8 indicated they would rather not use ePortfolios at all. One student said, *‘I would prefer just to work with word documents and upload regularly to create a folio, as it’s something I’m familiar with.’*

My ePortfolio is a great summary of me as a person and a professional. It highlights my strengths, weaknesses and goals.

Do ePortfolios enhance the learning experience?

A total of 77 students responded to the question of whether using the ePortfolio improved their overall learning experience. The majority of students, 43 out of 77 (56 per cent)

indicated that it had improved their overall learning experience. Thirty-four students (44 per cent), in contrast, said that it had not. Some of their comments are provided below.

I learn better through more traditional learning ways and assignments.

...instead of just learning the course material and eventually forgetting about it, I was able to spend more time thinking about my learnings and their potential implications.

ePortfolios and employability

When asked how they see ePortfolios helping them in terms of employability, 76 students responded. Significantly, 24 students (31.5 per cent) stated that they did not see the potential of ePortfolios helping them from an employability perspective. However, 11 students (14.5 per cent) indicated it was a useful 'showcase of work' and 'skills', while three students (4 per cent) said it was essentially an enhanced curriculum vitae.

6.3.3 University of Southern Queensland – Student Survey

A total of eight students (40 per cent) responded to the survey relating to ePortfolio use in the Accounting Major – WIL unit at USQ. While three students expressed positive feelings, four out of the eight students surveyed indicated that they felt negative towards the use of ePortfolios in their learning. One of the students attributed this to the fact that their LinkedIn profile negated the need for an ePortfolio:

I already have eportfolio type information on LinkedIn...and initially thought the eportfolio idea was rather repetitious and perhaps unnecessary.

Six out of the eight students identified the main challenge around the ePortfolio experience as the technology and ePortfolio tool itself being 'difficult to use'. Students commented:

I did not find the eportfolio an intuitive software program to use.

It was a little difficult to navigate...

All students, except one, did, however, point to a range of benefits from ePortfolio use. Two students liked that it was a repository in which all their work was 'in one place'. Others identified the following as beneficial: showcasing what you do, ability to revise work, is 'always there'. Interestingly, only two students saw the ePortfolio experience as assisting them to understand themselves as learners. The majority did not see that it helped them understand themselves better.

The majority of students did not seem to understand the question of how ePortfolios differed to a more traditional business learning experience. One student did, however, have a clear insight into the differences:

The [unit] involved 'self-development' and required 'self-reflection' (rather than the more traditional rote learning), about new skills acquired, lessons learnt and actions that perhaps could have/should have been taken.

The majority of students did not have a good understanding or insight into the purpose of the ePortfolio learning approach. They viewed it as a repository to store work and a way to submit assignments – but did not touch on reflection or learning.

Half of the students saw no skills as being developed in the creation of the ePortfolio. The other four students identified the following skills: creativity, project planning and reflection.

When asked to identify the advantages and disadvantages associated with the technology, only one student provided an advantage, which was that ePortfolios can be accessed anytime. Seven out of eight students focused only on the disadvantages, which included: technology issues, unclear instruction, the submission process, privacy concerns.

When asked how the ePortfolio could be improved, students suggested better instruction through the form of an 'information sheet' or instructional 'YouTube video', and easier navigation. One student commented:

Review the system as a whole. Useability testing and user experience research would be beneficial.

There were mixed feelings towards the potential of ePortfolios in relation to employability. Students liked the resume section, but some were unclear as to how beneficial it would be with prospective employers.

Ultimately, five out of the eight students commented that ePortfolios should continue to be an integral part of the course at USQ.

6.3.4 In summary

A significant number of students were found to be resistant and expressed negative feelings toward the ePortfolio implementation in their units. Students indicated they found them difficult to use, time-consuming, and not enough instruction was provided. Their feedback points to a need for greater explanation about the pedagogical underpinnings of ePortfolios and greater capacity building. The technology itself also needs to be more user-friendly and less 'clunky'.

Many students did, however, enjoy using ePortfolios, appreciating that it was 'different' and it fostered a 'new way of thinking'. Students saw the key benefits of ePortfolios as 'reflection' and an online repository where their learning and achievements were 'all in one place'. ePortfolios were found to help students understand themselves better as learners and they saw the benefits of ePortfolios over a traditional teaching approach in their ability to foster 'deeper learning' and 'continuous learning'. Students indicated they had learnt a wide range of skills from using ePortfolios, with the three top skills mentioned being self-reflection, communication and digital literacy.

While recognising the benefits of reflection, the majority of students commented on how difficult self-reflection actually was and there is a clear need for capacity building in relation to reflective writing. Students also generally failed to see the benefits of ePortfolios to employability and this points to the need for greater articulation and explanation surrounding their overall benefits and purpose of the ePortfolio approach.

7 | Conclusion

In the last two decades, teaching and learning in higher education has undergone transformative change as a result of disruptive technologies and new learning paradigms. Research indicates this change and its impact on teaching and learning will continue. This begs the question: What will be the role of technology in the innovation of business education in the future? How can business academics adapt to and embrace learning paradigms involving digital technologies? We argue that a key consideration for business faculties and teaching practitioners in 21st century business education can be ePortfolios, which is a transformative learning approach and paradigm.

An ePortfolio ultimately provides students with the opportunity to demonstrate their learning, as well as a set of desired professional capabilities, to enhance their professional development and employability. In addition, ePortfolios have the potential to extend the learning beyond the classroom, and engage learners in student-centred activities that encourage them to reflect, take ownership, and become lifelong learners. The “e” component of ePortfolios arguably enhances the power of Portfolio pedagogy and ultimately augments teaching and learning potential. However, as we have learnt, the “e” component should never override the sound, underpinning pedagogies aligned to portfolios.

..in such a digitised ecology of learning, in which the classroom is no longer ‘the center,’ where is the center? For learners, the new center is their ePortfolio. (Batson 2015)

7.1 Key Findings

The key findings to emerge from this project in relation to the effective large-scale implementation of ePortfolios are:

- **ePortfolio use needs to be intentional, purposeful and meaningful in order to provide real value to staff, students and employers.**
- **Greater awareness raising around ePortfolios.** All of the employers interviewed in the project realised the benefits of ePortfolios once they were enlightened on their potential and purpose. There needs to be greater efforts made, particularly in the Australian context, to engage with employers and introduce them to ePortfolios. The same promotional efforts need to be made with staff and students in business education.
- **ePortfolios need to be framed and “sold” effectively to stakeholders to ensure engagement and uptake.** Whether it is staff, students or employers, it is only by effectively communicating the why behind ePortfolio use that we can ensure engagement by stakeholders. Providing further examples of how this approach can enhance the evidencing of student learning outcomes is critical.
- **ePortfolios need to be demystified for students and appropriate instruction and guidance must be provided.** Almost half of the students demonstrated resistance

and negative experiences with ePortfolios and they attributed this to a lack of instruction and guidance. Students need to be guided through the purpose of the ePortfolio learning approach and its overall benefits. They also require capacity building in both IT skills and reflective writing skills. In relation to the task itself, students require: a clear purpose; the language to reflect on and describe their learning; and, access to appropriate technology.

- **Staff require adequate capacity building in order to appropriately engage with ePortfolios.** One of the key challenges to effective implementation identified in the project was some hesitation by some staff to consider the potential of ePortfolios. This issue is compounded by the technical skills-focus that Business, as a vocational discipline, traditionally has though evidence of change is apparent. For students to fully derive the learning benefits afforded by an ePortfolio learning approach, teaching staff need to be aware of the value of ePortfolios and be committed to their implementation.
- **Strong leadership is required to oversee implementation and have a united voice.** This must be accompanied by sufficient resource provision.
- **Adopt a whole-of-team approach in the implementation and assessment of ePortfolios.** As one staff member interviewed in our study commented, 'We all need to be on the one page as a collective teaching unit'.

7.2 Key Recommendations

Based on these findings, we provide the following recommendations:

1. Given that business education is a diverse and eclectic field, it is essential to scope the implementation of ePortfolios by designated program and/or discipline major.
2. Greater emphasis needs to be given to ePortfolios in the context of business education to define and deliver quality learning experiences designed to enhancing students' career preparation and employability prospects.
3. ePortfolio adoption should be seen in relation to the increasing expectations of external stakeholders for higher quality business education.
4. ePortfolios need to be strategically designed into curricula in ways which maximise student motivation to create high-quality learning artefacts/exhibits. An ideal time to consider the strategic adoption of ePortfolios is when programs are undergoing new development, review or renewal.
5. The value of ePortfolios for internal and external stakeholders needs further investigation, with particular focus on how ePortfolios might assist the recruitment process of business graduates.
6. Effective use of ePortfolios is as much about mindset as it is about the mechanics of use. Promoting the potential of ePortfolios as a key strategic professional learning and career-development strategy, with students holding 'personal brand equity', holds great potential in promoting the benefits of use to such an audience. A significant part of this is the need to convey to academics the value of ePortfolios to enhanced student learning and further, to educate business academics about the nature and value of ePortfolios.

7.3 Lessons Learnt

The project has learnt some key lessons throughout the duration of this project. Lessons include:

- The reality of the current low uptake of ePortfolios in the business education sector.
- The lack of consensus on the types and meanings of desired professional capabilities to be developed and assessed in the business education sector despite the presence of prescribed skills and capabilities (threshold learning outcome standards) across the business discipline.
- The magnitude of the challenge in progressing the agenda surrounding the assessment of desired professional capabilities with and through ePortfolios in the business education sector.
- Mastering processes in engaging stakeholders in various forms of data collection, and most importantly students in sharing their learning experiences.
- The challenge of achieving acceptable response rates to data collection efforts is heightened by researching an area that is not widely known or practised.
- Overestimating the response of employers that the project team set out to interview and underestimating the extent of employers' knowledge of ePortfolios.
- The time needed to build staff capacity significantly in the lead up to ePortfolio implementation.
- The importance of a 'just in time' approach to ePortfolio implementation.
- One of the major strengths of the project – focused in planning and leadership. Good leadership with strict deadlines; managing multiple diverse inputs (from reference group, evaluator, other academics); managing diversity, connectedness and inclusivity. This proved an effective management model.

7.4 Challenges

The project team also encountered a range of challenges, some of which are outlined below:

- Data collection across the three partner institutions. This necessarily brings with it the challenge of consistency in approach and the need to navigate the availability of multiple staff members. Further, the project demonstrates the importance of not being too ambitious in the scope of data collection, while still attempting to ascertain relevant stakeholder perspectives.
- Lack of engagement as a result of ePortfolios not being well known. This has proven challenging in relation to data collection; particularly the Employer Interviews and Academic Surveys where response rates were lower than initially expected.
- Despite their potential, there is a documented low number of people who are using ePortfolios in education and business.
- Consistency and clarity of timely communication across institutions.
- Business people in academia do not necessarily value and engage deeply in reflection, a key element of ePortfolios.
- Lack of recognition of teaching in HEI performance and reward policies, which in turn adversely affects motivation to engage in educational technology innovations like ePortfolios.

7.5 To Conclude

As a project team we have been privileged to work with motivated and inspiring staff and students, whose willingness to challenge existing paradigms and embrace ePortfolios as a new approach to learning has enabled the production of the resources produced and which are now available as key deliverables from this project. Changes, improvements and/or enhancements in learning and teaching approaches are often difficult to forge. Yet as academics we are responsible for constantly seeking innovative ways to enhance the learning outcomes for our students and, as a consequence, their employability prospects. Technology provides us with additional affordances to consider in this quest. However, ultimately it is sound pedagogy that is focussed on providing opportunities for students to evidence their professional learning outcomes that is, and should always be, the key driver. Underpinned by a clear pedagogical purpose, we see ePortfolios as a way to enhance and develop graduate capabilities and employability opportunities, and ultimately to prepare our business graduates for 21st century careers in a global business environment.

7.6 Formative Evaluation

The formative evaluation process has been a significant component to the success and completion of the project. The project evaluator has proven invaluable in relation to the critique of the project's position papers, the development of the Evaluation Matrix, and the Assessment Framework. The Evaluator's final evaluation report is provided in Appendix K.

Appendix A | Certification

Certification by Deputy Vice-Chancellor (Education)

I certify that all parts of the final report for this OLT project provide an accurate representation of the implementation, impact and findings of the project, and that the report is of publishable quality.

Name: Professor Beverley Oliver

Date: 27 July 2015

Appendix B | References

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Appendix C | Dissemination

The project team has adhered to an active and continuous dissemination strategy throughout the project. Seeking opportunities to discuss and promote the project has resulted in an extensive dissemination list.

Project Website

As a result of concerted dissemination efforts, the project website has, to date, been viewed by 3859 people.

Published Articles

Watty, K., Kavanagh, M., McGuigan, Leitch, S., Holt, D., Ngo, L. (2013). "A National Investigation into Assessing Students' Learning through ePortfolios in Business Education." *AFAANZ Accounting Educators Professional Periodical*, December.

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23 Oct, 2014 - Project website link sent out to Dr Helen Chen's networks.

Conferences/Workshops/Presentations

DATE	EVENT/VENUE	DISSEMINATION ACTIVITY	No. OF ATTENDEES (estimated)	No. OF INSTITUTIONS (estimated)
23 November, 2015	RMIT Accounting Educators Conference, Melbourne	<i>Presentation</i> Professor Marie Kavanagh et al.		
27-30 Oct, 2015	ISSOTL Conference, Melbourne	<i>Conference presentation, 'ePortfolios: A 21st century pedagogy and learning paradigm'</i> Professor Kim Watty		
27 Sep – 1 Oct, 2015	ePortfolios Australia Conference, Perth, Australia.	<i>20x20 presentation/poster session/workshop</i> Dr Leanne Ngo, Dr Jade McKay		
Sep, 2015	Macquarie Learning and Teaching Conference 2015, NSW, Australia	<i>Conference Presentation</i> Mr Nick McGuigan		
27-30 Jul, 2015	AAEEL Conference, Boston, U.S.	<i>Conference Presentation</i> Dr Leanne Ngo		
21 Jul, 2015	National Academic Leaders Forum #2, Sydney	<i>Project led forum with academic leaders from Australian HEIs</i> Project team	45	12
6-9 Jul, 2015	HERDSA conference, Melbourne.	<i>Showcase Presentation</i> Dr Leanne Ngo and Dr Jade McKay, "Realising the potential: ePortfolios in Australian business education".	60	10
4 Jul 2015	Accounting Education Special Interest Group (SIG), NSW	<i>Presentation</i> Mr Nick McGuigan	51	3
29 Jun, 2015	Staff Capacity Building Event, Deakin University, Faculty of Business and Law, Melbourne.	<i>Introduction to the Portfolio tool in CloudDeakin – Staff capacity building event</i> Dr Leanne Ngo	8	
25 May, 2015	Staff Capacity Building Event, Deakin University, Faculty of Business and Law, Melbourne.	<i>Designing for Assessment (Pedagogy session) – staff capacity building event</i> Dr Leanne Ngo	10	

DATE	EVENT/VENUE	DISSEMINATION ACTIVITY	No. OF ATTENDEES (estimated)	No. OF INSTITUTIONS (estimated)
19 May, 2015	Deakin University Webinar , Melbourne	<i>Webinar ePortfolio session, 'Ways of supporting ePortfolio thinking – for students, staff and whole course design'.</i> Professor Kim Watty and Dr Leanne Ngo.	30	
4 May, 2014	Staff capacity building event , Deakin University, Faculty of Business and Law, Melbourne.	<i>Portfolio in Business Education Showcase – staff capacity building event.</i> Dr Leanne Ngo	40	
27 Mar, 2015	BHERT event, Round Tables with employers , Sydney and Melbourne	<i>Project Led Round Table event, 'Graduate recruitment, business benefits and employer views'</i> Nick McGuigan and Professor Kim Watty	12	3
6 Feb, 2015	ABDC T&L Network	<i>Nick McGuigan</i>	45	12
Feb, 2015	CFO Forum	<i>Presentation</i> Mr Nick McGuigan		
17 Jan, 2015	Meeting with Associate Professor Raj Bhika , Program Director at LaGuardia Community College, New York, U.S.	<i>International dissemination opportunity</i> Professor Kim Watty	2	2
28 Nov, 2014	ePortfolio session , Wollongong University.	<i>Project led ePortfolio session</i> Nick McGuigan and Associate Professor Shona Leitch	20	
26 Nov, 2014	Deakin Learning and Teaching Conference , Deakin University.	<i>Conference Presentation</i> Dr Leanne Ngo, "ePortfolio in Accounting session"	25	
24 Nov, 2014	The RMIT Accounting Educators Conference , RMIT University, Melbourne	<i>Invited Session Chair</i> Professor Kim Watty, 'Learning in Context'.	12	4
12 th - 13 th Nov, 2014	International Conference on Education, Culture and Society , Canadian Association for Academic Research,	<i>Conference Presentation</i> Professor Marie Kavanagh	40	

DATE	EVENT/VENUE	DISSEMINATION ACTIVITY	No. OF ATTENDEES (estimated)	No. OF INSTITUTIONS (estimated)
	Toronto - Canada			
2 Oct, 2014	ePortfolios Australia, 2014 ePortfolio forum and workshops , La Trobe University, Melbourne.	<i>Conference Presentation</i> Prof Kim Watty, 'Realising the potential: Assessing professional learning through the integration of ePortfolios in Australian business education'	25	8
2 Oct, 2014	ePortfolios Australia, 2014 ePortfolio forum and workshops , La Trobe University, Melbourne.	<i>Poster Presentation</i> Dr Leanne Ngo, "Implementing ePortfolios in an Australian Business Education Curriculum: Layer by layer"		
19 th Sep, 2014	National Academic Leader's Forum , Deakin University Melbourne City Centre	<i>Project led national Forum/Workshop</i>	60 attendees (including academics and employers)	10
5 July, 2014	Accounting and Finance Association of Australia and New Zealand (AFAANZ) , Accounting Education Symposium	<i>Presentation</i> <i>Marie Kavanagh and Nick McGuigan</i>	50	12
May/Jun, 2014	School forums , University of Southern Queensland	<i>Forum</i> <i>Professor Marie Kavanagh</i>		
Feb/Mar 2014	Presentation to Bachelor of Management academic staff, Deakin, Melbourne	<i>Presentation</i> "ePortfolio use in the Bachelor of Management."		
28 Feb, 2014	Departmental Learning and Teaching Strategy day , Department of Accounting and Corporate Governance Staff, Macquarie University, NSW.	<i>Presentation</i> Mr Nick McGuigan		
6 Feb, 2014	Presentation at ABDC Teaching & Learning Network	<i>Presentation</i> Professor Kim Watty, "ePortfolios in Business Education".	35	15

DATE	EVENT/VENUE	DISSEMINATION ACTIVITY	No. OF ATTENDEES (estimated)	No. OF INSTITUTIONS (estimated)
11 Dec, 2013	Accounting Frontiers Forum	<i>Presentation</i> Professor Kim Watty, "Realising the potential: Assessing professional learning through the integration of ePortfolios in Australian business education".	25	5
Oct, 2013	Commerce Advisory Board, Melbourne.	<i>Project presentation</i> Associate Professor Shona Leitch, 'The project and ePortfolio use'		

Appendix D | The Framework

Framing assessment of and through ePortfolios in Australian undergraduate business education:

Context, Principles, Benefits, Key Questions, Good Practices and Resources

A. Framework background

1. Purposes
2. Context
3. Principles
4. Definition
5. Stakeholders
6. Benefits
7. Challenges

B. The Framework

8. Key questions (and perspectives)

C. Framework-enabling resources

9. Institutional case studies and supporting materials

FRAMEWORK BACKGROUND

1 Purpose

ePortfolios have various purposes depending on their use and positioning within the business-education curriculum and the diverse needs of various business-education stakeholders. The project is principally interested in the use of ePortfolios to enhance graduate employability by providing opportunities for students to develop a better understanding of their learning, both personally and in a professional context. This can occur in various ways – over an entire course² or in a major or capstone unit³, for example. In particular, an ePortfolio provides students with the opportunity to reflect on their learning over an extended period of time and to demonstrate and have assessed evidence of a set of desired professional capabilities, designed to enhance their employability and career development.

For students to derive these learning benefits, teaching staff need to be aware of the value of ePortfolios and be committed to the implementation.

In addition, ePortfolios provide a record of student achievements and feedback on those achievements. Referring to feedback from previous units provides a unique opportunity for learning facilitators (academics/ teachers) to reflect on previous feedback and learn more about how the student has (or has not) used the feedback for subsequent improvement. This is a powerful aspect of student learning that ePortfolios facilitate.

In this project, the following set of desired professional learning capabilities have been drawn from the literature to inform the effective design and implementation of ePortfolios in business education:

1. **Professional judgement:** Use knowledge and skills to solve novel business challenges
2. **Problem-solving:** Use knowledge and skills to identify and solve common business problems
3. **Communication:** Demonstrate oral, written and visual communication skills appropriate to the needs of different business stakeholders
4. **Teamwork:** Demonstrate skills in working collaboratively with colleagues in undertaking complex and varied work tasks
5. **Leadership:** Demonstrate skills in constructively influencing the work of colleagues individually and in teams towards mutually agreed goals
6. **Digital literacy:** Use knowledge and skills in information and communications technology (ICT) to frame, analyse and report on business problems and their solutions
7. **Self-management:** Demonstrate skills in self-initiative, self-motivation and self-directed learning in business studies and practices
8. **Creativity and innovation:** Demonstrate the capacity to generate new ideas to meet customer needs, and in the understanding of how good ideas become marketable products.
9. **Entrepreneurship:** Appreciate how new businesses are created, grow and adapt to changing market conditions.
10. **Social responsibility:** Develop a critical awareness of businesses' obligations to the societies within which they operate, and to those parties who directly contribute to their viability.
11. **Cultural awareness:** Demonstrate knowledge and skills in working effectively with cultural diversity as related to global and international business practices.

² Course also refers to Program throughout

³ Unit also refers to Subject throughout

12. **Sustainability as applied to business organisations:** Develop a critical awareness of businesses' need to evolve and adapt to the imperatives of an economically, environmentally and socially sustainable world in the service of future generations.

13. **Ethics:** Develop a personally meaningful set of values to guide professional practice which reflect honesty, fairness, respectfulness, loyalty, composure and competence.

While this list appears exhaustive, each institution has articulated its own set of Graduate Learning Outcomes or Graduate Attributes that detail the skills of graduates. Though the wording may differ, inevitably, the skills listed are unsurprisingly similar. See

Deakin University: <http://www.deakin.edu.au/students/university-handbook/2014/deakin-graduate-learning-outcomes>

Macquarie University:

http://www.mq.edu.au/about_us/strategy_and_initiatives/sustainability/fundamentals/graduate_capabilities/defining_capabilities/

*For the purpose of this project, ePortfolios are labelled as, **Learning and Employability Portfolios**. The focus is on the scaffolded learning of personal and professional capabilities through the formative stages of a course, then transitioning to the focus being on employability in later stages in preparation for graduate employment.*

They ultimately represent students' real learning accomplishments in their chosen fields of business education.

2. Context

In any educational setting, whether general or specific, internal and external drivers will influence, to varying degrees, curriculum design. Of importance is having an awareness of these drivers when ePortfolios are being considered.

General external drivers within Higher Education

- **Widening access** (through global development of open educational resources and Massive Open Online Course (MOOC) platforms)
- **Changes in funding** (move to deregulate fees under Coalition government)
- **Pressure to generate new sources of income** (through massive global eLearning developments and increasing budgetary pressures)
- **Further acceleration of trend towards user-pays** (through fee rises, the charging of real interest rates on accumulated debt, lowering of income threshold for debt repayment)
- **Intense competition** (now in evidence through sectoral groupings, consortia, partnerships with international universities, and extension of student loan support for TAFE and private sub-degree and degree providers)
- **Maintaining quality and standards** (now in evidence in relation to clear articulation of professionally endorsed threshold learning outcomes, evidence of their achievement, and TEQSA AQF course level requirements, AACSB)
- **Changing expectations from a new generation of students** (even more diverse needs, expectations and demands from a generation who are always 'clicking and connected')
- **Changing patterns of participation** (New Coalition Government abandoned low socio-economic status (SES) targets; with a plan to deregulate university fees, subsidise private providers to expand tertiary education opportunities, and to use certain proportion of fees raised by universities to provide scholarships to students from low SES backgrounds)

Specific external drivers within Business education

- **Softening in demand from international students**
- **Technology** which has changed globalisation of business and communication, including the learning experience
- **Increased competition** in the education market-place:
 - from privately-operated business schools
 - from regional universities who have established city-based campuses
 - from the drive towards – and to maintain – international accreditation as a differentiator.
- **Market perceptions** of the relative worth of business-related degrees and specifically the MBA
- **Strong employer emphasis on graduate attributes** such as generic or ‘soft skills’ to facilitate job readiness
- **Internationalisation of the curriculum**
- **Increased government accountability and transparency**
- **External accreditation**

Specific internal drivers within Business education

Curricula issues include:

- Balance of core, discipline-based and elective units– vocational or discipline orientation
- When and how to specialise – the adoption of a USA model of generic undergraduate degree and postgraduate specialisation as in the ‘Melbourne model’
- Integrating learning technologies effectively

Academic dissatisfaction due to:

- High student-staff ratios (i.e. unreasonably large class sizes)
- Uncompetitive academic salaries compared with industry, and associated difficulties in attracting and retaining highly qualified staff who are increasingly mobile across the globe
- Shortage of academic staff, particularly in some disciplines; Accounting and Economics, for example
- Shortage of staff with high levels of professional practice experience and/or experience of pedagogy and student learning
- Increased academic workloads – balancing competing expectations and demands
- Diversity of student profile – skills, knowledge, capabilities, language competence
- Student expectations (e.g. eLearning; consumerism; litigiousness; flexibility; paid employment while studying; student community as a mix of domestic and international students)

3. Principles

While the purposes of an ePortfolio will change as a result of being context-driven, the following principles apply, regardless of context.

1. ePortfolios need to engage students in developing important business-education professional capabilities
2. ePortfolios need to be embedded in the design of business-education curricula, be purposeful and have contextual meaning for the students
3. The preparation of ePortfolios for assessment must be explicitly factored into teaching and student workload relating to curriculum design and development to support the teaching and learning processes
4. ePortfolios need to be developed and curated by students, supported by their learning facilitators
5. Students and learning facilitators need to be properly oriented about the purposes and methods of developing an ePortfolio
6. ePortfolios should encourage students to develop a strong sense of personalised ownership of their learning
7. Students' ePortfolio contributions should receive constructive, timely and integrative feedback
8. Students should develop the skills to select relevant evidence of capabilities from their ePortfolio for specific audiences and purposes

4. Definition

Rowntree (1977, p.4) provides a timeless and powerful definition of assessment in the educational context which can be related to ePortfolios:

More basically, assessment in education can be thought of as occurring whenever one person, in some kind of interaction [electronically and/or in-person, face-to-face], direct [real-time, synchronous] or indirect [delayed, asynchronous], with another, is conscious of obtaining and interpreting information about the knowledge and understanding, or abilities and attitudes of that other person. To some extent or other it is an attempt to *know* that person.

[and we would add for one of the key purposes of this project to know that person through them constructing their learning experiences in the form of various digital artefacts/ exhibits of relevance to course and unit aims and objectives in electronically based Portfolios).

Based on Rowntree's list of assessment purposes (1977, pp.22-31), we contend that the primary purpose of ePortfolios is to provide students with a broader, scaffolded, and more integrated learning experience which represents a stronger preparation for professional life and, in a form they can continue to access after graduation. In common with other well designed assessment approaches, ePortfolios also:

- Enhance student motivation to engage with Portfolio tasks in anticipation of work being assessed, i.e. student knowledge of knowing that they will be assessed on their contributions;
- Provide learning facilitators with the opportunity to provide valuable feedback across a series of units which will in turn motivate students to continue to enhance the quality of their Portfolio work, i.e. student knowledge of how they performed on assessment and access to feedback provided to students on previous tasks, form a basis for developmental improvement.
- Provide learning facilitators with feedback on how well students have achieved their intended learning outcomes, i.e. insights are provided into the realities of student learning of the formally designed curriculum.

5. Stakeholders

Different stakeholders will ascribe different purposes to ePortfolios in business education. For example, academic leaders may see the ePortfolio purpose in terms of learning assurance in pursuit of securing and retaining external national and international accreditation. While the project sees this as an important external driver or imperative, such factors alone will not realise the full potential of ePortfolios in the business-education curriculum. *Realising the full potential requires the primacy of student learning of highly valued professional capabilities throughout the business-education curriculum, and the use of such evidence for self-improvement, employability and career development.* The direct relevance of the stakeholders will strongly depend on the context of implementation. Larger contexts of implementation will usually require the involvement of more stakeholders, with smaller contexts of implementation requiring fewer stakeholders, e.g. whole-of-organisation or faculty-wide implementations versus course/ major/ subject-based implementations. These considerations are illustrated in the various project case studies.

Internal business-education stakeholders	External business-education stakeholders
Students (chief beneficiary of ePortfolio for learning development, career preparation and increased employability)	Employers (benefit through recruiting the best prepared and employable graduates)
Teaching staff (ePortfolio can reveal students' real learning and assist in course/ unit/ teaching development)	Alumni (protecting and advancing the reputations of the programs they have graduated from, and facilitating graduate networking for advancing career opportunities)
Academic leadership (help create conditions most amenable to ePortfolio implementation, and reap benefits of enhanced learning and teaching outcomes)	Professional accrediting bodies and associations (ensuring required content coverage and the evidencing of threshold learning outcomes plus facilitating full membership to the body, and continuing professional development, including evidence thereof)
Support staff (day-to-day help in best use of ePortfolios by students and staff)	Employer associations (expectations on the types of attributes graduates should have to secure employment and excel in the workplace, including the relationship of ePortfolios to resumés, job interviews and other job-recruitment requirements)
Student societies (strong interest in reputation of programs, achieving best learning experiences and employability of graduates)	TEQSA (setting expectations for volume and nature of learning at different course levels in tertiary education through AQF, and where ePortfolios can provide important evidence course expectations are being met)
Teaching, learning and technology groups (within Faculty) (providing in-house educational and technical support in setting up and best using ePortfolios)	ABDC Teaching and Learning Network (provides an opportunity for members to share practice, resources and creative ideas through networking functions, presentations and interactive sessions, with recent focus topics include academic standards, benchmarking, quality assurance, accreditation, and strategies for

Internal business-education stakeholders	External business-education stakeholders
	encouraging, measuring and rewarding good teaching, all relevant to the ePortfolio agenda)
Teaching, learning and technology groups (central) (orchestrating and implementing best ePortfolio approaches and solutions across institution, as related to institutional statements of graduate outcomes)	Office for Learning and Teaching (OLT) (developing, enhancing and promoting teaching and learning in higher education, and the sectoral sponsor of the ePortfolio project, with expectation of broad dissemination of findings)
Careers groups (maximising students' understanding of career options, career preparation and the ways ePortfolios could be used for this purposes)	International accreditation bodies (assurance of learning and international endorser of quality in business education)
Equity & diversity groups (ensuring that all students, irrespective of background, can take fair advantage of technologies like ePortfolios for their learning and development)	
IT departments (facilitate institutional decision making on best ePortfolio solution and support institution-wide deployment)	

Stakeholders will vary depending on the purposes of the ePortfolio. Common to most would be staff and students, but others will vary. In deciding on the type of ePortfolio to be developed, it is useful to identify specific stakeholders who may be impacted by the use of the ePortfolio. This helps to focus the design of the ePortfolio for the purposes intended and this is the approach taken in our project case studies.

6. Benefits

Portfolios (be they 'e' or not) provide an opportunity for enhanced:

1. learning experiences and outcomes
2. employability
3. career development
4. professional identity and judgement-making

Further, ePortfolios provide an opportunity to evidence some of those generics or soft skills that are often difficult, if not impossible to 'measure', (yet every university lists them as being achieved by their graduates). For example, how do we effectively measure self-management or self-awareness?

With a generation of students that are always, connected, communicating, collaborating and clicking the value of the 'e' in ePortfolios reflects an increased focus on the value of connection and networking through social media to build and promote one's brand equity, e.g. LinkedIn. Eportfolios provide an opportunity for students to learn to develop and promote their brand equity, or professional digital identities as a key digital literacy-related employability capability. Increasingly this is information that is accessed as part of the employment process used by graduate employers.

Further, the 'electronic' affordances, as manifested in ePortfolio system functions and features, have potential to enhance the power of ePortfolio pedagogy by allowing students, and in some instances academics, to:

- **See and respond to feedback** provided over time on the demonstration of professional capabilities, acknowledging where and how feedback has been used to improve subsequent performance, and for academics to review and reflect on the previous feedback and how it has been utilised for improvement by the student.
- Express their learning in a greater range of more easily producible **media forms** through a greater range of **desktop, laptop and mobile devices** that can be used in a greater range of relevant locations
- Store these media learning forms, or artefacts/ exhibits, in one easily **accessible electronic repository** for ongoing self-assessment purposes across a whole program of study
- **Search, select and present** these artefacts/ exhibits in different configurations depending on the requirements of different audiences
- **Share artefacts/ exhibits** with different parties (fellow students, learning facilitators, support staff, graduate employers to receive feedback for both formative and summative purposes
- **Collaborate** with each other in creating group ePortfolios
- **Transport their artefacts/ exhibits** to other professional systems after graduation for ongoing career and developmental purposes
- Use the **functions of other electronic systems such as learning-management systems (LMSs)** in ways which both augment and integrate directly with ePortfolios.

While digital and electronic/ online system affordances can add to the value of designing ePortfolios into the curriculum, not all related teaching/ learning activities have to be conducted online or lead directly to the creation of a digital artefact. Analogue artefacts may be created through individual and collaborative work, and digital images captured of them to be recorded in an ePortfolio. This is well illustrated in one of the project case studies.

7. Challenges

Being aware of the potential challenges associated with ePortfolio design and implementation can assist staff when deciding whether this is an approach that they consider as appropriate for their course or unit. These challenges may include:

- A lack of resources and support for the adoption of the technologies
- Staff engagement in the pedagogy of ePortfolios, including recognition, reward and allocation of suitable workloads
- Staff concerns about the functionality and reliability of the technologies
- The need for a holistic rather than ad hoc design and development approaches
- Lack of evidence of ePortfolios making a significant difference to student learning
- A lack of understanding of the 'why' and 'how' of ePortfolios, i.e. the best ways of introducing and positioning them in the curriculum
- A more general lack of cultural readiness for the adoption of learning technologies
- Staff who are not comfortable or confident in their own use of educational technologies

8. Key questions (and perspectives)

In this Section we explore key questions and perspectives to consider in addressing those questions under 3 major headings: *Leadership roles; Approaches to learning and Assessment design.*

Our case studies serve to inform the narrative and have prompted the questions posed here.

1. Leadership roles

- ***Who should lead the implementation of ePortfolios in the business-education curriculum? Should it be a faculty or institutional decision?***

Institutional leadership is essential in creating a strategic rationale for the use of ePortfolios along with ensuring that an agreed and supported solution is selected, deployed, maintained and supported.

Faculty leadership is important in creating a vision and support structures relevant to ePortfolios, giving students a professional competitive edge.

Course leadership is required to ensure that ePortfolios are appropriately embedded in the business-education curriculum; and

Unit leaders to ensure that assessment is undertaken at key learning points through ePortfolios based on desired learning outcomes.

- ***What approaches can be adopted to lead change management around the implementation of ePortfolios?***

Institutional, faculty, school, course and unit leadership needs to be well aligned in their commitment to the integration of ePortfolios as a means of providing unique, relevant and engaging programs geared to maximising the development and assessment of desired professional capabilities for enhanced employability. Certain external drivers can be highlighted in creating an environment more conducive to the adoption of ePortfolios. Eportfolio teaching champions need to be identified, supported, recognised and rewarded for being the early ePortfolio adopters. Such teaching champions should in turn cultivate student ePortfolio champions to help promote their value amongst student groups. Leadership needs to design a formal, yet flexible plan for implementation, and to support trialling, evaluation and incremental improvements.

- ***What incentives, workload allocations and training can be provided to support effective implementation of ePortfolios? Where and how is staff capacity building facilitated?***

The two layers of service (institutional and faculty) need to complement and be well integrated with each other. More general services and resources should be provided at the institutional level, and more customised and personalised services and resources at the local level, that is ideally school or department but may, by necessity, be at the faculty level. A key resource required are exemplars of the good use of ePortfolios: both relating to teacher approaches and student work. Innovation in the design and use of ePortfolios should be strongly encouraged. Their adoption should be seen as a site of technologically enabled teaching and learning innovation and staff should be supported to see adoption as a significant research and development opportunity. Teaching workloads need to acknowledge the work involved in setting up and designing ePortfolios into courses and units, with special consideration given to the time involved in judging the quality of student ePortfolio work and providing helpful feedback on student performance. Recognition and reward should be given to those teaching staff who excel in using ePortfolios in their teaching.

2. ePortfolios as an approach to learning and development

- ***Why choose an ePortfolio over other approaches?***

An ePortfolio represents students' created or authored work, reflects their learning development, and reflections on their progress in developing desired professional capabilities. While LMSs represent the world of teaching and instruction, ePortfolios represent the world of student learning. Both should be equally important in enhancing teaching and learning in business education. Part of an institution's online system may be a tool specifically designed as an ePortfolio for student learning purposes. However, other technology tools may be used and/or preferred by students to achieve these purposes.

ePortfolios are a tool that can reflect their designer's mindset and approach to learning. A strong educational commitment to students' constructing their own learning meanings, and storing, sharing and having them judged, leads to choosing an ePortfolio. Conversely, a commitment to didactic or instructor-led teaching leads to other approaches being favoured. A unit-focused approach to curriculum design and delivery may not lend itself necessarily to an ePortfolio approach. A course-wide scaffolded design and delivery approach is more conducive to ePortfolio implementation and reaping its full benefits over a longer period.

- ***How do academics design ePortfolios for specific purposes, i.e. aligned to pedagogy and/or in addressing different professional capabilities in different areas of the curriculum?***

At the course level, course leaders/ directors with unit leaders should map out the curriculum along three key dimensions, namely: (1) the alignment of institutional, course and unit intended learning outcomes, with a focus on the development of desired professional capabilities; (2) the key pedagogies underpinning the curriculum design at the unit level; and (3) the formal assessment requirements for each of the units constituting the course.

ePortfolios should be strategically embedded across year levels at key assessment points to best promote their use. The curriculum design needs to ensure an effective orientation to the use of ePortfolios at first year level, and an effective completion of ePortfolios at the final year level. Between beginning and end, students need to see ePortfolios as contributing to their learning and professional capabilities development, through an ongoing process of reflection.

- ***How do we evaluate the benefits and costs of using ePortfolios in business education?***

Evaluation design is complex, not least because there is a lack of experience with ePortfolios in business education in Australia. A mixed-methods, multiple-stakeholder approach should be adopted in evaluating the benefits and costs of ePortfolios over time. The extent to which ePortfolios enhance student engagement, evidence learning outcomes and contribute to the creation of a professional identity should be central to any evaluation strategy. Evaluation approaches should illuminate students' learning achievements, and their learning processes, and the presentation of exemplary student ePortfolios is a powerful means of revealing and promoting their value.

Action learning is a valuable approach to evaluating and improving the use of ePortfolios with its emphasis on engaging in a continuous cycle of planning, acting, evaluating and enhancing of their use.

- ***How do we identify and navigate/ mitigate the challenges of using ePortfolios in the business-education curriculum?***

ePortfolios should be used strategically in the business-education curriculum by choosing to implement them with enthusiastic and capable staff, and in areas of the curriculum which lend

themselves best to their full and effective utilisation. Foundational knowledge building units may not lend themselves well to using ePortfolios. Those areas of the curriculum that focus most explicitly on developing generic capabilities, and which use experiential learning, have the highest potential for full and effective use. If ePortfolios are to be a course-wide commitment, it is important that their use is scaffolded at each year level throughout the curriculum. For example, a portfolio in year 1 might focus on learning; at year 2 on career development; and at final year on employability. Students need to develop and own their ePortfolio space and support each other as they progress through their learning journeys as enabled through their ePortfolio – a representation of their personal professional digital brand and evidence of achievement.

- ***How do we facilitate students transporting their ePortfolios to accommodate their ongoing personal learning, employment and career development?***

For the course-wide implementation of ePortfolios, students need to appreciate the changing emphases around purposes as they progress through their studies. Eportfolios, for much of their studies, will be about stimulating, capturing, sharing and promoting various forms of valuable learning. Nearing the end of their studies a greater emphasis should be placed on the ePortfolio showcasing students' achievements in order to enhance graduate employability. Latter or final year learning activities need to focus more on encouraging students to synthesise their learning, and present their learning artefacts (evidence), around their business profession's statement of required capabilities/ competencies. Employers, including alumni, need to be informed about the what and how of this approach to learning to ensure a greater appreciation of the unique value of ePortfolios. Students need to be educated how to best use their ePortfolios as part of their employment strategy, and, specifically, their job applications and interview preparation.

3. Assessment design using ePortfolios

- **What to assess in the business-education curriculum through ePortfolios?**
 - Academic capabilities that count, i.e. what academic teaching staff value (**academic leadership survey**)
 - Employer capabilities that count, i.e. what employers value, particularly in graduate employment (**employer survey**)
 - Student capabilities that count, i.e. what students themselves might most value in their studies (**student evaluations**)

The project has identified and described 13 professional capabilities of importance to business education. These professional capabilities are commonly identified throughout the literature. There is a high level of consensus amongst academic leaders, teaching staff, students and employers that these are relevant and valuable learning outcomes. However, different emphases may exist depending on the stakeholder(s) involved. These professional capabilities need to be strongly promoted at all levels of institutional leadership. Students need to understand that the best job and career opportunities will accrue to those who can demonstrate the highest level of achievement, and to those who continue to learn and develop these capabilities over their careers. *Eportfolios are centrally about giving students a competitive learning edge in the marketplace. They are not an optional activity peripheral to their academic studies.*

- ***Where can we best assess through ePortfolios in the business-education curriculum?***

The starting point should be mapping out the three-dimensional curriculum-design matrix, namely: (1) the alignment of institutional, course and unit intended learning outcomes, with a focus on the development of desired professional capabilities; (2) the key pedagogies underpinning the

curriculum design at the course and unit level; and (3) the formal assessment requirements for each of the units constituting the course.

ePortfolios are best embedded at the intersection of valued professional capabilities, experiential pedagogies and authentic assessment tasks in the curriculum-mapping exercise. At the unit level, ePortfolios must be integrated with blended learning and assessment approaches. The ‘rubber hits the road’ at this level in achieving the greatest level of engagement with ePortfolios. A well-designed course curriculum map needs to be enacted through the combined efforts of all unit leaders charged with realising its intentions through direct interaction with students. Course curriculum mapping will evolve as various aspects of the curriculum are enacted, and experienced by students and learning facilitators. Curriculum mapping should not lock down the curriculum in action. Both should evolve through prototyping, implementation evaluating and continuous improvement. Within this process, the design, use and value of ePortfolios will also evolve.

- ***How can we use ePortfolios to best assess professional capabilities in the business-education curriculum? (Teacher, Self and Peer assessment approaches)***

Once course-wide curriculum design mapping has been the focus of how to assess in and through ePortfolios shifts to the unit level. The most effective, efficient and fair assessment methods need to be designed reflecting alignment with the unit’s set of learning and unit learning outcomes. Unit Chairs need to know whether they are accepting special responsibility for developing or progressing the learning of certain professional capabilities such as oral communication or teamwork. Moreover, they need to know whether they are accepting special responsibility for orienting students to ePortfolios in first year, or completing ePortfolios for employability purposes in final year.

The sets of learning activities will be different between orientating and completing experiences, year levels and underpinning pedagogy of the unit. Learning activities throughout need to promote reflective learning, a desire for learning improvement, and sharing of learning achievements with peers and teaching staff. Formative feedback (not necessarily for marks or grades) from other interested stakeholders is critically important for enhanced self-awareness and personal development.

Inherent in assessment is judgement. As previously noted, various parties can make judgements on the quality of students’ ePortfolios – these might be given informally or formally through the allocation of a mark or grade. These stakeholders include employers and/or alumni. Centrally, assessment methods should encourage students to make their own judgements about the quality of their work, and to challenge students to make these self-judgements over the duration of their studies. Making judgements involves having some point of comparison. Students can self-assess their performance on key professional capabilities by reflecting on whether they believe they are performing better compared to when they performed the capability previously, as documented in their ePortfolios, i.e. are they better, same or worse than they were previously in relation to their self-management skills. Peer, teacher and employer assessment can provide additional perspectives on performance improvement. Learning facilitators need to be clear about expectations of performance within their units, and, more broadly, from year level to year level through the course. They will set the key benchmarks of performance, guiding self-, peer- and external assessment processes.

- ***How do we establish assessment regimes to judge the quality of student work in ePortfolios in the business-education curriculum?***

As per responses above, there needs to be strong constructive alignment of unit learning outcomes, learning activities and formal assessment requirements. *Making judgements on the value of student ePortfolio contributions needs to be based on a clear understanding of the properties (or qualities) of the tasks to be undertaken, and levels at which these properties (or qualities) might be*

demonstrated. These requirements are increasingly being embodied in assessment rubrics being built and operated in online LMSs.

Online assessment rubrics need to be well designed and function effectively in LMSs. These assessment rubrics need to be shared with students (and ideally involve students in their design) in order to help them achieve the type and level of quality required. *Teacher-generated rubrics might predominate at the beginning and earlier stages of a course, while in later stages students might be given a more active role in shaping the design of the rubrics*. Rubrics might be of the analytic or holistic variety.

Analytic rubrics disaggregate the task into clearly defined criteria, at clearly defined levels of performance. Each criterion is assessed, and values aggregated to determine a final mark or grade. Holistic rubrics, may have fewer defined criteria, and focus on a more global assessment of the quality of the tasks performed. Holistic rubrics might be best used in capstone or work-integrated learning units. They allow the students to see more easily a bigger, more integrated picture of their professional performance and such assessment may be more valuable as they begin their transition to graduate employment. An example of this might be a global assessment of the students' overall capacity to choose and use theory effectively to enhance professional practice by solving a particular client problem during a work placement, including the effective communication of the solution from the client's perspective.

- ***How do we provide feedback to students, based on assessment regimes, on the quality of their ePortfolio work?***

Once judgements are made on the quality of students' ePortfolio work, feedback must be provided to inform future learning and, ultimately, to help prepare them for transition to the workplace or graduate study. The basis of the provision of effective feedback is a well-designed and functioning assessment rubric (analytic or holistic). Text descriptors, summary text comments, and numerical ratings may be augmented with the use of audio-visual feedback. Useful feedback might be given by alumni or prospective employers. Beyond unit-level feedback, year-level feedback might be provided where students are using ePortfolios through their entire course of studies. *In order to complete the feedback loop, students need to process feedback and use it to improve their future learning performance. Assessment processes should encourage student reflection on feedback received, and a requirement for them to articulate how they will or have used it to improve their subsequent learning performance*. The special affordance of ePortfolios is that they allow students to track feedback, performance and improvement within units, over a year of study, and from year-to-year of study over entire courses. Assessment processes should also encourage students to periodically declare the value of ePortfolios in contributing to the development of their professional identities and the desired set of professional capabilities.

FRAMEWORK ENABLING RESOURCES

9 Institutional Case Studies and Resources

The case studies are significant in the way they provide a nuanced view of ePortfolios across uses, users, aims and contexts. For the full version, the institutional case studies have been developed using media-rich and engaging technologies and are available at:

- Macquarie University – www.portfoliosinaccounting.weebly.com.
- Deakin University, Bachelor of Management – www.bmgt.weebly.com.
- Deakin University, Accounting Major – www.deakinaccountingportfolio.weebly.com.
- University of Southern Queensland – <http://usqaccountingportfolio.weebly.com>.

An overview of the case studies is provided below (sourced from the project website: <http://www.buseport.com.au/>).

10 Case studies of institutional use (including examples in use)

Purposes

Context

Stakeholders

Design

Implementation

Evaluation

Improvements

Appendix E | Development of the Framework

The starting point in developing the Framework was identifying seven key issues related to the project's purposes and scope:

- 1) **Why ePortfolios?** Rationale; definition; purposes; learning theory underpinnings; learning assurance around institutional graduate attributes, course learning outcomes, business education discipline threshold Learning Outcomes (TLOs), professional and international accreditation requirements like Association for the Advancement of Collegiate Schools of Business (AACSB), EPAS; Australian Qualification Framework (AQF) requirements; employer expectations and changing market conditions;
- 2) **How should ePortfolios be integrated in the business education curricula?** Different curriculum design models; different types of aims and objectives; different uses;
- 3) **Where and when should ePortfolios be integrated in the business education curricula?** Different curriculum components: generic skills; foundational coursework; capstone; work-integrated learning (WIL); scaffolding use through business education curricula; and associated different learning activities;
- 4) **What should be in ePortfolios?** Development and selection of types of learning artefacts/exhibits in response to different activities for different audiences; different media formats; artefact reflections (through journaling); individual and group learning artefacts; ePortfolio technical functionality;
- 5) **How should ePortfolios be judged and valued, including who should do it?** Teaching staff, individual and peer assessment; external employer assessment; ePortfolio assessment criteria/rubrics/criterion-referenced assessment; ePortfolio student feedback from various interested parties;
- 6) **How should ePortfolio use be supported institutionally?** ePortfolio solutions, infrastructure, communities of practice, sharing of good practices; integration with other virtual learning environments (VLE) systems; planning for future developments;
- 7) **How should ePortfolio use be supported at the program level?** Staff and student training and support in use, in assessment and evaluation; faculty, program and unit.

Appendix F | Staff Interview Questions

1. Had you ever used ePortfolios before in a teaching and learning environment?
2. Can you share what were the key reasons for choosing to use ePortfolios? (in your unit/course/major)
3. Please share with us your experiences of using ePortfolios? (in your unit/course/major)
 - a) *What specifically worked well?*
 - b) *What specifically didn't work as well as you had hoped?*
4. Has anything surprised you about using ePortfolios? Something unexpected?
5. What value do you see in students using ePortfolios? And in terms of their learning outcomes?
6. What skills do you think students have learnt (if any) by using an ePortfolio?
7. What kind of support have you been provided with in relation to the implementation of ePortfolios? And from where has that support come?
8. What level of leadership role do you see yourself having in the implementation of ePortfolio?
9. How do you think ePortfolios could be further used in the curriculum?
10. Is there anything else that you would like to share?

Appendix G | Summary of findings from teaching staff interviews

In-depth interviews with eight academic staff involved in the implementation of ePortfolios in the partner institutions were carried out from 2014–2015. The findings from these interviews are presented here.

Key Reasons for implementing ePortfolios

Our study found that implementation of ePortfolios was either driven from the top by innovative Unit Chairs or Heads of School, or was a way for these innovative educators to make their units ‘more interesting, innovative and relevant’. Staff also saw the potential of ePortfolios in relation to employability, building skills, developing self-reflective graduates, and providing a more ‘holistic picture of a student’s learning’.

What worked?

When asked what had worked in the implementation of ePortfolios in their units, staff indicated that they had managed to take students out of their comfort zones, developed lifelong learning and that support from Information Technology (IT) and Teaching and Learning (T&L) staff had been useful. In the Accounting Capstone unit, ePortfolios were found to be a way to ‘relate to Accounting that is personal’. Staff also found them to be a new and innovative way that offered a ‘welcome break from the traditional mode of assessment’.

What were the challenges?

The main issue alluded to by most staff was lack of staff capacity and the time required to train and build that capacity – particularly in relation to staff marking ePortfolios. By capacity building we mean then both the time and skills required to effectively design and use ePortfolios for assessment purposes. Other issues included difficulty of assessment rubric development, challenges with marking, and different staff communicating different instructions on the use of the ePortfolio. Getting students on board with the task also proved a challenge as it was often perceived as too ‘new’ and ‘foreign’ to them. Some staff members said the students simply did not like using ePortfolios; however, as one respondent commented: ‘It’s about telling them why we’re doing things, and showing them - this is the reason why we do what we do’. The same staff member pointed to the difficulty getting staff in business faculties to buy-in to the ePortfolio learning approach as these technical-focused academics were often found to say, ‘Why? How does this relate?’ Another staff member raised the issue of the time required to complete the ePortfolio versus the marks often attributed the task: ‘As it took students a while to embrace the idea, I’m not sure if the time and effort that they needed to inject into the task was necessarily well equated to the relatively small percentage that was allocated to the assessment task’. Reflective writing was also seen as ‘difficult and challenging’ for students, and equally difficult for staff to mark.

Support

Overall, staff seemed to have adequate support from T&L and IT staff. Support was apparently lacking in relation to the task of building staff capacity. Similarly, staff called for more hands-on, practical support and training required for students – particularly in relation to writing, providing examples of what a perfect ePortfolio looks like, and the IT tool itself. As one staff member stated, ‘It’s a fantastic tool, if you can provide them a little more help.’

What surprised staff members

Most of the staff members were surprised by the difficulties surrounding reflective writing – the challenges students had with this and the issues surrounding the marking of reflection. Even the local students were found to struggle with reflective writing, and staff saw this as an important factor for implementation. Their comments surrounding the overall impact of the ePortfolio learning approach demonstrate its transformative potential:

I’ve learnt so much more in-depth detail about my student base than what I ever did before.

It’s about a journey between myself and my students and we actually learn together. And that’s what portfolios have done.

Learning outcomes

Staff identified a suite of skills and competencies developed through the use of ePortfolios. These included:

- Self-reflection skills
- Writing skills
- Communication
- Self-management
- Autonomous learning
- Critical thinking

‘..portfolios are a really nice way to shift that focus back to the learner.’

How ePortfolios can be used further in the curriculum

Most staff indicated that ePortfolios should be introduced in the first year and scaffolded all the way up to third year. They also stated that they would ideally not just be an ‘add-on’; they should be embedded.

Summary

The staff experience with the implementation of ePortfolios reveals that while ePortfolios have the potential to innovate, enhance and transform business education, implementation is not without its challenges. Staff pointed to a raft of challenges but the key message relates to the capacity building of both staff and students; with capacity building in all aspects necessitating both a willingness and the capacity to engage in change. Adequate training and support was seen as critical by all interviewees. The academics agreed with the need for ePortfolio implementation to be embedded across a course as opposed to just a unit, and they also stressed the importance of a whole-of-team approach.

Appendix H | Employer Interview Questions

Demographics

Tell us a bit about your organisation

Sector

Size (employees)

- 1 – 20
- 21 – 100
- 101 – 200
- 201 – 500
- 500+

Graduates you employ – do you focus on specific degrees and/or universities? Please expand – which ones? Why?

What is your process for recruiting graduates?

Professional capabilities

What are the 3-4 key skills/attributes that you look for when employing graduates?

How does your current process reveal these?

What are the 3-4 key skills/attributes that you look for when employing graduates 3-5 years out? What is different? Why?

ePortfolios

1. Have you heard of student/applicant ePortfolios?
2. What do you understand them to be?
3. Have you seen them used as part of an applications process?

For employers who have seen them used and are aware.

1. What role do they play in the application process?
2. Are they valuable? Why? What do they tell you about the applicant?
3. Is there a role for extending eportfolios into the workplace? Why?

For employers who are not aware:

e-portfolios may be described as a collection of evidence of student learning outcomes and reflections on how, why and how their individual learning has occurred.

The portfolio represents the student perspective of learning and provides evidence of that learning aligned to learning outcomes.

1. Do you see this type of resource as having a role to play in the application for employment process?
2. How might they be best used?
3. What evidence/information would you like to see in an eportfolio?
4. What might they reveal about an applicant that your current process doesn't?
5. Is there are role for extending eportfolios into the workplace? Why? How?

Appendix I | Summary of Findings from Employer Interviews

A total of 14 interviews were carried out with business employers. Respondents varied in terms of the types of organisations in which they worked (ranging from large sized organisations, medium-sized organisations, sole enterprises, BIG 4, retail, consulting, and marketing).

Skills sought by employers

A broad range of skills were identified by employers as significant. These included: breadth of experience, communication skills, a commercial approach to work, academic grades, adaptive, ability to work autonomously, ability to work in a team, ambition, analytic skills, attention to detail, commitment, emotional intelligence, global citizen/worldliness, good attitude, interpersonal skills, leadership, learning agility, maturity, motivation, passion for learning, presentation skills, problem-solving, professionalism, research skills, resilience, tenacity, respect for others, self-directedness, technical skills, 21st century skills, work ethic, and writing skills.

Employers consistently spoke about graduates being well-rounded and offering something to their organisation:

I would say that we look for students who are well rounded. (EMP_014)

They also indicated that their expectations of new graduates versus those that were 3-5 years out of university were different. Older graduates were expected to have better technical skills as well as soft skills which were seen as critical. The employers identified these as being: leadership, a well-developed network, ability to manage staff, experience, professionalism and ability to build relationships.

The potential of ePortfolios

None of the respondents who participated in the project had any depth of knowledge about ePortfolios. Once ePortfolios were explained to them, however, all fourteen respondents, in varying degrees, perceived them as potentially useful in recruiting graduates. Employers identified the following as key benefits:

- Providing a body of evidence
- Help in the recruitment process (with narrowing down selection)
- Caters to the next generation
- Helps employers get a 'feel for the person'
- Useful in the early stages of the process for some
- Benefits of reflection
- Benefits of the curation process
- Offers an in-depth understanding of applicant

Illustrative quotes include:

It just provides that terrific additional depth that you can't really put on a CV. (EMP_001)

I guess it would give ... more of an insight into the individual and their background ... So it's a ... more personalised kind of approach, than what we do see ... on paper... it sort of brings the person to life, which is important ... I guess it would depend on how focused the ePortfolio is and how well put together it is, but that in itself would say a lot about candidates. (EMP_003)

The culture of the next generation of applicants joining us ... they are digital natives and are used to it and should we not provide this avenue? (EMP_004)

I quite like the concept of having a body of evidence that can be used to sort of help you understand how they think and how they form their conclusions and judgements ... I think it then differentiates those candidates ... it's giving us even more insight into those individuals. (EMP_005)

Employer respondents also indicated that ePortfolios have the potential to reveal the following things about applicants that traditional processes cannot:

- Personalised body of learning evidence
- Examples of skills
- Learning style and preferences
- The lens through which they view the world/life
- Communication tool
- “Richer” format of evidence
- Helps make connections
- Provides a greater sense of softer skills

Their comments further substantiate the potential of ePortfolios to provide a “richer” insight into graduates. They stated that ePortfolios were “more revealing” and provided “a better feel for the person”. Another claimed, they “could provide more substance” and finally:

...it really ... gives you an insight into them beyond anything else that they would otherwise present. So it's interesting. (EMP_004)

What Employers want to see in an ePortfolio

The data reveals that employers would like to see the following content and inclusions in ePortfolios:

- Evidence and background relevant to the job application
- Applicants critiquing something
- Making connections between studies and the real world
- Evidence of learning, progress, thinking, judgement
- Offering information more visually

Their comments reveal the potential of ePortfolios to reveal graduate attitudes, cultural fit and self-awareness – qualities that are not always apparent in a CV, LinkedIn profile or interview.

In terms of attitude and you know 'never say die' and so forth. Maybe they've climbed Mount Everest or something and they can put a video of that on it, I don't know ... so rather than just academic qualifications – examples of what I call extracurricular stuff – so where they've volunteered in a community somewhere or they have done stuff like that. (EMP_004)

I think, also, evidence around sort of team activities that they might have worked on. You know, how they worked as a team. Some reflection on, you know, what worked, what didn't work, how they might modify the way they interacted or engaged in that activity? So some reflective component to it, I think, would be quite helpful, rather than just the doing of the task ... That reflection piece also gives us really good insights into the individual and how they think, you know, how they behave, what their values are. You know, what the cultural fit might be. (EMP_005)

You want it to be visually nice to look at and probably a little bit more interactive so you could probably attach a link to your e-portfolio through your LinkedIn profile to give your profile a little bit more depth. (EMP_013)

Employers did, however, allude to potential issues with ePortfolios in graduate recruitment. They suggested that ePortfolios might be time-consuming, may end up being template-like and that information would be difficult to verify.

Summary

While employer respondents did not have knowledge of ePortfolios, once explained to them, all employers saw their potential in the recruitment process. This potential was seen to lie in offering a better “feel for the person,” “bringing the graduate to life,” and providing greater insight into graduate attitudes and experience, and overall insight into their capabilities and employability. They viewed ePortfolios as a way to extend and enhance traditional recruitment processes to some extent. Importantly, none of the employers had in-depth knowledge of ePortfolios before the interviews which points to a clear need for awareness-raising amongst employers.

Appendix J | Student Focus Group/Survey questions

1. How did you feel about using ePortfolios?
2. Can you tell me what you found challenging?
3. Can you tell me what you found beneficial?
4. To what extent has this experience assisted you in understanding yourself as a learner?
5. Can you describe how the ePortfolio experience may have differed from a more traditional business learning experience?
6. Did the ePortfolio experience allow you to interact with each other? In what way?
7. Can you tell me what you see as the overall purpose of ePortfolios?
8. What kind of skills do you think were developed while using the ePortfolios? (e.g. creativity, reflective capabilities, ability to integrate across your learning)
9. Can you describe the advantages/disadvantages that may be associated with this type of technology prescribed by your university?
10. Would you prefer to choose your own portfolio tool to use or would you prefer for this to be given? If so, what would you choose?
11. How could the use of ePortfolios be improved to enhance your learning experience?
12. Is there any advice you would provide a fellow student regarding the use of ePortfolios?
13. How do you see the process helping you in terms of employability?
14. Concluding thoughts? Remarks?

Appendix K | Formal Evaluator's Report

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External Evaluator's Report

Realising the potential: Assessing professional learning through the integration of ePortfolios in Australian business education

Introduction

This project has addressed a complex issue at the centre of challenges to business education, namely how to strengthen capabilities for graduates entering what is often a turbulent workforce in the business sector – a sector that is rapidly changing and subject to a number of global drivers. Rightly, the project team from the outset recognized that the focus needed to be on pedagogical issues, and not on a search for a neat technological fix.

There are always tensions in higher education – both philosophical and pragmatic (the latter often with significant financial implications). Resolving these tensions inevitably includes reference to the function and purpose of universities. In terms of the educational aspect of universities, consideration must constantly return to the knowledge, skills and attitudes that graduating students can demonstrate. Descriptions of desired graduate capabilities exist for all Australian universities and, in most cases, receive focused attention.

Graduate attributes/ graduate capabilities appear in a number of projects funded by the Office for Learning and Teaching (OLT), and this is a clear signal about the importance of strengthening and assuring the knowledge/ skills/ attitudes of Australia's graduates. A number of factors work together to ensure that this project is a timely one for the higher-education sector in Australia. Three points are:

1. Funding is limited, leading both funding bodies and the community at large to demand increasingly robust evidence of graduate outcomes.
2. Technology systems to support the design of learning environments are now more robust and user-friendly.
3. These systems can yield data (the field called learning analytics) that can significantly add to the evidence base.

Therefore, a project which provides a way forward for the use of one type of technological system, namely ePortfolios, in ways that focus on how best to support the development of desired graduate outcomes, is very welcome indeed.

Project design

There are three focuses for this project (as described in the original grant submission)

1. A business-education ePortfolio professional capabilities assessment framework

2. Supporting professional development resources
3. Illustrative case studies.

The project design required that all three focuses needed to be addressed together – a conviction that I wholeheartedly share. The design is excellent with a clear praxis – an iterative intertwining of theory and practice. Various iterations of the framework have informed the progress of the case studies, and the experience and results of the case studies have informed refinements to the framework. As a ‘critical friend’ to the project team, I have been able to view this process in action, and have been impressed by the rigour demonstrated by project team members. I can confidently attest that this project is a significant contribution to business education in Australia and elsewhere.

The project is embedded in a discipline. My own experience had led me to see context as vital to the uptake of new ideas. I have worked in teaching and learning across universities in several countries and know that change is best facilitated within a discipline context.

Project leadership and management

I attended three project team meetings (19 November 2013; 9 and 13 April 2015); had a review meeting with Kim Watty on 15 October 2014; and attended the national project forum on 21 July 2015. I was also involved in a number of email conversations which provided regular updates. I am privileged to have been a participant observer.

The project made some use of Basecamp project-management software, which supported ready access to key project documents, a matter obviously of key importance in a project across several universities.

Project leadership and management were strong. The project team clearly looked to the project leader, Professor Kim Watty, for direction and guidance. Her clear understanding of what the project was aiming for kept the project on track. For example, in such a project, getting mired in the pros and cons of various ePortfolio technical options is a danger; this was avoided and the focus was maintained on the pedagogical framework, which can endure through any number of enhancements that will inevitably take place in the technological systems.

At the same time, Professor Watty was skilled in ensuring that aspects of the projects were appropriately delegated. An excellent example of this is way in which ownership of individual position papers was decided. See <http://www.buseport.com.au/position-papers.html>. Project team members were thus able to focus on particular areas of interest; it is envisaged that these position papers will become published academic papers, and this is an excellent way for scholarly dissemination to occur.

Ownership of the case studies was also clearly within the teaching teams at the three universities involved in the project.

Project administration was clear and timely. I was especially impressed by the fact that project team meetings occurred according to plan. In many projects, these peter out. In this project, the regular meetings kept the momentum going.

Project outcomes

The *project website* (www.buseport.com.au) is a rich and valuable asset. While not an agreed deliverable, it has become a hub for the project. In my view, all OLT-funded projects should have a website as this not only enables the project to maintain coherence, but also is an important aid to dissemination.

The *framework document*, described and included in the main report, is comprehensive and should inform national practice for some time. I appreciate the nicely designed and produced shorter versions that are available on the website. These are much more likely to be widely used than a longer document. See

http://www.buseport.com.au/uploads/2/6/9/9/26997874/summary_document_of_framework_for_sept_22_final_v2_16092014.pdf and

http://www.buseport.com.au/uploads/2/6/9/9/26997874/beep_framing_assessment_tri-fold_flyer.pdf

The *case studies* were chosen to exemplify a good range of contexts. The presentation of the case studies in a web format is a strategy that other projects may wish to adopt. These are engaging and valuable descriptions of the framework in action, giving a sense of the nuances of different institutions with their own student profiles, different program designs, variation in teaching styles, etc. Each case-study team took ownership of the development of their Weebly web reports. These sites will be linked to the main site.

Macquarie University – www.portfoliosinaccounting.weebly.com

Deakin University, Bachelor of Management – www.bmgt.weebly.com

Deakin University, Accounting Major – www.deakinaccountingportfolio.weebly.com

University of Southern Queensland – usqaccountingportfolio.weebly.com

I attended the national project forum on 21 July 2015 where the case studies from Deakin and Macquarie Universities were presented and discussed intensively. These case studies brought the framework to life. They were an essential and integral part of the project and added significant value to the project.

Understandably, thus far, there has been a strong focus on establishing staff and student views; successful implementation of a new strategy demands getting participants on side. However, gaining more robust evidence about student learning outcomes is the next phase that I hope members of the project team continue to research. There was a suggestion at the national forum about investigating graduates' views about their ePortfolio experience when they are in the workplace. This is an interesting possible research strategy for the future, and could dovetail well with a more detailed analysis of the quality of the portfolios that students produce. However, I note that these options are possible work for the future, now that a solid framework has been established.

The evaluation plan

Unless innovative projects have *both* a good theoretical basis *and* good evaluation evidence, they are unlikely to make an impact on the higher-education sector. Colleagues will not investigate a set of resources with accompanying pedagogy unless they have a compelling reason to do so. This means that projects need to produce a persuasive educational rationale and a convincing set of data about how student learning will be enhanced.

The 'LEPO' (Learning, Environment, Processes, Outcomes) conceptual framework for curriculum design (Phillips, McNaught, & Kennedy, 2010, 2011) has informed thinking about the context and interactions involved in curriculum design in this project. Within a *learning environment*, students attain *learning outcomes* by going through *learning processes*. In the case studies, incorporating a portfolio into the learning environment provided students with learning experiences (the learning process) that could impact on their learning outcomes.

There is a tension between seeing ePortfolios as about being either a process *or* a product; about facilitating the process of reflection and self-awareness *or* about showing evidence of attaining desired learning

outcomes. It is a little glib to just say “both”. It was clear to me at the national forum in July 2015 that there is a genuine diversity of opinion here and this would usefully be a focus for further work in the future.

The evaluation plan was finalized in December 2013, and has been used a guide during the project. It is provided in the appendix to this evaluator’s report as I consider that it is an elegant and succinct exemplar that might be of assistance to other projects. The plan served as an ongoing reference point in the project to emphasize the various sources of data and how each data source can serve an evaluative function.

It is useful to note that the strategy of producing position papers as evaluative outcomes was built into the project design right from the beginning of the project. This is an excellent strategy.

Dissemination and diffusion

In reports on other OLT projects, I have commented on the challenges of dissemination and diffusion. On both counts, I am pleased to report that the project design with position papers, events and the website is a good example of how these challenges can be met.

There has clearly been a good deal of *dissemination*. This was built into the project so that a range of dissemination events occurred; these events are captured on the website and listed in the main report. The position papers and subsequent academic publications are, as noted above, a very fine dissemination strategy.

However, it must also be noted that the project process itself supported dissemination in that the conversations with key stakeholders, such as employers, raised awareness about graduate capabilities and the potential for ePortfolios to assist students in developing and demonstrating these capabilities. These conversations were in themselves dissemination activities.

The tricky one is *diffusion* – to what extent does the project genuinely impact on student learning in the sector? Are the resources likely to be widely reused?

The answers to these questions lie beyond the remit of any one project, and are in the realms of institutional and governmental policy. What rewards exist in the sector for university teachers to adopt and/or adapt innovative learning designs and resources? How do universities – at department, faculty and institutional level – plan and enact work-allocation procedures? Is sufficient time for a) innovation; and b) intensive student-centred activity given to teachers, teaching support staff and IT support staff?

The outcomes of this project are comprehensive and readily accessible. To that end, the project team has very satisfactorily fulfilled their remit.

The OLT has done much to move the sector in a direction that supports diffusion of the excellent pedagogically sound resources that this and other OLT projects have produced. It is hoped that the next version of OLT – in whatever form it emerges – will be able continue these essential and excellent endeavours.

References

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Project evaluation plan

<i>1. Within the</i> Learning Environment	Questions	Data Sources	Samples	Project value-add
1a. Current – internal	How is curriculum designed in the pilot studies?	Internal – Course & unit documents, incl. assessment requirements External – Discipline accreditation, professional expectations, national QA requirements (TEQSA & Higher Education Standards Framework)	3 pilot studies • Deakin (whole course) • MQ (capstone in Accounting) • USQ (TBA)	Paper 1
	How do academic leaders/ teaching staff perceive ePortfolios?	Academic questionnaire survey	Up to 50 – via ABDC network. ADTLs plus 5 others per ADTL	Empirical analysis of academic views
1b. Current – external	How do employers perceive ePortfolios?	Graduate employer phone survey – using predefined questions	Up to 30	Exploratory analysis of Australian graduate employer views
2. Learning and teaching activities are designed and delivered	What can we learn about ‘good’ practices in ePortfolio design and assessment?	Teaching Staff – journals (current) and interviews (retrospective)	3 project team members (probably)	Paper 2 Designing teaching & learning activities & assessment tasks
	Who decides if practices deliver on learning outcomes?	Students – journals (current), interviews (retrospective) and exemplars (post-pilots)	Up to 10 per pilot	Paper 3 Technology and ePortfolios
				Resources for staff and students
3. <i>That enable students to evidence</i>	Who defines learning outcomes?	Internal – Statements of course & unit learning outcomes, as	3 pilot studies	Designing & using rubrics for assessing student learning in

<i>(normally via assessment tasks) their Learning Outcomes using eportfolios, and that enable staff to reflect and refine their teaching</i>		aligned to graduate learning outcomes External – international academic standards & professional accreditation. See also 1a.		ePortfolios
	What is the academic perspective?	Teaching Staff – journals (current) and interviews (retrospective)	3 project team members (probably)	Designing & using rubrics for assessing student learning via ePortfolios
	What is the student perspective?	Students – journals, interviews and exemplars	Up to 10 per pilot	Exemplars
				Resources for staff and students

From considering the learning environment' teaching and learning activities and the need to evidence learning outcomes, will evolve the framework or principles for assessing professional learning through the integration of ePortfolios in Australian business education. This will be referred to as 'The business education ePortfolio professional learning capabilities assessment framework'.

Watty V2 4/12/2013. Minor tweaks by CMcN 29 December 2013

Appendix L | Stakeholder Flyer

Business Education

ePortfolios

Stakeholder Flyer



Academic teaching staff, employers

Assessing generic/employability skills in business education is a constant challenge. While knowledge or problem solving may be explicitly assessed, other important skills that we know are highly valued by graduate employers, like teamwork or self-management, are more problematic. As we learn more about the value of students creating their own evidence of achievement to demonstrate these skills, we look to different approaches and methods to capture that learning. An ePortfolio is one approach that can assist educators as facilitators of learning, and students as potential employees, in this complex task.

An ePortfolio provides an opportunity for students to reflect on their unique and diverse approaches to learning and to generate evidence of the employability skills highly valued by graduate employers. These skills include, but are not limited to, professional judgement, leadership, digital literacy, self-management, creativity and innovation, communication, teamwork, problem solving, social responsibility and ethics. Providing this evidence enhances the opportunity for graduate employers to source the best candidate in an increasingly competitive market.

Professional Bodies

Developing business graduates who are skilled to meet the diverse and constantly changing landscape of a global business environment ensures that educators seek out evolving methods and approaches to education, with a special focus on assessment. Professional bodies play a unique role in further educating graduates for a specific profession.

An ePortfolio provides an opportunity for students to reflect on their unique and diverse approaches to learning and to generate evidence of the employability skills highly valued by graduate employers. These skills include, but are not limited to, professional judgement, leadership, digital literacy, self-management, creativity and innovation, entrepreneurship, social responsibility, cultural awareness, sustainability and ethics. This learning provides a valuable and solid platform for graduates to continue their education with various professional bodies.

Students

As a graduate in a business discipline, you know that the competitive market for employment demands that you are able to 'stand out in a crowd'. Your ePortfolio provides an opportunity for you to do just that. Treat it as a record of your learning, to evidence what you have achieved over your academic journey and use it beyond your degree as you enter your chosen profession or undertake further studies. Use it to reflect on how you learn, your strengths and the challenges you have faced and what makes you an employable graduate. This is your own personal record of learning and achievement, past, present and future.

ADTLs/PVC

Assessing generic or employability skills in business education is a constant challenge, yet increasingly we are required by national and international accrediting bodies to provide evidence of achievement (Assurance of Learning). While knowledge or problem solving may be explicitly assessed, other skills that we know are highly valued by graduate employers, like teamwork and self-management, are more problematic. As we learn more about the value of student's creating their own evidence of achievement for skills of this type, we look to different approaches and methods to capture that learning. An ePortfolio provides an opportunity for students to reflect on their unique approach to learning and to generate evidence of the employability skills highly valued by graduate employers. These skills include, but are not limited to professional judgement, leadership, digital literacy, self-management, creativity and innovation, entrepreneurship, social responsibility, cultural awareness, sustainability and ethics.

OLT

ePortfolios are an innovative tool which have the potential to create meaningful learning experiences for students and enhancing the employability of graduates. Despite its potential, ePortfolio use in higher education remains limited. A cutting-edge research project led by Deakin University in partnership with USQ and Macquarie University explores the potential of ePortfolios in business education. This large scale study is changing the way learning occurs and is evidenced, and aligns with the OLTs focus on enhanced learning and teaching. The project affords enhancements to learning experiences and outcomes, employability, career development and professional identity.

ABDC promoting

As the higher education sector continues to explore issues of academic standards, quality assurance and enhanced teaching and learning, it looks to different approaches and methods. ePortfolios are one approach that can assist us in this complex task. An ePortfolio provides an opportunity for students to reflect on their learning and, more importantly, to evidence the skills that we know are valued by graduate employers. A cutting-edge research project led by Deakin University, in partnership with USQ and Macquarie University, explores the potential of ePortfolios in business education to offer enhancements in the following critical areas: learning experiences and outcomes, employability, career development and professional identity.

AACSB

Increasingly, business educators are required by national and international accrediting bodies to provide evidence of achievement (Assurance of Learning). While knowledge or problem solving may be explicitly assessed, other skills that we know are highly valued by graduate employers, like teamwork and self-management, are more problematic. As we learn more about the value of student's creating their own evidence of achievement for skills of this type, we look to different approaches and methods to capture that learning. eportfolios are one approach that can assist us in this complex task. An ePortfolio provides an opportunity for students to reflect on their unique approach to learning and to generate evidence of the employability skills highly valued by graduate employers. These skills include, but are not limited to professional judgement, leadership, digital literacy, self-management, creativity and innovation, entrepreneurship, social responsibility, cultural awareness, sustainability and ethics.

A cutting-edge research project led by Deakin University, in partnership with USQ and Macquarie University, explores the potential of ePortfolios in business education affording enhancement to the following critical areas: learning experiences and outcomes, employability, career development and professional identity.

AAEBL

A cutting-edge research project led by Deakin University, in partnership with USQ and Macquarie University, funded by the OLT, explores the potential of ePortfolios in business education and the enhancements afforded to the following critical areas: learning experiences and outcomes, employability, career development and professional identity. This project is one of the first of its kind in the Australian

higher education sector. An ePortfolio provides an opportunity for students to reflect on their unique approach to learning and to generate evidence of the employability skills highly valued by graduate employers. These skills include, but are not limited to professional judgement, leadership, digital literacy, self-management, creativity and innovation, entrepreneurship, social responsibility, cultural awareness, sustainability and ethics. Feedback from graduate employers, academic business education leaders and students provides a rich source of information for the project.

E-portfolios Australia

While ePortfolios are not new, their uptake in business education in the Australian higher education sector remains strikingly limited. This is despite the growing popularity of ePortfolios overseas (for example, in the US and Canada), and the potential enhancements to teaching and learning afforded by ePortfolios. A cutting-edge research project led by Deakin University, in partnership with USQ and Macquarie University, funded by the OLT, explores the potential of ePortfolios in business education and the enhancements they offer to the following critical areas: learning experiences and outcomes, employability, career development and professional identity. An ePortfolio provides an opportunity for students to reflect on their unique approach to learning and to generate evidence of the employability skills highly valued by graduate employers. These skills include, but are not limited to professional judgement, leadership, digital literacy, self-management, creativity and innovation, entrepreneurship, social responsibility, cultural awareness, sustainability and ethics. Feedback from graduate employers, academic business education leaders and students provides a rich source of information for the project. This project is one of the first of its kind in the Australian higher education sector.

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