4. **NATIONAL AND INTERNATIONAL CONTEXTS FOR ePORTFOLIO PRACTICE IN HIGHER EDUCATION**

**Goal 1:** To provide an overview and analysis of national and international context related to the development of portfolios, particularly ePortfolios, in tertiary education and in schools

### 4.1 Overview

The initial environmental scan of ePortfolio activity provided a valuable overview of ePortfolio activity in education, employment and the community, which required a deeper examination of national and international policy and practice. Investigations on the part of the project team sought to contextualise the scope of ePortfolio use. An examination of the present Australian policy context was particularly timely, given that the project itself coincided with a new Labor Federal government being elected in November 2007 and the Australia 2020 Summit being held in April 2008. Emergent political themes include employability skills, participation in education and employment, national productivity, innovation and lifelong learning.

From the perspective of internationalisation of education, the Australian ePortfolio Project also dovetails with the National Diploma Supplement project funded by DEST, with the two project teams intersecting on issues of mutual concern. It has been found that the Australian policy environment differs significantly from the international policy environments, most specifically in Europe and in the United Kingdom. The key factors leading to sector-wide engagement with ePortfolios in these jurisdictions are reviewed, with reference also made to policy-driven ePortfolio activity in Canada and New Zealand. In a global education market, questions of technical standards and interoperability are also critical, in order to meet the need to support learner mobility within and between learning and training institutions and the workplace.

Beyond the policy contexts, there are also a number of practice contexts that are analysed. Some professions, such as teaching and nursing, have a strong tradition of portfolio activity and these are seen to be leading the way for current ePortfolio initiatives, nationally and internationally. Beyond university students, there is also an emergent interest in ePortfolios for academic staff, especially within the contexts of academic probation, academic promotion and teaching excellence. Attention is also paid to a number of initiatives in the K-12 education sector and the vocational education and training (VET sector). The interplay of higher education with the schools and VET sectors further highlights some of the policy issues associated with technical standards and interoperability.

### 4.2 Policy contexts

#### 4.2.1 Australian policy context

In mid April 2008, the Australian Federal Government hosted the 2020 Summit. Education was identified as a key theme in the national ‘productivity agenda': one of the ways in which Australia can become more productive is by equipping Australians ‘with the capacity to contribute and innovate through an education and training system that leads the world in excellence and inclusion’ (Australian Government, 2008, p. 10). The need to develop strong connections through ‘collaborations in education, business and innovation’ (Australian Government, 2008, p. 10) has been recognised as an important aspect of the process. The report goes further to establish the importance of ‘focusing on the connections between quality teaching and productivity’ (Australian Government, 2008, p. 11).

The Federal Government seeks to widen access to higher education in order to support increased participation in the labour market. In the Australia 2020 report, it has specifically indicated a desire...
to build ‘life learning centres’ for working age career needs and take full part in the digital economy (Australian Government, 2008, p. 12). The need for ongoing skills development is also part of addressing the critical problem of a skills shortage and sees further manifestations in other training programs such as the Productivity Places Program (DEEWR, 2008b).

In recent years, there has been a growing interest in ‘employability skills’. While Australia currently has no government policy to mandate the formal recording or reporting of employability skills, strategies have been in place in the VET sector to incorporate employability skills into the National Training Packages, with consideration given to the options for assessing and reporting on the individual’s acquisition of skills. In 2006, DEST commissioned the Allen Consulting Group to examine the issues associated with recording and reporting of employability skills with the goal of developing a better understanding on the part of learners, trainers and employers (Allen Consulting Group, 2006). One of the key recommendations in the report to DEST was that learners should be encouraged to develop their own portfolios of employability skills:

Students would collect and organise evidence of the employability skills that they have developed through VET, other study, or in other areas of life. Learners could continue to update their portfolio throughout their working lives, as they continue to develop different facets of employability skills in new contexts.

(Allen Consulting Group, 2006, p. 7)

Learners would consequently be better informed about the range of employability skills needed for specific jobs, as well as about where and how to develop the skills though work and study. It is argued that they would, as a result, be better prepared for job interviews. Transition into and through training courses in single or multiple institutions, with the ability to support the recognition of prior learning (RPL) may be managed more easily (education.au, 2008a). It has been noted that some Australian employers favour an ePortfolio approach as it gives a ‘more informed picture of the job candidate’ than is possible through a traditional resume (Department of Science, Education and Training (DEST), 2007, p. 42). Nevertheless, employers tend to have their own perspective on ePortfolio, which means that the demands of the employer are not always commensurate with the educational goals of individual development and empowerment (Ward, 2008).

In 2004 DEST contracted education.au to develop and trial a national ePortfolio tool that could be used for the recognition and recording of employability skills (Curyer, Leeson, Mason & Williams, 2007). In 2005 a beta-release called My e-Portfolio was developed for MyFuture (2008), the Federal government’s career information service. Trials were conducted using a small sample of secondary schools, institutes of Technical and Further Education (TAFE) and tertiary institutions. This ePortfolio project remains a work in progress and is not publicly available. However, the report on developing ePortfolios for the VET sector (Curyer et al., 2007) makes reference to the project as an opportunity for further national development.

Similar themes have emerged in the interface between the higher education and employment sectors. Industry groups and professional bodies have advocated the need for universities to offer courses that more adequately meet current industry and market place needs, especially within the area of graduate attributes or generic capabilities. In 2000, the Department of Education, Training and Youth Affairs (DETYA) commissioned a study of employers’ satisfaction with university graduates. Findings revealed that employers believed that as many as 75% of Australian university graduates were not in fact suited to the jobs they applied for (AC Nielsen Research Services, 2000). Employers indicated that the apparent lack of preparedness is not in the technical areas but in the ‘generic’ capabilities of oral and written communication, interpersonal dealings, critical thinking, problem solving and ethics training.

In 2007, the Business, Industry and Higher Education Collaboration Council (BIHECC) was asked to undertake research into the development, teaching, assessment and reporting of graduate employability skills. It was acknowledged (Precision Consultancy, 2007) that employability skills were developed by university students through:

- courses, that is, through curriculum and course design
- work placements such as fieldwork, internships, cooperative education and sandwich programs
- exposure to professional settings
- advice and guidance provided by university careers services
• further opportunities offered by part-time employment, volunteer work and community participation.

It was felt that academic staff were well placed to meaningfully assess employability skills, but the issue of reporting was more complex. Reference is directly made to the potential for ePortfolios in this area:

_E-portfolios were seen by businesses and universities to be a practical method for graduates to explain and provide examples of their employability skills. E-portfolios need to be managed by the students themselves. Some universities offer web-based portfolios to students, but to be effective students need guidance from careers services and/or academic staff to complete these._

(Precision Consultancy, 2007, p. 4)

Making reference to the DEST-funded National Diploma Supplement project to develop a single agreed template to document the achievements of Australian graduates, the researchers indicated that, while most of the information presented in a diploma supplement would be ‘the testamur associated with a degree or diploma’, it was hoped there would be a section of the document ‘where details of employability skills associated with the given qualification could be readily and meaningfully included’ (Precision Consultancy, 2007, p. 4). The Graduate Employability Skills report was released in August 2007, coinciding with funding being awarded by the Australian Learning and Teaching Council (ALTC) to the Australian ePortfolio Project team, which included members of the National Diploma Supplement project team. Chapter 7 of the current report presents a discussion on the diploma supplement project, which has resulted in recommendations for an Australian Higher Education Graduation Statement (AHEGS). The chapter includes an overview of the relationship between the proposed AHEGS and ePortfolios (see Section 7.5).

The goals of lifelong and lifewide learning are gaining political and pedagogical significance. It may be argued that the political agenda has reached a position where a mature ePortfolio environment could play a significant role in bridging the education and employment sectors to attain a useful and potentially highly rewarding synergy. The ALTC has demonstrated its support for investigating the ePortfolio area through funding for the Australian ePortfolio Project. The ALTC therefore has the opportunity, through the current project, to raise the awareness of the potential of ePortfolios in education and employment and to develop linkages across the sectors.

Interestingly, links between policy and practice can be identified: current priority areas for government training include nursing and education, two areas where ePortfolio development has been strong and highly innovative, both in Australia and overseas (Broadbent, 2005; Dennis, Hardy, & White, 2006; Finger, McGlasson, & Finger, 2008). Teacher education is regarded as a traditional portfolio-based area, where evidence of the attainment of professional standards is required for registration as a teacher. Medicine and nursing represent other discipline-specific instances where portfolio and ePortfolio use provides evidence of competency and standards attainment. There have also been ePortfolio initiatives arising in the careers and employment sections of higher education institutions as a response to the call from Australian employers for job-ready graduates. Increasingly, ePortfolio practices are being introduced to areas such as engineering and science, where portfolios are less common, but there is a growing need to give students the opportunity to develop awareness of their employability skills, which in turn enables them to have a competitive edge when job seeking (McAllister, Hallam, & Harper, 2008).

4.2.2 International policy contexts

The policy environment in Australia, however, differs markedly from that in Europe and the United Kingdom. The policy drivers in the northern hemisphere are reviewed to help develop an understanding of the significance of ePortfolios in education and employment. However, it is interesting to note that, while widespread ePortfolio practice is reported in both universities and community colleges in the USA, there is scant evidence of specific government policy drivers contributing to ePortfolio use, beyond one example of the reform of professional teaching standards. Much of the impetus to use ePortfolios in education has evolved from an interest in student learning processes, for example, student centred learning; student self-reflection; critical thinking skills; technology skills; and lifelong learning habits. Nevertheless, these foci may also lead to an interest on the part of academic managers: ‘Provosts and other educational leaders often connect eportfolios to the fulfillment of institutional mission and to the fulfillment of educational objectives … As an extension of using eportfolios for student assessment,
Eportfolios can assist in program improvement and with accreditation’ (Lee, 2007, p. 12). The Council for Aid to Education (2008) coordinates the Collegiate Learning Assessment (CLA) process, which seeks to improve student learning outcomes in the areas of critical thinking, analytical reasoning, written communication and problem solving. CLA focuses on the institution as the point of analysis, rather than the students per se, but a number of institutions are utilising a portfolio approach to collating student work, which is aggregated for the purposes of institutional assessment. Overall, therefore, ePortfolios may be of interest within the academic policy context, rather than within the government policy context.

### 4.2.2.1 Europe

In Europe, the development of eLearning technologies and strategies has led to an international campaign: Objective 2010 — ePortfolio for All (EIfEL, 2008b). The vision emerged at the Council of the European Union (EU) meeting held in Lisbon in March 2000, where it was agreed that Europe should strive to achieve greater sustainability and economic benefit. The strategic goal for 2010 was formulated, for Europe ‘to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion’ (European Commission, 2008). The strategy highlighted the importance of lifelong learning as the process to support the achievement of ‘the economic, employment and social goals for Europe’ (Leney, 2004, p. 8).

The development of ePortfolios as support to the concept of lifelong learning had been forefronted in Europe in 2001 by the establishment of the European Institute for ELearning (EIfEL). Lifelong learning is defined as ‘multi episodic’, with individuals moving beyond a specific period of formal education, to participate in multiple, but occasional, periods of education and training throughout their working life; the idea of an ePortfolio, therefore, ‘recognises that learning is continuing and seeks to provide tools to support that learning’ (Atwell, 2007, p. 2). EIfEL states that it aims to ‘make the ePortfolio the tool of choice for 21st century knowledge workers and citizens to valorise individual achievements, support renewed approaches to quality assurance of education and training policies and support lifelong and lifewide learning policies’ (Elearningeuropa.info, 2007).

The European Commission is currently funding a four-year project (2005–2009) known as The European Network for Lifelong Competence Development (TENCompetence). This is a research and technology development project that specifically examines the creation, storage, use and exchange of information and data about knowledge resources, learning activities (and units of learning), competence development programs and networks for lifelong competence development (Sligte & Koper, 2008). The working environment of the 21st century is characterised by the need for flexibility to cope with multiple jobs, multiple roles and multiple functions; workers are required to work in multidisciplinary teams, to frequently take up new roles and to adapt to new situations. Work and learning have become integrated; indeed, ‘learning has become an integral part of our whole life, just like eating, drinking and breathing’ (Sligte & Koper, 2008, p. 5). Through the TENCompetence project it is hoped that an integrated open source infrastructure can be developed that will enable and foster lifelong learning. The ePortfolio process itself recognises learning as a continuing process ‘where individuals are responsible for defining and organizing their own learning’ (Berlanga, Sloep, Brouns, Bitter-Rijpkema, & Koper, 2008, p. 24). In planning the different learning activities that help learners acquire a competence, the learner can prepare his or her competence development plan (CDP). ePortfolios can promote the articulation and visibility of the individual’s attributes that can be shared with others, for example, peers, teachers, tutors or employers. The ePortfolio enables individuals to develop and present their diverse personal and professional profiles, with the option to choose what information each profile should display (Berlanga et al., 2008).

In a digital world, there is the potential for citizens to present themselves digitally. In Europe, digital identities are being developed through the eHealth, eAdministration and eCitizenship agendas, so that a single individual may potentially have multiple digital identities. An ePortfolio provides the individual with the opportunity to construct his or her own digital identity in this environment. This year, the annual European ePortfolio conference hosted by EIfEL has the title ‘ePortfolio and Digital Identity 2008’. The aim of the conference is to explore ‘how digital technologies, and in particular ePortfolios and digital identity, are transforming individual, organisational and community learning and development’, with a particular focus on the needs of the knowledge economy and society’ (EIfEL, 2008a).
4.2.2.2 United Kingdom

The United Kingdom is actively engaged in promoting and supporting the use of ePortfolios. Activity has arisen in both a ‘bottom up’ manner, from within the education sector and in a ‘top down’ manner, from government policy initiatives. A range of UK government policies can be seen to be supporting the implementation of ePortfolios, including the e-strategy of the Department for Education and Skills (DfES, 2005). Following the first high level priority of improving access to online services, the second priority focuses on providing support to learners, with the requirement that institutions offer personal online learning space with the capacity to support an ePortfolio. The electronic portfolio will make it ‘simpler for learners to build their record of achievement throughout their lifelong learning’ (DfES, 2005, p. 5). The policy context for e-strategy development in the UK is based upon the twin pillars of attainment and inclusion.

Within the higher education context, interest in ePortfolios was stimulated by the recommendation of the National Committee of Inquiry into Higher Education (Dearing, 1997) which recommended that Institutions of Higher Education, over the medium term, develop a ‘Progress File’. The file should consist of two elements:

- A transcript recording student achievement that should follow a common format devised by institutions collectively through their representative bodies.
- A means by which students can monitor, build and reflect upon their personal development (Personal Development Planning/Recording).

Personal Development Planning (PDP) was subsequently defined further as ‘a structured and supported process’ (Quality Assurance Agency in Higher Education, 2001), used to reflect on learning and/or performance and also for career or other planning — a process that is congruent with, and increasingly supported by, practice within electronic environments, specifically via the use of ‘e-pdp’ and/or ‘e-portfolio’ software. The policy rationale is that learning should be lifelong and personal. All learners should be able to ‘develop, record, repurpose and transfer a wide range of information about themselves electronically, as they progress through different levels and episodes of learning, training and employment’ (JISC, 2006). Further policy development is anticipated in the UK, specifically in terms of the current interest in a possible Higher Education Achievement Report (HEAR) for all students, as proposed in the Burgess Group Report (Universities UK, 2007) and the developing agenda in respect of workforce development and employer engagement, following the Leitch Review of Skills (Leitch, 2006). ePortfolio technology and PDP practice are considered central to the need to marry the requirements of employee, employer and institutional stakeholders in order to facilitate the planning, recording and reviewing of learning across distributed learning environments; to enhance the communication between learners, peers, academic and workplace mentors; to develop clearer opportunities for personalising learning; and to monitor the linkages of individual learning to organisational needs and requirements.

The Joint Information Systems Committee (JISC) was formed in 1993 as a committee of the Higher Education Funding Council to deal with networking and other specialist areas. It released its first strategy in 1996 to consider coordinated electronic information and network services. In 2005 JISC had a key role in supporting a set of national policies and strategies in the higher education (HE) and further education (FE) areas. Among these policies was a number that had specific impact on the UK program of development of ePortfolios. These policies urged mature ePortfolio development not only for the individual user at the student or teacher level, but also at the level of higher education institutions, awarding bodies and, ultimately, other sectors.

One project has explored the potential for a personal portfolio as a tool for every citizen, a goal that has thematic and policy links to the EIfEL manifesto. Career Wales Online (CWO) was developed as a ‘client-led web service which will enable everyone to hold an e-portfolio of achievements, qualifications, experiences’ (Jones, 2004, p. 1). Aimed at addressing the drop-out rate from training and employment and potentially preventing long-term unemployment, young people (16–19 years) are introduced to the ePortfolio tool during the school years with the goal of helping them think about lifelong career planning.
With a focus on career self-management and self-awareness, the platform helps users understand and record their learning and work styles, interests, skills, personal qualities and achievements through the e-portfolio and interactive games.

(European Commission, 2005, p. 15)

CWO (2008) was a finalist in the European eGovernment Awards 2005, as well as being nominated for a number of awards in the areas of education, technology and social innovation.

The Centre for Recording Achievement (CRA) operates as an Associate Centre of the Higher Education Academy (HEA) with a specific focus on supporting higher education institutions and their communities with the implementation of Progress Files, Personal Development Planning and ePortfolios (Centre for Recording Achievement, 2008a). It also works in areas where ePortfolio practice is under development, including with schools and colleges, foundation degrees, work-based learning, postgraduate study, employment and continuing professional development. The CRA has a membership that encompasses major higher education institutions, smaller organisations and individuals, providing a forum for dialogue about policy and practice. The organisation has close links to the JISC, the Quality Assurance Agency (QAA) and, of course, the HEA. The CRA conducted an ePortfolio survey in 2007, on behalf of HEA, which found that 77% of institutional respondents reported that their PDP processes were supported by an electronic tool (Strivens, 2007). It is important to note, however, that in many cases individual practice in universities predated any specific policies (Ward, 2008).

4.2.2.3 The Netherlands

In the Netherlands, government policy issues associated with the ICT infrastructure for higher education resulted in the establishment of the organisation SURF. Dutch universities were challenged to develop and introduce ideas associated with the use of the ICT network that linked the academic and research institutions. Current activities encompass the provision of network services, development and management of protocols for security and authentication, software development and collaboration across the thematic areas of eLearning, scholarly communication, digital rights, identity management and technical standards. SURF and its activities are primarily funded by the academic partners (research intensive and applied science universities) and the government Ministry of Education, Science and Culture and the Ministry of Economic Affairs. NL Portfolio is a special interest group (SIG) within SURF, established in 2004, that aims to ‘combine, share and develop further the knowledge in the field of digital portfolios in higher education’ (SURF NL, 2008). In 2006-2007, the NL Portfolio Expertise Group conducted a research study to examine ePortfolio practice in Dutch higher education, which includes the research universities and the universities of applied science, which tend to offer a more competence-oriented education. NL Portfolio is working with a number of institutions that are ready to embark on scaling up their ePortfolio projects to an institution-wide level. SURF is involved in collaborative projects with international partners such as JISC in the UK.

4.2.2.4 Canada

ePortfolio use has been promoted in Canada since 1997 by the eLearning forum Learning Innovations Forum d’Innovations d’Apprentissage (LIfLA). The intention was to incorporate ePortfolio practice across ‘all areas of education and training’ (Barker, 2004, p. 1). Barker and her research team have worked to establish links between ePortfolio practice and recognition of prior learning (RPL); lifelong learning, education and training and human capital management. LIfLA is closely affiliated with the European eLearning organisation, EIfEL.

In a project funded by Human Resources and Skills Development Canada (HRSDC), LIfLA looked at the application of ePortfolios to map the skills of new immigrants coming to Canada to the available employment opportunities. Canadian employers were struggling with the recognition of training and work experience undertaken outside of the Canadian system (Barker, 2006). The project brought together human resources, education and software specialists and effectively dovetailed with the stated aims of an ‘ePortfolio for every citizen’ and ‘one ePortfolio for Life’ (Barker, 2006, p. 5). LIfLA used this as a springboard to call for a national and integrated approach to ePortfolios for immigration and learning, but the project resulted in no effective outcomes.
Earlier, in 2004, the Ministry of Education in British Columbia mandated the use of the Graduation Portfolio — as either a physical or electronic portfolio — by all Years 10–12 students in the province. It was intended to provide equity of assessment as it would facilitate a broader concept of assessment than just the formal classroom perspective. However, for many reasons, the mandatory ePortfolio graduation requirement was not well supported by teachers, students and parents in British Columbia and it was rescinded late in 2006. Parents, students and teachers reported to the Education Minister that the ePortfolio activities, both compiling them and assessing them, were too complex and too time consuming. They also felt the system had been introduced ‘too hastily’ (Bellett, 2006). Teachers were not given time or additional staffing to become acquainted with the system or the requirements. There were also concerns that the ‘less traditionally motivated’ students who would supposedly benefit from a broader assessment approach were not adequately supported to use the system (Russell, 2006). A lack of assistance for international students was also perceived (Preston, 2006). The BC Teachers Federation reported the ePortfolio placed a ‘barrier to graduation’ for some of the most vulnerable students (Bellett, 2006). The Council of Ministers of Education, Canada (CMEC) report to the OECD in 2007 suggested that although in British Columbia the graduation portfolio has become an optional activity for graduating secondary students, ‘a portfolio culture now permeates BC’s schools, as students are required to collect and reflect on evidence of their unique learning’. The report details many ePortfolio initiatives currently being undertaken in British Columbia (Council of Ministers of Education Canada CMEC, 2007, p. 12).

4.2.2.5 New Zealand

The New Zealand context is one where significant efforts have been made to make effective use of a limited education budget. High costs and a perceived lack of flexibility in platforms such as WebCT and Blackboard has seen policy shift to the development and uptake of economically sustainable technologies, with a specific interest since 2003 in open source software. The New Zealand Government established the eLearning Collaborative Development Fund (eCDF) as an avenue for dedicated eLearning funding for the period 2003–2007. One of the key strategies for the deployment of funds is that ‘Projects should be collaborative across institutions and be designed to have impact on the whole sector’ (Wyles, p. 2).

The New Zealand Tertiary Education Commission’s eLearning Collaboration was contracted in 2006 to develop an ePortfolio application for the New Zealand tertiary sector. The project was a collaborative effort involving Massey University, Auckland University of Technology, The Open Polytechnic of New Zealand and Victoria University of Wellington. The result was Mahara, an open source portfolio application incorporating social networking applications. It is freely available and provides users with the tools to ‘demonstrate their life-long learning, skills and development over time to selected audiences’. Mahara means ‘thinking’ or ‘thought’ in Māori, which conveys the purpose of the project: to create a ‘user-centred life-long learning and development application’ (Mahara, 2006). At the conclusion of the project, the Flexible Learning Network (NZ) has guided the ongoing development of an ePortfolio service, through My Portfolio, which is powered by Mahara. Mahara is attracting attention in European education institutions, not least due to arrangements for access thorough the More Self-Esteem with my ePortfolio (MOSEP) project (2008) (see Section 4.4.2).

4.2.2.6 Scandinavia

EIfEL acknowledges that much of the pioneering work in the area of ePortfolios has been undertaken in Scandinavia. In Norway, the national ICT infrastructure is well established and it has been argued that ambitious government policy has sought to increase the use of ICT, with all households and enterprises to have access to cost-effective broadband services and digital tools to be made available in all elementary and secondary schools (Norwegian Association for Distance and Flexible Education NADE, 2007). The vision for widespread ePortfolio use has been recorded:

*The student develops and produces learning resources as part of her/his learning process. She/he has access to a great range of learning resources and learning objects that might be used to build new products as part of the learning process. The student refines them and brings them to her/his personal portfolio (e-portfolio). The content of her/his portfolio is shared with other students. The content is easily accessible as learning objects or as materials for future studies and for future jobs.*

However, it has been noted that current government ICT policy does not mention ePortfolios. While the term ‘ePortfolio’ is less common than the term ‘digital portfolio’, there is a locally developed software tool, Aspiro, which is available to students in most academic institutions, and one research project has investigated the use of digital portfolios in teacher education programs at the University of Bergen and the University College Stord/Haugesund. Recently, a Special Competence Group was established by the Norwegian Opening Universities (NOU) to investigate the potential for digital portfolios in higher education.

The Danish National Agency for Flexible Learning (CFL) is currently looking into the potential of ePortfolio to promote and support lifelong learning for adult learners. This agency hosts conferences and seminars designed to inspire the audience to ePortfolio practice. In collaboration with the Swedish National Commission on Validation, it is hoped there will be a pilot project involving 1000 foreign workers using ePortfolios for skills validation.

Skoglöf (2007) notes that the Swedish Educational Broadcasting Company (UR) is currently engaged in ePortfolio activity. UR has recently set up a ‘Room for Storytelling’ where participants record their personal journeys. The aim is to spread ‘knowledge on how digital stories can be used in pedagogical contexts’ (Skoglöf, 2007, p. 12). UR has also joined with the Swedish National Agency for Education to undertake the Confolio project, which encourages sharing between users through the use of international standards. In a related development, mathematics teachers collaborated, using the Confolio system, to create a national network for learning resources in mathematics. The report indicates that while there are significant pockets of ePortfolio engagement and exploration in Sweden at present, the ePortfolio field is considered to be dynamic and expanding.

4.2.3 The standards context

Learner mobility within and between education, training and employment sectors, alongside the concepts of lifelong learning and the global education market are significant drivers for the requirement to move beyond static repositories to ensure ePortfolio data is secure, accessible and able to be exported and imported across different systems and services. ePortfolio specifications are the focus of work being undertaken by a number of organisations, including the IMS Global Consortium, JISC Centre for Educational Technology and Interoperability Standards (CETIS), SURF and Europortfolio.

IMS Global Consortium was created within the National Learning Infrastructure initiative of EDUCAUSE in 1997. IMS describes itself as:

… a global, nonprofit, member organisation that strives to enable the growth and impact of learning technology in the education and corporate learning sectors worldwide. IMS members provide leadership in shaping and growing the learning industry through community development of interoperability and adoption practice standards and recognition of the return on investment from learning and educational technology

(IMS, 2008a)

The IMS specifications framework was established as a response to the limitations imposed on online teaching and learning initiatives by a lack of coherent approach, what it defines as ‘the absence of agreed (upon) and compatible ways to describe teaching strategies (pedagogical approaches) and educational goals’ (IMS, 2008b). The framework provides a generic language that is still flexible enough to provide a set of accessible tools. It was originally developed by the Open University of the Netherlands (OUNL) (IMS, 2008c) and currently has partners from around the world representing over one hundred organisations. These include educational institutions as well as ICT vendors and government agencies. While IMS has coordinated the development of specifications and standards for a range of digital environments (such as metadata, web services and enterprise services), the IMS ePortfolio Specification (IMS, 2008b) is of particular relevance.

The IMS has a European presence through the European IMS Network, which is, in turn, a member of the Europortfolio Consortium. The members of this consortium span both the educational and technical dimensions of ePortfolio use, thus indicating very early in the development of ePortfolios the intention to mainstream ePortfolio use across the European education sector and into the wider community. Consortium members include EIFEL, European Schoolnet, JISC Centre for Technical Interoperability Standards (JISC CETIS) and European IMS. Europortfolio aims to ‘contribute to the definition of
technical standards; ensuring interoperability between ePortfolio and ePortfolio-related technologies and services’ (Europortfolio, 2008). Further collaborative work is being undertaken under the auspices of the European Portfolio Initiatives Co-ordination Committee (EPICC), which seeks to develop a vision and strategy for Europe to be a leader in ePortfolio technology and practice by ensuring the clear definition of ePortfolio functional requirements and interoperability standards. EPICC partners include IMS in Europe and JISC CETIS.

JISC CETIS represents UK Higher and Further Education in the initiatives that focus on international educational standards, to provide strategic and technical advice to universities and colleges (Joint Information Systems Committee JISC & Centre for Educational Technology and Interoperability Standards CETIS, 2008a). JISC CETIS runs a Portfolio Special Interest Group (SIG) to support engagement with the different standards bodies and to encourage community building and knowledge sharing in the areas of ePortfolio and e-PDP. JISC CETIS has been working closely with the University of Nottingham on the ePortfolio Reference Model Project, which seeks to develop a reference model for ePortfolios within the JISC e-Learning program, with recommendations for approaches which can be enabled by the eFramework for Education and Research. eFramework partners include JISC, SURF, the New Zealand Ministry of Education and the Department of Education, Employment and Workplace Relations (DEEWR) in Australia.

In this country, the issues of standards and interoperability in the education sector are the focus of work undertaken by the Australian Information & Communications Technology in Education Committee (AICTEC). AICTEC released a report in late 2007 that presented a summary of the current status of interoperability standards, the perceived gaps and future opportunities. A draft policy to encourage a collaborative standards framework is presented, together with an implementation plan (Croger Associates, 2007). The report recognises the real need for interoperability and collaboration, especially in the global context of education. However, it found that collaboration is often best managed at the sectoral level and furthered by the federal (as opposed to state or other) level of government.

At the federal level, eStandards for training are contextualised by the Australian Flexible Learning Framework (Framework). The E-Standards Expert Group (EEG) brings together key players from a range of national initiatives, including representatives of cross-sectoral organisations and the relevant State and Territory agencies. At a more grassroots level, the 2008 Framework Business Plan includes funding for key business activities for ePortfolios (DEEWR, 2007a), specifically to consider the potential for a national infrastructure with the appropriate technologies and standards to support learner mobility. A reference group that includes representatives from the Australian higher education sector will work towards achieving agreement on ePortfolio standards, policy and business rules.

### 4.3 Practice contexts

While American academics are widely represented at international conferences on ePortfolios, their own conference activity in the USA tends to be framed by the broader technological arena. At least 85 higher education communities across the USA use ePortfolios, with potentially more unreported. Home-grown ePortfolio technology and practice sit alongside the initiatives of commercial companies such as Blackboard. A number of key organisations have emerged in the last few years to bring ePortfolio practitioners together, including the Inter/National Coalition for Electronic Portfolio Research (NCEPR) and the Open Source Portfolio Initiative (OSPI).

The Inter/National Coalition for Electronic Portfolio Research is perhaps the most active of the American groups. Its aim is to develop and support research into practice by studying the impact of ePortfolios on student learning and educational outcomes. Academic institutions can apply for a three-year term of membership to the coalition (see Section 8.3). The Open Source Portfolio Initiative (OSPI) is ‘one of the largest open source projects in academia’ (Lee, 2007) and is hosted by two universities (Minnesota and Delaware) and the rSmart group, a company who develop open source software. The group aims to develop leading open source ePortfolio software while influencing and reflecting on best practice (Lee, 2007). Among individual universities engaged in ePortfolio practice, the two most advanced users are George Mason University and Indiana University–Purdue University Indianapolis (which is a co-founder of OSPI) (Lee, 2007). The latter employs ePortfolio process for students and teachers.
However, there is consensus that the ePortfolio environment in the USA is currently very ‘fractured’ (Lee, 2007, p. 47), with little coordination across disciplines or professions, as is evident in some other jurisdictions.

**4.3.1 Professional and disciplinary contexts**

As academic engagement in ePortfolios often takes place at the discipline level, this becomes a valuable context for the review of ePortfolio practice. Contrasting approaches to ePortfolio can be driven by disciplinary needs and context as well as profit by engagement outside of the university within the disciplinary area, for example employing bodies (Broadbent, 2006, p. 2).

Certain disciplines have a strong tradition of portfolios: visual arts, performing arts and architecture are all fields where a professional portfolio has long been critical (Lee, 2007), while teacher training programs and medical education are areas where professionals are accustomed to demonstrating the attainment and development of professional standards: ‘In these areas, ePortfolios are perceived as instruments that enhance learning and support the development of competencies’ (Berlanga et al., 2008, p. 24). The standards-based reforms of education, such as those in the USA, have contributed to an increased interest in the use of portfolios in general, and ePortfolios in particular, in teacher education (Butler, 2006).

In the UK, the DfES e-strategy, Harnessing Technology, has stimulated interest in the electronic portfolio that can be derived from the personal online learning space offered to learners. It has been further noted that certain professional groups, for example, those in the health sector, ‘are already required to develop and maintain portfolios of evidence to support their claims to competence’ (Duncan-Pitt & Sutherland, 2006, p. 70). Limitations of paper-based portfolios in terms of accessibility and flexibility are therefore encouraging some learning communities to move towards ePortfolios. It has been argued that in practice-based professions, ‘expertise is not derived from the application of higher-order knowledge to practice but rather as a result of complex situational understanding’ (Duncan-Pitt & Sutherland, 2006, p. 70). The ePortfolio process supports the notion of situated learning with learning situated in practice, as there is the opportunity to prepare ‘reflective, critical incident-type journal records’ (Duncan-Pitt & Sutherland, 2006, p. 72) that result in professionals who are more reflexive and more confident about their clinical practice.

ePortfolio conferences, professional journals and the learning and teaching literature present ample coverage of the various aspects of ePortfolio practice in practically all discipline areas. In this chapter, a small number of disciplines have been selected to highlight the role ePortfolios can play in supporting the development of professional standards: teaching, nursing, engineering and the medical sciences.

**4.3.1.1 Teaching**

In the US, the National Board for Professional Teaching Standards (NBPTS) has established five core propositions in their professional standards manifesto. Among these are propositions especially germane to eLearning and ePortfolio use, including the need for teachers to keep abreast of multiple means of assessment of students (part of Proposition 3); that teachers employ reflective practice (part of Proposition 4); and Proposition 5, that ‘teachers are members of learning communities’ with the ability to build partnerships with community groups and business (NBPTS, 2008). The route to becoming a National Board Certified Teacher (NBCT) involves preparing and submitting a portfolio for assessment. NBCT candidates are asked to document their situated learning, that is, aspects of their teaching practice that demonstrate their ability to translate knowledge and theory into practice in real-life settings.

Across the world, teachers use their portfolios to foster continual self-assessment and awareness, as well as repositories for artefacts, activities, planning and assessment methods. The use of electronic portfolios in teacher education as well as within the professional context is emerging as fundamental to professional development. In Australia, where the teacher registration processes encompass the requirement to provide evidence of continuing professional development as a critical element of the renewal of registration, there is generally the opportunity to develop a professional portfolio (Western Australia, Victoria, Tasmania and Queensland). Dixon, Dixon and Pelliccione (2005) investigated the ePortfolio perceptions of 11 educational professionals, primary and secondary teachers, as this group engaged with a trial software package designed to support the creation of a professional portfolio.
Participants were very positive about the self-analysing and self-reflective nature of the activity and all agreed that the resultant portfolio was a very valuable personal asset. Finger (2005) notes that ePortfolio use by teachers helps facilitate not only the reflective capability, but also enables teachers to share ‘and be supported in their development of personal stories of learning’ (p. 9). The teaching portfolio, therefore, is viewed as supporting lifelong learning in the teaching environment.

There are numerous examples internationally of the successful implementation of ePortfolios as learning tools for pre-service teachers (Bartlett, 2006; Hauge, 2006; Peters, Chevrier, LeBlanc, Fortin, & Malette et al., 2006; Ring & Foti, 2006). In Australia, professional development for teachers involves the use of electronic portfolios. The Queensland Department of Education, Training and the Arts released their ‘Smart Classrooms’ initiative in 2005. A main premise is to create a community of teachers using computers in classrooms. Included in the initiative is an ICT Professional Development component that helps teachers construct a digital portfolio that ultimately gives them an ‘ICT Pedagogical License’ (Department of Education Training and the Arts DETA, 2007).

Australian Catholic University (ACU) restructured its four-year Bachelor of Education (primary) degree for delivery in 2006. This was against a background of increased scrutiny of teaching training and a call for national standards (Broadbent, 2006). The framework was taken from the Faculty of Education’s graduate attributes, which sought to encourage reflective practitioners, comfortable with and discerning in the use of new technologies, and committed to the relevance of lifelong and lifewide learning. With this in mind a Professional Experience Program was created in the Education Studies strand to see trainee teachers not only gaining direct professional experience, but also building community links with the employment sector as well as with non-formal educational contexts (for example, hospitals, community centres etc.). Professional ePortfolios were introduced to allow students to demonstrate understanding of professional issues and self-knowledge, and to clearly document this with evidence (Broadbent, 2006).

The use and development of ePortfolios in teacher education is also exemplified in a trial conducted at Curtin University of Technology involving 30 first year pre-service Education students (Pelliccione, Dixon & Giddings, 2005). The success of the trial, particularly in terms of the ability for students to develop a sense of ownership, self-reflection and engagement in the learning process, has seen electronic portfolios embedded in the Bachelor of Education's core curriculum. An ePortfolio or 'webfolio' project at James Cook University in 2003 offered pre-service teachers web-based case studies in a multimedia environment, including audio conversations and opinions as well as weblinks to in-person responses from practising professionals. These were then used to create the components of an ePortfolio. The approach was designed to promote integration and collaboration (Sorin, 2005).

The abundance of portfolio use in the teaching profession has also lead to the use of portfolios by teacher-librarians. In 2005, the Australian School Library Association (ASLA), in conjunction with the Australian Library and Information Association (ALIA), jointly released a policy document to address the need for professional standards regarding their professional development and levels of excellence (Australian School Library Association, n.d.). This policy framework assists teacher-librarians with regard to their professional role in the areas of knowledge acquisition, practice and commitment. Included in these recommendations was a commitment to the utilisation of professional portfolios and the development of electronic portfolios (Mitchell, 2005, p. 8).

The use of ePortfolios in the education of library and information students is exemplified in QUT’s own Master of Information Management. Building on more than a decade of portfolio development in the Professional Practice unit, the ePortfolio was introduced in 2003. The ePortfolio is introduced to students as a whole-of-course learning process, so that they are able to build connections between the different subject areas within the course, understand the relationship between theory and practice through authentic learning activities, fieldwork placements and casual employment, and develop their own understanding of the professional attributes through industry forums and career mentoring partnerships (Hallam & McAllister, 2008). In the UK, the Chartered Institute of Library and Information Professionals (CILIP) mandates the development and submission of a professional portfolio for all applications to become a chartered librarian.
4.3.1.2 Nursing

The use of educational portfolios applied in the health profession emerges in the literature in the late 1980s and early 1990s (Garrett & Jackson, 2006). In line with the continuing complexity of the role of health professionals, there is seen to be a need to use portfolios to facilitate personal reflections and to document professional development (McMullan et al., 2003). The Royal College of Nursing in the UK offers their members access to a ‘learning zone’ to encourage ongoing engagement with professional development. The College provides an ePortfolio, My portfolio, to record, collect evidence and reflect on learning, employment and achievements, and to develop action plans that can be used for re-registration purposes. In Queensland, the registration of nurse practitioners is managed by the Queensland Nursing Council (QNC). The QNC has adopted a portfolio approach to registration, with candidates asked to provide evidence of their clinical leadership and their reflective self-assessment of their attainment of the nurse practitioner competency standards.

Murray and Currant (2006) discuss the use of ePortfolios by undergraduate nurses and doctors in their work-based training and identify the differences between reflection and feedback process in both the academic context and the workplace context. In their work environment the pedagogical outcomes are quite different; in the workplace setting feedback from supervisors is recorded, while in the academic context the process involves both recording and reflecting on feedback.

While paper-based portfolios have been used extensively in the past, electronic portfolio use is emerging in line with technological and wireless developments. The University of British Columbia has designed a ‘clinical e-portfolio’ for nursing students to access clinical resources, information and reflect and record their clinical experiences remotely. Garrett and Jackson (2006) outline the development of the personal digital assistant (PDA) ePortfolio tool, which utilises a variety of media — text, audio and images; this mobile ePortfolio has been designed to synchronise with their web-based portfolio from remote locations. With the advantages of handheld technologies and the rise in the use of data management tools, the authors comment that it is logical to adopt the mobile use of portfolios within the clinical learning sector.

Responding to a rising call for standards and benchmarks and the establishment of a sectoral quality audit review board, in 2006 the Australian Catholic University (ACU), using the Australian Nursing Council competency standards as the framework, developed an ePortfolio model of best practice for the training of registered nurses. This had dual goals: firstly, to promote evidence-based practice, reflection and judgment, and secondly, to encourage students to see connections across the different units of study (Dennis, Hardy, & White, 2006, p. 1). It was hoped to identify the core components that would represent best practice for ePortfolio use within a discipline, but also be sufficiently generic to be transferable across disciplines so that the ePortfolio model could be extended to other faculties.

4.3.1.3 Engineering

In the School of Engineering at University of Tasmania a successful ePortfolio trial producing ‘mature and reflective portfolios’ was used in 2004–2005 (Sargison, Tatham, & Apsitis, 2006, p. 1) for engineering graduates to develop skills and attributes generally considered desirable in their intended profession. One of the drivers was a lack of satisfaction among academic staff in adapting the old traditional examination form to chart the inculcation of graduate attributes, which had then just been introduced. Both the reflection process and the information collection side were judged highly satisfactory. The use of the portfolios was expanded the following year (Sargison et al., 2006). Other examples of current ePortfolio projects within the engineering discipline include the University of Wollongong and the University of Melbourne.

QUT is the lead institution for the DEAMES project, which is the DEEWR EU Australia Mobilisation of Engineering Students project, a multi-partner project involving universities in the Australian Technology Network (ATN) and the European CLUSTER group of universities. The goal is to develop strategies to support the mobility of engineering students, graduates and academics in the increasingly complex environment of globalised education. The ePortfolio is being considered as a potential process and tool to support the recording of evidence of engineering skills. Meanwhile, at the University of Nottingham, the JOSEPH project (Joining up Organisations to Support new Engineering Pathways into Higher Education) is a collaborative activity involving colleges, schools and employers, linking the fields of
ePortfolio and Information, Advice and Guidance (IAG) in the context of the UK’s new 14–19 Diploma in Engineering. It is exploring vocational pathways for young people into higher education, as well as providing support for cross-institutional learning (University of Nottingham, 2008a).

4.3.1.4 Medical sciences

In Australia, projects involving the use of ePortfolios in medical education are underway at the University of New South Wales, University of Wollongong, University of Melbourne, University of Sydney, University of Queensland and Monash University. In the UK, the School of Medical Education Development, University of Newcastle, is doing extensive work in the area of ePortfolios, researching the issues of interoperability, mobile portfolios and Web 2.0 applications. The ePortfolio team hosts a website (www.ePortfolios.ac.uk) as a community resource. In February 2008, the Higher Education Academy (HEA) Subject Centre for Medicine, Dentistry and Veterinary Science hosted a one-day conference titled ePortfolios: Identity and personalised learning in healthcare education. The proceedings document the richness of ePortfolio practice in medical and health science education in the UK, especially in terms of collaboration across the sector as a whole, with regional and national projects involving other universities, such as Leeds, Sheffield, Dundee and Queen Mary’s University of London.

This is one example of the significant role of the HEA subject centres as inter-university disciplinary hubs. The HEA policy focus is on learning and teaching, and they aim to use the centres to amass empirical evidence, synthesise current research and build capacity for further research initiatives (Higher Education Academy, 2008a). There are currently 24 subject centres that facilitate communication between academics in related fields, with the websites providing access to resources such as case studies, research reports and funding opportunities. The discipline focus in ePortfolio practice becomes increasingly important when there is the need to align qualifications and career development with professional standards.

It is important to note that within Australian higher education that the discipline context, while currently less mature than in the UK, has the potential to provide a new framework for academic engagement. The ALTC has a keen focus on Discipline-based Initiatives (DBI), acknowledging ‘disciplinary affiliation as the primary site of engagement for the development and dissemination of good practice in learning and teaching’ (ALTC, 2008a), with ‘Discipline Communities’ accommodated within the ALTC Exchange (ALTC, 2008b).

4.3.2 ePortfolio use by staff in higher education

Findings from the national audit survey undertaken as part of the Australian ePortfolio project found that, to date, ePortfolios tended to be used more frequently by academic staff than by professional staff, although the numbers for both groups are still very small. In the focus groups, some participants commented on the potential value of ePortfolios for academic staff:

I believe academics are moving ahead with their career development and the ePortfolio would be a useful tool

I thinks it would be useful to introduce ePortfolios to academic staff for a period of six months before students use it then staff can reflect of their own educational practices before their students use it

A number of professional associations promote the value of teaching portfolios for academic staff, for example, the Staff and Educational Development Association (SEDA) in the UK and Higher Education Research and Development Association of Australasia (HERDSA) in this country link the portfolio process to their Fellowship schemes. The Flourish project coordinated by the University of Cumbria has been funded by the JISC Users and Innovation program, with the goal of developing an ePortfolio system for academic staff to document their own learning and achievement for a variety of professional purposes: career review, academic qualifications, professional accreditation and personal development (University of Cumbria, 2008). The project team hopes that the ePortfolio might be embedded within the Postgraduate Certificate in Teaching and Learning in Higher Education program and is also working with professional accreditation bodies such as HEA, SEDA and CILIP to assess the efficacy of the ePortfolio application. However, the range of users may extend beyond the teaching staff, to include line managers, professional staff and administrative staff.
A number of Australian universities (such as Swinburne University of Technology, University of Southern Queensland, QUT and University of Western Australia) are currently investigating the potential of ePortfolios to meet a range of purposes, including, support for new academics during their probationary period, support for more established teaching staff in the academic promotion process, or support for nominees for internal or external awards for teaching excellence. In regards to capability developments for professional staff, QUT is currently preparing to rollout professional staff ePortfolios (to be piloted in technical areas). ‘The staff ePortfolios will have links to performance planning and review (PP&R) processes, succession planning and will incorporate evidence-based secondments’ (Harper, August 24, 2007, personal communication).

The ePortfolio system at Queen Margaret University, Edinburgh, incorporates a specific program for university staff in regards to Continuing Professional Development (CPD). The university defines its CDP program for staff as ‘… supporting employees to understand more about the environment and profession in which they work, the job they do and how to do it better. It is an ongoing process throughout a Life Long Learner’s working life’ (Lind, 2007). Meanwhile, Warwick University promotes the ePortfolio to contract research staff. These are staff members who are professionally employed in a research role at the university. The ePortfolio provides a means of showcasing their research work, academic experiences and professional development, as well as serving as a showcase for the research work undertaken within the institution (Warwick University, 2008).

4.4 Other contexts

4.4.1 K-12 education

Early education is embracing digital technology in step with its higher education counterparts. While examples of electronic portfolio activity in the schools sector are difficult to identify without the basis of a specific forum for discussion and collaboration, the ePortfolio Australia conference hosted by EIFEL, held in Melbourne in March 2007, attracted a number of delegates and speakers from Victorian primary and secondary schools. The principal focus was around Victorian schools that have initiated digital portfolio work in response to the Victorian Department of Education’s strategies for ICT in the curriculum. Multiple forms of media and digital tools were in use including Folio Maker software, PowerPoint, Microsoft’s FrontPage Web design, Microsoft Photo Story software, and dedicated electronic or digital portfolio applications like EdCube and Concord.

Other State and Territory education initiatives incorporate digital portfolios within the curriculum. The Northern Territory’s Building Better Schools program is currently in the process of identifying software appropriate for student portfolio work in all schools. The Tasmanian Education Department is currently trialling a digital portfolio template in K-10 schools, principally at Clarence High School. Queensland schools are also taking up the move to digital learning and reflective practice with support from the Government’s Smart Classrooms initiative. The ‘Learning Place’ (Education Queensland, 2007), sponsored by Education Queensland, offers grants and funding for schools piloting digital portfolio work and currently provides teachers with access to workshops and activities around the development of digital portfolio creation for students with disabilities.

In 2009, the South Australian government will introduce a new Certificate of Education, Future SACE, for students in Years 10, 11 and 12. An important component of Future SACE is the Personal Development Plan, which will focus on the development of essential capabilities such as communication skills, personal skills including self-awareness and self-confidence, practical attributes that foster productivity and creativity, critical thinking and understanding of social and political issues. A second component of the Future SACE is an Extended Learning Initiative (ELI) that encourages students to research a topic of specific interest to them. The assessment process will include a portfolio that encompasses evidence of their research activities, their information management processes, their reflections on learning and reflections on feedback from teachers, tutors or mentors. An ePortfolio presents itself as a potential vehicle for recording and presenting the evidence.

The Australian Science and Mathematics School (ASMS) is a specialist high school for students in Years 11 and 12 and is co-located with Flinders University in Adelaide, South Australia. From 2003 the school
has employed Personalised Learning Plans, and since 2004 this has been delivered via an ePortfolio (Burns & Nelson, 2006). The ePortfolio forms part of a two-year sequence of nine interdisciplinary studies. ASMS sees itself as being part of EIfEL’s ‘2010’ framework and works in tandem with the State government through its Employability Skills Portfolio project. In an evaluation of the initiative, it was found that, while overall it had been a positive experience, some problems were encountered by students, for example, the lack of appropriate web authoring skills and the need for additional time to work on the ePortfolio as its use was outside the regular curriculum. These problems were subsequently addressed during 2005–2006. Future developments include embedding the tools in a learning management system and better integration with the rest of the curriculum.

In a further initiative, the Australian Department of Defence, in conjunction with the Department of Education, Employment and Workplace Relations (DEEWR), has created a Digital Student Portfolio resource for all defence families as a strategy to manage the educational mobility of children. The Digital Student Portfolio is an interactive multimedia program designed to capture the academic, sporting and social history of a child over each year of their schooling.

4.4.2 Vocational education and training (VET)

Some of the education and employment policy initiatives in Europe, specifically those delineated in the Declarations of Maastricht and Copenhagen in 2002 focus on vocational education and training, specifically on the need for lifelong learning and international worker mobility. Strategies developed to facilitate the ‘recognition and transferability of qualifications covering both VET and general education, based mainly on competences and learning outcomes in order to support the smooth and effective functioning of the European, national and sectoral labour markets’ (More Self-Esteem with my E-Portfolio MOSEP, 2008) include the European Qualifications Framework and the Europass.

The European Qualifications Framework (EQF) defines the different categories of competences: cognitive competence (use of theory and knowledge), functional competence (application of skills and know-how) and personal competence (social and ethical know-how). The EQF comprises eight different reference levels, or ‘learning outcomes’ that describe what a learner knows, understands and is able to do, which can be interpreted within the context of different qualifications, thus making national and international comparisons more straightforward. The Europass includes both personal and institutional documentation designed to help make skills and qualifications understandable across all countries in Europe: the Europass CV and Europass Language Passport can be completed and maintained by the individual, whereas the Europass Certificate Supplement, Europass Diploma Supplement and the Europass Mobility document are issued by institutions.

One of the key European ePortfolio projects in the VET area is the MOSEP (More Self-Esteem with my E-Portfolio) project (2008). This multinational project, led by Salzburg Research, Austria, runs from 2006 to 2008. It aims to counter the problem of adolescents dropping out of education, training and employment by using ePortfolios to strengthen student self-esteem, especially amongst those in the 14–16 age group facing decisions about entering vocational training. MOSEP involves a course of five interactive multimedia modules, available in multiple languages. The modules are designed to develop an understanding of the ePortfolio process and to encourage and support personalised, reflective learning. The MOSEP project team has noted that the tutorials can also be very helpful to academic staff and students in higher education, especially in situations where ePortfolios are being implemented as part of a university’s eLearning strategy. While the concepts presented in the MOSEP tutorials are not system specific, access is offered to the Mahara ePortfolio tool (see Section 4.2.2.5).

In the context of vocational education and training in Australia, the Australian Flexible Learning Framework released a report in April 2007 that documented the current issues and developments associated with ePortfolios, particularly in the Australian vocational education and training (VET) sector (Curyer et al., 2007). The report presented five specific use cases for ePortfolios within VET:

- transition into the VET sector
- learning within the VET sector
- transition from the VET sector to further education or work
- managing a VET workforce
- transition into self employment.
The report considered the specific issues of functionality and ePortfolio services, along with the business rules, policy areas and technical standards that would be required for the effective implementation of ePortfolios (Leeson, 2008).

Further research work into ePortfolio practice in the VET sector was undertaken in 2008 by education.au, culminating in a national symposium held in June 2008. The research findings for the VET sector echoed the overall findings for the higher education sector, discussed in detail in Chapter 6: ‘Engagement with e-portfolios in Australia has been sporadic and primarily at institutional level. To date there has been limited activity at the national or jurisdictional level to address key issues confronting the education and training community (education.au, 2008b). Nevertheless, the majority of the respondents to the VET survey indicated that there was a current and ‘future anticipated’ demand for ePortfolio services, with teaching staff and trainers driving the demand, rather than the students themselves — or indeed, the institutions. In stark contrast to the findings of the survey of higher education, the VET sector reported that recognition of prior learning (RPL) was a significant driver for ePortfolio implementation, with 48% of VET respondent, compared with around 12% of higher education respondents.

The researchers indicated there was scope for further discussion and debate on some of the policy key issues that can potentially encourage the development of a framework to assist in the implementation of ePortfolios in Australia, for example:

- Standards and interoperability
- Ownership, access, security and privacy
- Storage and archiving
- Support and resourcing.

A range of stakeholders in the ePortfolio arena, including policy and decision makers, were invited to the national symposium to discuss key strategic issues and directions. Members of the Australian ePortfolio Project were invited to present their analysis of ePortfolio activity in the higher education sector. Draft recommendations drawn from the symposium discussions have been released, presenting a series of ideas that cluster around five key themes: ownership and purpose; interoperability; shared understandings; training and user/teacher support; resourcing (education.au, 2008b). Many of the issues considered in the recommendations are pertinent to ePortfolio practice within the higher education sector and across the different education and employment sectors. The higher education sector needs to work with the schools sector, the VET sector and employers and the professions, as well as with the policy makers, to ensure there are indeed common aims and shared understandings, with appropriate policies and strategies, to effectively contribute to the achievement of the Federal Government’s education and productivity goals.

4.4.3 ePortfolios in the community: Digital storytelling

In the context of the wider community, the concept of digital storytelling is emerging as an activity whereby digital tools ‘help ordinary people tell their own “true stories” in a compelling and emotionally engaging form’ (Wikipedia, 2008), so that, fundamentally, it is about adapting the tradition of oral personal narratives through technology (Educause, 2007). A more detailed description proposes that:

… a digital story is an engaging and creative multimedia production in which people or organisations document, preserve and share memorable stories of their lives or significant experiences of a group that are worth repeating. The multilayered process results in a tangible, valuable and lasting record of powerful experiences to save and share

(Rule, 2008)

A digital story may last three to eight minutes.

The pioneers of digital story telling established the Centre for Digital Storytelling (CDS) based in Berkeley, California (Centre for Digital Storytelling, 2008). Many digital storytelling projects commence in the community, with one of the earliest initiatives sponsored by the BBC in the UK, with the goal of capturing various local histories and cultures (Educause, 2007), to illustrate the ‘richness of people’s lives’ (University of Gloucestershire, 2007). British examples of community engagement with digital storytelling include Capture Wales (BBC Wales, 2008) and Bristol Stories (Bristol’s Museums, Galleries and Archives, 2008), while in Australia, the State Library of Queensland has its own Queensland
Stories, which seeks to develop a collection of stories that record and document the diversity of Queenslanders’ lives, with some specific localised collections within the larger collection (State Library of Queensland, 2008). Queensland Museum has also established an interactive collection of refugee stories (Queensland Museum, 2008). Production workshops are offered by the Australian Centre for the Moving Image (ACMI) to help members of the community gain the skills required to become a digital storyteller (ACMI, 2008). In 2006, ACMI hosted an international conference to stimulate interest in digital storytelling. A very broad audience was identified: ‘Digital Storytelling practitioners, media artists, and academics in media, games and cultural studies … telecommunications providers and those interested in Digital Storytelling as a communication and educational tool … community development practitioners, those involved in the oral history and museum industries, and representatives from the health sector …’ (ACMI, 2006). Leadership in the field of digital storytelling in Australia is offered by QUT through the Creative Industries Faculty, where researchers have developed ‘applications for teaching, applied research, heritage, youth welfare, health and international development contexts’ (Queensland University of Technology, 2008).

While the digital literacy angle of the field has encouraged primary and secondary teachers to initiate projects with their students, with a keen focus on the activity to support students at risk, there is also a growing interest within the higher education sector. In the UK, JISC has funded a project within the discipline areas of medicine and dietetics that investigates the use of digital storytelling to develop reflective learning through Web 2.0 technologies such as blogs, wikis, social networking sites and media sharing sites (JISC, 2008c). The project seeks to resolve some of the issues associated with the reticence of students to engage in reflective learning, based on the premise that reflective practice is generally communicated in a text-based medium, while the researchers argue that the students, as representatives of the Net Generation, are comfortable in a multimedia environment. The research hypothesis presented is that ‘digital storytelling has the potential to motivate learners to actively engage in reflective learning and that next generation technologies and practices have an important role in facilitating this process’ (JISC, 2008d). The project team based in Leeds (University of Leeds and Leeds Metropolitan University) will complete their study in March 2009.

In the United States, Barrett has considered the relationship between ePortfolios and digital storytelling:

> An ePortfolio is a purposeful collection of work that demonstrates effort, progress and achievement over time, stored in an electronic container (CD, DVD, www). In this context and in terms of the technology, a digital story is a digital video clip, told in the author’s own voice, illustrated mostly with still images, with an optional music track added for emotional effect. Rhetorically, a digital story is a personal narrative that may show the author’s identity: strengths, weaknesses, achievements, disappointments, learning experiences, passions, and hopes for the future; in other words: reflection.

(Barrett, 2006)

Barrett argues that the element of ‘voice’ is absent from an ePortfolio, so that through digital storytelling the authentic voice, or unique personality, of the subject is heard. Accordingly, reflection is recognised as the key element of a portfolio, with digital storytelling becoming ‘a highly motivating strategy that can make reflection concrete and visible’ (Barrett, 2006).

At the current point in time in Australia, however, there is little crossover between ePortfolios and digital stories. Nevertheless, the higher education sector needs to be sensitive to emergent practice of digital storytelling, particularly in terms of the impact and influence it may have within the context of eLearning.
4.5 Summary

Through the investigation of the national and international contexts that frame current ePortfolio practice the project team sought to present an analysis of the different policy and practice issues that are associated with ePortfolios in education. The review has highlighted the specific policy environments in Europe and the UK that have contributed to the development of initiatives that focus on the goals of employability skills and lifelong learning, not only to support workforce participation and mobility, but also to encourage the ongoing development of knowledge and skills within specific professions. There is a strong interest in achieving integration across the different education and employment sectors, which is stimulating developmental work in the area of standards to support the identification of key data sets that can be migrated between different ePortfolio systems.

It was noted that — to date — there is scant evidence of ePortfolio activity within the business sector and in the broader community, although future directions in Web 2.0 applications and social networking may possibly influence activities in this area.

While this chapter has focused on the factors that have stimulated — or have the potential to stimulate — engagement with ePortfolios in education, it is also important to consider a range of issues that are associated the implementation of ePortfolios in educational settings. These are presented in Chapter 5, with specific attention paid to the perspectives of the different stakeholders: academic managers, teaching staff and the learners themselves.