Recognising workplace learning: The emerging practices of e-RPL and e-PR

Introduction

The Recognition of Prior Learning (RPL) is an important process for recognising skills developed in the workplace (formally, non-formally, and informally), as well as for recognising skills developed and learned in personal and community-based spaces. Professional recognition (PR) is another important aspect of workplace learning and a key component of this is continuing professional development (CPD), as judged against professional standards and requirements developed and determined by professional bodies. Both RPL and PR play a key role in the human capital development needs of organisations, industries and economies. They also act as critical processes for individuals, employees and professionals in recognising occupational and professional skills, competencies and knowledge acquired through multiple means and contexts.

During the General Discussion on human resources training and development at the International Labour Conference in 2000, ILO constituents expressed the view that:

> ...better recognition of individual skills is beneficial for both workers employability and enterprises competitiveness. Those workers who acquired skills predominantly on the job or through other activities are often disadvantaged in gaining access to formal education and training, or in securing employment which adequately reflects their skills and experience. Workers with few, or no, formal qualifications are most vulnerable in securing decent employment. By formally recognizing their skills, RPL is seen as a means of creating a level playing field in order for them to gain opportunities for further learning and to improve career prospects. Recognition of skills can contribute much to workers' self-esteem and motivation. For enterprises, a better recognition of workers' skills is a way to overcome skills shortages and match skills demand with supply. It can also provide an opportunity to improve the overall skill level and work performance of an industry (Dyson and Keating, 2005, p.iii).

The Institute of Continuing Professional Development makes a compelling argument for professional recognition and CPD:

> The world in which all professionals practice is changing. Global competition has never been more intense. Clients are becoming more knowledgeable and more demanding. Technology continues to affect all aspects of our lives. The knowledge-base of the professions, and of the sectors in which they operate, has also increased. With such developments come new opportunities: new clients, new markets, new areas of practice and new methods of working. These changes demand ever-evolving knowledge, skills and understanding and an increasing demonstration of commitment to lifelong professional learning (http://www.cpdinstitute.org/).

Particular attention must be given to definitions and delineations. The key terms (RPL and PR) are both distinct *and* synthesisable. They both operate across a variety of contexts for a variety of purposes. Although they are distinct processes in themselves however, there are aspects of both that are open to a synergistic analysis due to common ground in terms of processes and purposes. Both require the collection of evidence and have purposes related to the public recognition of learning, skills, competencies and knowledge acquired through a variety of means (formally, non-formally and informally) and across a range of learning contexts and spaces.

The Australian Qualifications Framework (AQF) defines RPL as: 'an assessment process that involves assessment of the individual's relevant prior learning to determine the credit outcomes of an individual application for credit' (AQF, 2009, p. 8*).* In the *AQF National Policy and Guidelines on Credit*

Arrangements (2009) RPL was subsumed under the overarching term of *credit*, defined and positioned as one of several *credit processes*. Under this relatively recent policy *credit* becomes the principal overarching term for recognising learning supported by *credit inputs*, *forms of credit* and *credit processes*. *Credit* is defined as 'the value assigned for the recognition of equivalence in content and learning outcomes between different types of learning and/or qualifications which reduces the amount of learning required to achieve a qualification' (AQF, 2009, p.8). *Credit inputs* provide the basis for the credit through the different forms of learning that can be recognised for credit (formal, non-formal and informal). *Credit processes* are utilised by education and training providers for determining the credit decision (credit transfer, articulation and RPL) and *forms of credit* refer to different credit outcomes (block, specified and unspecified) (AQF, 2009, p. 9). The AQF definitions for the inputs for credit are provided below:

Table 1: Credit terminology framework definitions

Term	Definition
Inputs for credit	
Formal learning	Learning that takes place through a structured programme of learning and assessment that leads to the full or partial attainment of a recognised AQF qualification or other formally recognised qualification.
Non-formal learning	Learning that takes place through a structured programme of learning but does not lead to a formally recognised qualification.
Informal learning	Learning gained through work-related, social, family, hobby or leisure activities and experiences. Unlike formal and non-formal learning, informal learning is not organised or externally structured in terms of objectives, time or learning support.

Source: Adapted from AQF (2007, p.8).

Professional recognition is defined as the formal acknowledgement of an individual's professional status and right to practice in accordance with standards and subject to regulatory controls (Harvey, 2009). Continuing professional development (CPD) is defined as: 'The systematic maintenance and improvement of knowledge, skills and competence, and the enhancement of learning, undertaken by an individual throughout his or her working life' (Guest, n.d). The Higher Education Funding Council for England (HEFCE) (2010) defines continuing professional development as: 'A range of short and long training programmes, some of which have an option of accreditation, which foster the development of employment-related knowledge, skills and understanding'. Ferguson and Ramsey (2010, p. 26) refer to the work of Star (1984) in relation to what is meant by professionalisation. They determine this to be a social process that involves several steps: 1) establishment of a set of widely acceptable professional qualifications; 2) establishment of barriers to entry (occupational closure) and a metric(s) that can discern the qualified from the unqualified; 3) establishment of professional associations. One role of professional associations is socialisation/collegiality; another is to establish and regulate continuing education in order to ensure practicing professionals continuously improve skills and knowledge and 4) establishing and enforcing a professional code of ethics/conduct.

The aim of this paper is to provide an environmental scan of the use of ePortfolios for recognition in workplaces and professional practice contexts, as a new and emerging field of practice and inquiry. The history and foundations of RPL in the Australian context are then established and models of RPL are explored. A brief overview of portfolios and ePortfolios is then provided as a basis for exploring the small but growing body of literature reporting the use of ePortfolios for RPL (including similar practices reported in the United Kingdom).

The approach is exploratory and employs a content analysis methodology. The sample is Australia-based, consisting of papers from a showcase on ePortfolios in 2009, an ePortfolio conference in 2010 and documentation reporting the implementation trails of ePortfolios and RPL between 2009 and 2010. Findings from the study are reported before introducing a new framework for e-RPL and e-PR developed by expanding Smith and Tillema's (2003) typology of portfolios and adding dimensions from Cameron and

Miller's (2004) models of RPL. The paper concludes by presenting the future applications and research of the newly developed framework.

RPL in Australia

Australia introduced the Recognition of Prior Learning (RPL) as part of a larger national training reform agenda that included the introduction of a competency-based vocational education and training system, inclusive of a national qualification system and training packages. RPL is a standard and requirement of any offering of accredited training that is embedded in the Australian Qualifications Framework (AQF), initially introduced under the national framework for the recognition of training (NFROT) in 1992. Since then RPL has slowly become a central activity within post-compulsory education and training (Cameron, 2011).

Bateman and Knight's (2003) review of RPL within the vocational education and training (VET) sector in Australia between 1995 and 2001 acknowledges that the concept of RPL has developed and evolved within each Australian state and territory. They conclude that shifts in terms of definition, application and focus have occurred due to responses to different state and territory policies (Bateman & Knight 2003, p. 7). Within the VET sector, RPL is defined as an assessment process. In the higher education (HE) sector the Australian Vice-Chancellors' Committee's Credit Transfer Project defined RPL as: 'Recognition granted for any form of knowledge and/or skills acquired through work or life experience as well as through studies in courses credentialed by providers other than Australian universities or TAFE' (Haydon, 1994, p. 5).

Cameron (2011, pp. 25-6) summarises the drivers of RPL in VET and compares those to RPL in higher education (HE). She concludes that RPL activity in VET has been considerable, driven by the wider purposes of social and economic change and related to human capital policy that addresses rates of workforce participation, an ageing workforce and economic competitiveness within in global economy along with policy related to social inclusion. Conversely, RPL in HE has been sparse and plagued by definitional confusion, autonomous policy development and a general lack of enthusiasm and some paradigmatic resistance.

Miller (2009, p. 4) posits four business drivers of RPL: helping employees stay abreast or reshape themselves; reducing training costs; supporting human resource and human capital requirements, and providing solutions to national and international labour demands. In the literature, drivers of RPL have usually been addressed through categories of stakeholders such as RegisteredTraining Organisations (RTOs), industry, government bodies and students. For state/territory training authorities, drivers relate to training reform, workplace standards and organisational restructuring and include the emergence of training packages, industry legislation and licensing requirements, industry restructuring and new immigrants. For industry, the drivers are up-skilling, recognition of skills and skill gaps, and enterprise bargaining requirements (Bowman *et al.*, 2003, p. 13). For employers the fast tracking of qualifications and the fostering of a learning culture builds confidence in employees to develop further, and increases employee motivation (Hargreaves, 2006).

Models of RPL

A variety of RPL models are reported in the international literature (Butterworth, 1992; Trowler, 1996; Harris, 1999. A synthesis of these models compiled by Cameron and Miller (2004) and refined by Cameron (2006) is presented in Table 1. Many contributors view models as positioned between two poles of a continuum. At one end is the Credential/Credit-exchange model and at the other the Developmental/Empowerment Model. The dominant model of RPL in Australia is the credentialing model (Wheelahan *et al.*, 2003, p. 29). Cameron (2006, p. 121) critiques this model, arguing that it is limiting:

> This model has a valuable and viable role however it is limited by a 'narrowness' of application. The model suits circumstances, which are focused on a specific course, at a specific institution, at a specific point in time for an individual applicant. We need to broaden our vision of recognition

possibilities to encompass features of the developmental model. Approaches and models that are not limited by a direct relationship to assessment or credit exchange but focused on the learner and the learning process. Approaches situated in the spaces and places, which the larger community identifies with and which are framed by the wider objectives of lifelong learning for all.

Table 2:   Models of RPL - two poles on a continuum

	Credential Model	**Developmental Model**
Ideology	Market-orientated vocationalism	Person-orientated, associated humanism
Epistemology	Behaviourist - knowledge and skill acquisition as objectively measurable, aggregative	Knowledge and understanding seen as constructed by individuals. Integrated into their cognitive structures
Discourse	Human capital theory. Knowledge and competence as products	Humanist language of 'learner centeredness'
Features	Based on frameworks of vocational qualifications – a job-role notion of competence Discourse of efficiency, accreditation, competence, access, transparency, equality of opportunity and mobility Institution driven Sites of formal education provision and accredited training The claimant exchanges proof of past achievements for course credits Onus is on the applicant to provide 'proof' Claimant can receive credit	Development and empowerment of the individual - confidence building, self-improvement and self-actualisation Reflective process - acts as a transformative social mechanism Self-direction enhancing self knowledge. Learning process in its own right - with intrinsic value Role of tutor - assisting learners to make links between different learning contexts Centrality of rigorous dialogue with a supportive 'outsider' - trained educator Claimant can receive credit plus significant personal and professional development
Focus	Outcome Commodity exchange 'Equivalence'	Process Learner-centred Equity principles embedded

Source: Adapted from Cameron and Miller (2004, pp. 4-5).

This table provides a continuum of possible purposes and practices of RPL and is utilised in developing the e-RPL and e-PR framework emanating from this research. The paper now turns to literature which defines and discusses portfolios and ePortfolios. Much of the literature is concerned with RPL in educational context. In this paper the focus is RPL in workplace contexts.

ePortfolios

This paper is concerned with the use of electronic portfolios in RPL and in professional recognition (PR). ePortfolios are essentially electronic versions of paper-based portfolios which are 'created in a computer environment, and incorporating not just text, but graphic, audio and video material as well' (Butler, 2006, p. 10). The Joint Information Systems Committee (JISC) defines ePortfolios as follows:

> An ePortfolio is the product, created by the learner, a collection of digital artefacts articulating experiences, achievements and learning. Behind any product, or presentation, lie rich and complex processes of planning, synthesising, sharing, discussing, reflecting, giving, receiving and responding to feedback. These processes - referred to here as 'eportfolio-based learning' – are the focus of increasing attention, since the process of learning can be as important as the end product (JISC, 2008, p.6).

Butler (2006) refers to the development of portfolios from paper-based to electronic formats and describes how portfolios provide alternate forms of assessment capable of moving away from summative assessments to more 'authentic' assessments that can chart students' developmental thinking over time. These portfolios do not rely on one piece of evidence; they also demonstrate students' wider abilities. JISC (2007) identified a range of purposes that eportfolios might play across individuals' lifelong learning journeys: applications for employment or admission to further study; transition to new environments; learning, teaching; summative and formative assessment; personal development planning and continuing professional development. As part of the transition purpose referred to in 2007, JISC (2008) added two more concepts to this list of purposes: the celebration of learning and entry to courses.

Several authors have developed typologies of portfolios. Abrami and Barrett (2005) outline three types of portfolios: process portfolio; showcase portfolio; and assessment portfolio. Smith and Tillema (2003) differentiate between types of portfolios and present four types: dossier portfolio, training portfolio, reflective portfolio and personal development portfolio. These portfolios are differentiated along two dimensions: '(i) the purpose of the portfolio, as either being selection or promotion oriented or learning or developmentally oriented (ii) the setting of use, as either being mandated by external requirements or self-directed or voluntarily initiated for personal use' (Smith and Tillema, 2003, p. 627). A complete description of the Smith and Tillema typology is provided in Table 3.

**Table 3: Portfolio typology**

Dossier portfolio: • Record of achievement or a mandated collection of work for selection or promotional purposes required for entry to a profession or programme. • Detailed coverage of attainments. • Establishment of standards and a precise specification of levels of competence is required.	*Reflective* portfolio: • Purposeful and personally collected array of work providing evidence of growth and accomplishments to be brought forward for promotion and admission. • Compilation of evidence reveals best practices or key competencies chosen to meet certain criteria along with a self-appraisal showing progress over time and understanding of accomplishments across different contexts. • Annotation (the why and when) of evidence is as important as the evidence.
Training portfolio: • Required/mandated exhibits collected during learning or programme highlighting core professional knowledge, skills or competencies acquired. • Evidence collected during the time frame	*Personal development* portfolio: • Personal evaluation and reflective account of professional growth during a long-term process. • Collection itself is an opportunity to discuss and give value to the activities of

of a course as a representative sample of students' work.	the person who is building an identity.
• Reflective comments might explain the selected evidence.	• Importance of the collection lies in the opportunity for sustained conversation with peers or colleagues about experiences and in refining or restructuring one's growth.
• Often has a fixed format to help the collector provide appropriate evidence.	

Source: Adapted from Smith and Tillema (2003, p. 627).

Smith and Tillema (2003, p. 628) state that '[a]lthough all portfolios are sources of evidence, the precise type of portfolio distinguishes between what counts as evidence...Therefore, not properly distinguishing between portfolio types can lead to mismatches of practices and confusing assessment tasks which can distort the associated and subsequent processes of selection or development.' Their portfolio typology provides a very appropriate framework from which to further explore the possibility of expansion to include ePortfolios in RPL and PR. Figure 1 provides a visual depiction of the Smith and Tillman portfolio typology.

Figure 1:   Four types of portfolio
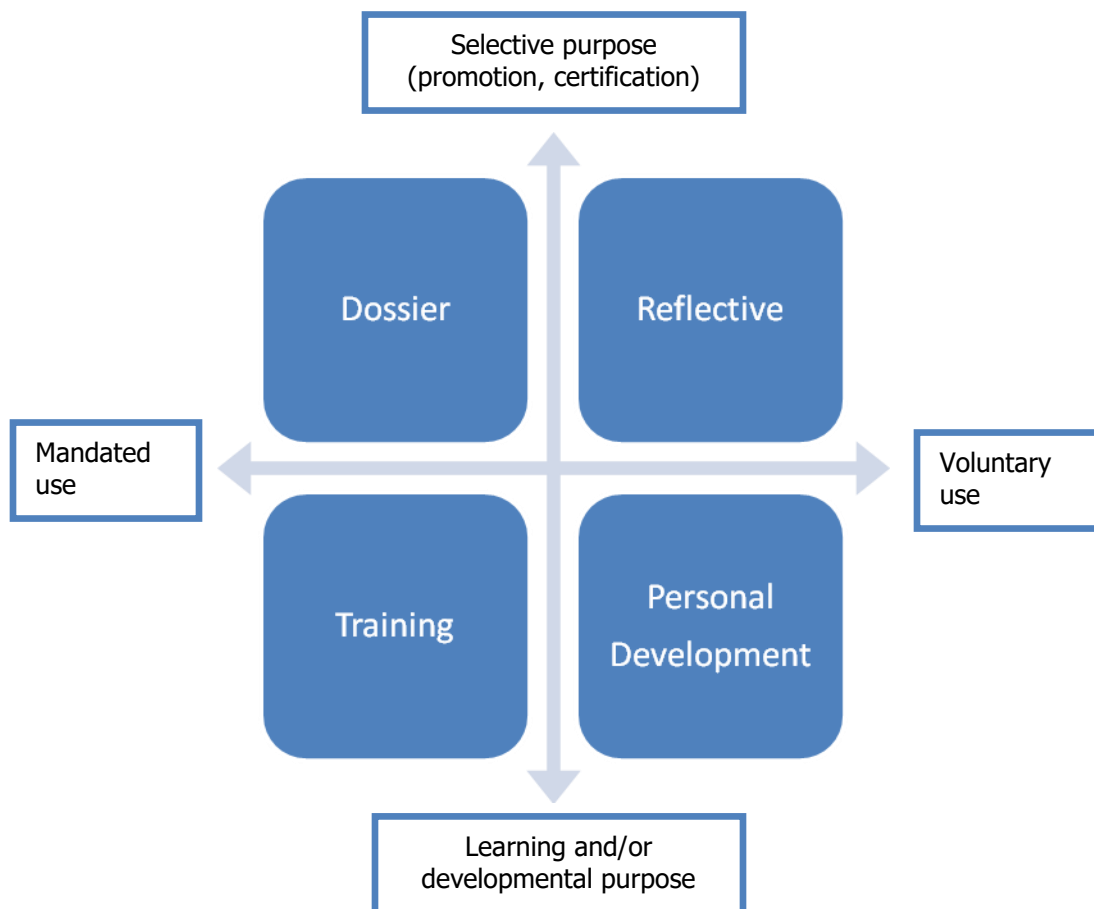
Source: Adapted from Smith and Tillema (2003, p. 628).

Voigt and Sanderson (2010) have developed prototypes, frames and metaphors for ePortfolio use in cross-disciplinary settings and have established three prototypical scenarios for ePortfolios: the Accreditation ePortfolios with Summative Feedback; Reflective ePortfolios with Formative Feedback; and

Networking ePortfolios. The frames of these three prototypes include software, innovation and ePortfolios as teaching instruments. This framework for ePortfolios is depicted in Figure 2.

Figure 2:   Prototypes, frames and metaphors for ePortfolios
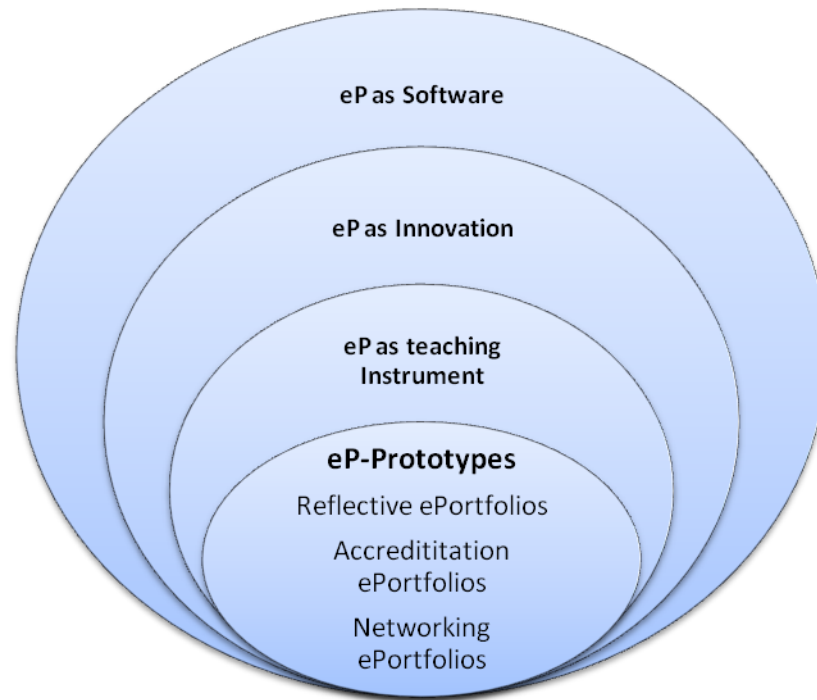
Source: Adapted from Voigt and Sanderson (2010, p. 5).

An interesting aspect of the use of eportfolios in learning and skills recognition is the importance of learner control and ownership with technology kept in its place: '[E]portfolios are about people, rather than technology. The tools have to be unobtrusive, supportive and flexible enough to accommodate the diverse needs and preferences of learners... A guiding principle behind reflective e-portfolio development – learner control – should apply to the tools learners use as well as to the content' (JISC, 2008, p.10). This aspect of the portfolio is not evident in either of these typologies/frameworks, although Smith and Tillema's (2003) settings dimension (mandatory or voluntary) does point to an aspect of this.

Use of eportfolios for RPL

Cameron (2011) conducted a review of Australian RPL research literature between 1990 and 2010, identifying several major themes - categorised as follows:

- Implementation: drivers and benefits of RPL
- Implementation: barriers to RPL
- Access and social inclusion
- Target groups

- RPL in the workplace
- Use of ICT and Web 2.0 technologies for RPL
- Building RPL practitioner capability

Two of these themes have direct relevance to the inquiry in this paper: RPL in the workplace and the use of ICT and Web 2.0 technologies for RPL. The first of these two themes reinforces the importance of RPL in workplace learning and skills recognition. The identification of the latter theme indicates an emerging area of interest in the Australian RPL practitioner and research community.

Callan and Fergusson (2009) investigated the use of e-learning in VET and with particular reference to skill shortage areas. Although they noted limited use of new technologies in RPL, they did discover the growing adoption of e-portfolios. The use of online assessment tools was noted in Western Australia, Queensland, Victoria and New South Wales. Miller (2009) reported on the use of e-portfolios for assessing existing skills for the purpose of gaining recognition or credit towards a formal qualification in the VET sector. The types of technology that can be used for RPL evidence gathering includes: accessible mobile devices (digital and video cameras), MP3 recorders, smart mobile phones and point of view devices. She argues that e-portfolios can assist with managing 'digitally rich assets and artefacts' (Miller, 2009, p. 5) as evidence for skills recognition and concludes that although e-portfolios can support both retrospective and prospective approaches to RPL, there are currently limited examples of their use, both in Australia and internationally.

Perry (2009, p.17) explored the use of e-portfolios to support RPL and found examples/cases of this in a number of different contexts including: recognising the business and administration skills of rural women by Technical and Further Education (TAFE) New South Wales (NSW) Western Institute; an assessment in fabrication and welding (with a strong focus on photo and image evidence) at TAFE NSW Illawarra; and an RPL professional development tool being developed by the Department of Further Education, Employment, Science and Technology (DFEEST) in South Australia which will include information about how e-portfolios are supporting the RPL process. Perry (2009) went on to present three case studies as examples of Registered Training Organisations (RTOs) are utilising e-portfolios to support RPL processes. The RTOs are: Charles Darwin University and Desart; Lifeline (Hobart) and; Swinburne TAFE. A summary of these case studies is presented in Table 4. The first case study has also been reported by Boyle (2009a).

Table 4:   Cases studies of RPL and ePortfolios

Project Description and Organisations	Qualification and Learners	Software
Charles Darwin University and Desart, the Association of Central Australian Aboriginal Art and Craft Centres.	*Certificate III in Arts Administration:* 60 art workers via an RPL process and appropriate gap training.	*Skillsbook* with some customisation. Art workers are supported and mentored to upload a range of evidence to their *Skillsbook* account including digital stories, MP3 files, videos, photos and a range of text documents. For Desart, the e-portfolio system needed to be flexible, accessible to people across Central Australia, and ensure easy uploading of evidence.
Lifeline (Hobart) offers a confidential telephone counselling service, information and referral service.	*Certificate IV in Telephone Counselling* for its volunteer counselling group.	Lifeline is using *Moodle* as an e-portfolio to support RPL. The aim of using an e-portfolio system in the RPL process for Lifeline's volunteer workers is to capture naturally occurring evidence on a dynamic basis. As counsellors take calls, access databases and record information, they are also able to generate and identify work-based evidence for RPL purposes.

Swinburne TAFE is a large RTO with six campuses: School of Engineering and Civil Aviation Safety Authority (CASA).	*Certificate IV* and *Diploma in Aviation Safety Regulation*: use e-portfolios to support 75 RPL students across Australia.	Utilise the platform *WebCT/Blackboard* for e-portfolios. The model is blended assessment and RPL with learners uploading evidence and identifying when they are ready to be assessed.

Source: Adapted from Perry (2009, pp. 17-23).

All three case studies report the utilisation of ePortfolios for RPL in relation to VET qualifications where learners are situated within existing workplace contexts. The literature addressing ePortfolio-based RPL practices in Australia has been characterised by descriptive implementation and a lack of critical engagement with the practices except to consider the information technology skill sets of learners as a potential barrier. This may be partially due to the emergent nature of the practices and the practical hurdles and challenges that need to be overcome before full operationalisation. It may be that once practices become more advanced and mature, practitioners and researchers will turn their attention to deeper theoretical implications.

e-APEL in the United Kingdom

There have been several projects in the UK on e-Portfolios for APEL (referred to as e-APEL projects). The Joint Information Systems Committee (JISC) funded a project (EAPEL) in 2009 to develop electronic APEL for the University of Derby in collaboration with the University of Wolverhampton, Manchester Solutions and the Small Firms Enterprise Development Initiative (SFEDI). In terms of workplace-related e-APEL, JISC (2008, p. 28) reported on the use of e-portfolios in CPD where:

> ...professional bodies are increasingly turning to customised e-portfolio systems to enable members to engage in CPD. For example, the Institute for Learning (IfL) is introducing the optional use of e-portfolios to record the statutory 30 hours of CPD now required of the 300,000 practitioners in further education in England...The Chartered Society of Physiotherapy (CSP) has also piloted an optional e-portfolio system for CPD. To practise within the UK, physiotherapists registered with the Health Professions Council undertake to keep a record of the reflective and professional learning that underpins their practice. The CSP accepts the importance of continuity for its members and has adapted some terminology to match that used in the existing paper-based materials – adopting a commercial e-portfolio system does not necessarily mean that it can be used 'off the shelf'.

JISC (2008) also refers to the Flourish project at the University of Cumbria which explored the use of e-portfolios for staff performance appraisals. Chesney (2009) reports that the following professional bodies in the UK now accept e-portfolio submissions for professional accreditation: Royal Pharmaceutical Society of Great Britain; Chartered Society of Physiotherapy; Nursing and Midwifery Council; Certified Member of the Association of Learning Technologists; Chartered Institute of Library and Information Professionals; Higher Education Academy and Staff and Educational Development Association.

As with the small body of literature on the use of ePortfolios in RPL in Australia, the literature on workplace related e-APEL can be described as descriptive accounts of implementation without any unpacking of the practices in a critical sense. As a result the literature, small as it is, is characterised by an almost unquestioning technological determinism.

Research methods

Against the above backdrop, this preliminary exploratory study aims to scope the extant literature on the use of ePortfolios in RPL (e-RPL) and for professional recognition (e-PR). Content analysis methodology is employed. The sample is relatively small and specialised due to the phenomenon being highly

contemporary and emergent. There are limited data sources on the emergent practices of e-RPL and e-PR and the sources identified represent newly established forums and funded projects where this type of activity is being trialled and explored. The sample includes abstracts and papers presented at the 2009 VET E-portfolios Showcase and the 2010 ePortfolios Australia conference and the Australian Flexible Learning Framework (AFLF) funded E-Portfolio implementation trials 2009 and 2010. The abstracts for the 2010 ePortfolios Australia Conference are available online as is the *Book of Abstracts and Papers from the ePortfolios Australia Conference 2010*. The 2009 VET E-portfolio Showcase consisted of six keynote presentations and 12 papers. The 2010 ePortfolio Conference contained five keynotes, 40 papers and six posters. Only the conference papers from each conference/showcase were included in the content analysis. The Australian Flexible Learning Framework (AFLF) has funded e-Portfolio Implementation Trials since 2009. The trials from 2009 to 2010 were included in the sample for this research. Secondary data sources are outlined in Table 5. The papers and AFLF-funded trails were analysed in terms of whether they utilised ePortfolios for either RPL and/or PR. It must be noted that at times the two can be combined when informal and formal partnerships between education providers and professional bodies are formed.

Table 5:   Secondary data sources

Data Sources	Years	No	Content
VET E-portfolios Showcase 09	2009	12	Showcase papers
ePortfolios Australia Conference	2010	40	Conference papers
Australian Flexible Learning Framework	2009 2010	3 3	Funded e-Portfolio Implementation Trails and associated reports

Findings and discussion

The AFLF funded three e-Portfolio Implementation Trials in 2009 and 2010 respectively. On analysis it was found that all six trials involved the use of ePortfolios for RPL and two of these incorporated an element of PR. This included the 2009 Skills Capture-Fire Protection Association Australia, Victoria Trial and the 2010 E-Portfolios for Nursing - Royal District Nursing Service, South Australia Trial. Table 6 provides a summary of the AFLF-funded E-Portfolio Implementation Trails for 2009 and 2010.

Table 6:   AFLF-funded e-Portfolio Trials 2009-2010

Trail projects 2009	Organisation	Description
Supportive Recognition	Coonara Community House, Victoria	Introduced the an e-portfolio system (Mahara) as a tool for creating an RPL portfolio for learners enrolled in the *Diploma of Children's Services*.
**Skills Capture	Fire Protection Association Australia (FPAA), Victoria	A Ning was created and trialled by FPAA as an e-portfolio system. Ten fire service technicians were invited to access the Ning to submit samples of workplace evidence to achieve unit TAAASS404B, *Participate in Assessment Validation,* which supports service technicians who apply for an *Extinguishing Agent Handling Licence*. The Ning was called an 'Evidence Record' rather than using the term e-portfolio.
Skills recognition using e-portfolios	TAFE NSW (Sydney Institute)	The trial tested how well the online e-portfolio system (Mahara) supported the existing skills recognition services and workplace assessment processes being offered to learners undertaking *Certificates III and IV in Hairdressing*.
Trial projects 2010	**Organisation**	**Description**
e-Pathways	Centre for Adult Education (CAE),	The goals set for this e-portfolio trial focused on tracking and documenting the integration of e-portfolios within two

	Victoria	trial groups – Victorian Certificate of Applied Learning *VET Retail Certificate II* and *Certificate II in Retail (ReTale)* mentored class. The Youth Pathways Officer and teachers have been able to track individual learner progress in updating and uploading personal files and their use of IT skills.
Mahara and regional RPL	Polytechnic West, Western Australia (PWA)	The PWA e-portfolio Implementation Trial (EIT2010) called 'Mahara and Regional RPL' investigatedthe Mahara e-portfolio system to enable PWA PathWest trainees in remote regions to provide evidence of competency and skills gained through on-the-job training. In addition, Point of View transparent glasses were sourced from EDUPOV Pty Ltd for the trial to assess their suitability for capturing RPL evidence in a diagnostic pathology laboratory environment. These glasses are suitable for indoor use and provide an additional safety feature for laboratory technicians who in some instances require the use of safety glasses as part of their personal protective equipment.
**E-Portfolios for nursing	Royal District Nursing Service (RDNS), South Australia	RDNS Education Centre obtained funding through the AFLF to conduct a trial between May and December 2010, in which PebblePad personal learning space portfolios were provided to adult *Diploma of Nursing* learners to enhance the collection, organisation, communication and presentation of competency evidence across the multiple dimensions of the qualification and the Australian Nursing and Midwifery Council (ANMC) Competency Framework.

** Incorporated elements of ePortfolios for RPL and ePortfolios for PR

Source: AFLF http://www.flexiblelearning.net.au/content/2010EIT and
AFLF http://www.flexiblelearning.net.au/content/2009EIT

The second secondary data source for this study was conference papers from the 2009 VET E-portfolios Showcase and 2010 ePortfolios Australia conference. The 2009 Showcase had a total of 12 papers. Table 7 summarises the six 2009 conference papers identified as utilising ePortfolios for RPL and/or PR.

Table 7: Use of ePortfolios for RPL and PR at the 2009 VET E-portfolio showcase

Presenter	Affiliation	Title	Category
Chan	Christchurch Polytechnic, New Zealand	Using mobile phones to compile e-portfolios on social networking sites: Narratives of workplace skill acquisition and identity formation	Work-based learners use of mobile phones and ePortfolios
Botterill and Mossuto	Royal Melbourne Institute of Technology (RMIT) University, Victoria	Using e-portfolio to evidence RPL in Certificate IV Financial Services (Accounting)	Online RPL process *Certificate IV Financial Services (Accounting)* for the Association of Accounting Technicians
Noteboom and Cooper	Challenger TAFE, Western Australia	The e-portfolio landscape	Indigenous employees of Fortescue Metals Group in the Pilbara
Barrett and Norberry	Australian Financial Markets Accreditation	Developing and implementing an assessment e-portfolio for	Development of an e-portfolio for the Australian Financial Markets Association accreditation

	Program	a VET qualification: a case study	program.
Boyle	Desert Knowledge CRC	E-portfolios for art workers in Central Australia	Aboriginal art workers applying for RPL for *Certificate III in Arts Administration*
Ridgway	Sydney Institute TAFE, NSW	Hair E-portfolio	RPL for apprentice hairdressers.

Source: AFLF http://www.flexiblelearning.net.au/files/Long_program_final.pdf

Table 8 summarises conference papers identified as utilising ePortfolios for RPL and/or PR as per the 2010 conference themes. Of the 40 conference papers analysed, it was found that 10 papers explored the use of ePortfolios for PR and five papers reported the use of ePortfolios for RPL.

Table 8: Use of ePortfolios for RPL and PR at the 2010 ePortfolios Australia Conference

Conference Theme	RPL and ePortfolios	PR and ePortfolios (professional standards)	TOTAL papers in the theme
Key government educational initiatives	2	2	6
Career pathways and lifelong learning	2	5	9
Work placement and employer partnerships	0	3	5
Responsive learning and assessment practices	1	0	8
Implementing ePortfolios - successes and sustainability	0	0	9
Streamed breakouts	0	0	3
TOTAL	**5**	**10**	**40**

The types of PR which employed ePortfolios involved professions and professional bodies such as the: Fire Protection Association; Society and College of Radiographers, UK; CPD National Health Workforce UK; Australian Computer Society; Professional Midwifery; Engineers Australia, and, Registered Nurses. Further analysis across international contexts needs to be undertaken to further explore this activity within professions and professional bodies and to analyse implications for life-wide learning. The two papers presented on this type of activity in the UK is testament to the need to explore these developments in other nations and to begin to explore this through a comparative lens. Further in-depth exploration of the theoretical implications these practices have for learner empowerment and transformation, the challenges these practices present for formal learning systems of knowledge and the issues related to access and competency in information technology skills as a barrier to engagement, are all potential lines for future inquiry.

A framework for e-RPL and e-PR

As a result of this study, a framework for e-RPL and e-PR has been developed. The following are definitions for the terms e-RPL and e-PR:

e-RPL is defined as the unique practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning acquired either formally, non-formally or informally or a combination thereof.

e-PR: Professional Accreditation is defined as the unique practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning and continuing professional development against the professional standards of a specified profession as determined by that profession's accrediting body.

The concepts 'RPL as process' and 'RPL as product' from the models of RPL developed by Cameron and Miller (2004) have been added to the Smith and Tillema (2003) typology of portfolios as another dimension, as has the level of learner control (high and low) and the learning continuum (from formal to informal). These added dimensions have generated three types of e-RPL: e-RPL for Access, e-RPL for Self Recognition and e-RPL for Workplace Recognition. Definitions for these types of e-RPL follow.

e-RPL for Access is defined as the unique practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning (acquired either formally, non-formally or informally or a combination thereof) for access to a course or programme of formal learning that leads to an accredited qualification. This process is formalised by mandated processes as determined by the provider of the accredited qualification which is usually an institution of formal learning.

e-RPL for Self-recognition is defined as the unique and voluntary practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning acquired either formally, non-formally or informally or a combination thereof. The purpose(s) of this type of activity is/are determined by the learner who has complete control over the process.

e-RPL for Workplace Recognition is defined as the unique practice of utilising electronic, digital and mobile web connectivity technology to collect and record evidence of prior learning and current competencies that are required by an organisation/employer. These purposes could be related to human resource management (job design requirements, occupational and industry standards, job-related competencies, knowledge and skills) or for human resource development (skills audits, skills gap analyses, performance appraisal, promotion, and, recruitment.

The new expanded typology of portfolios for e-RPL and e-PR is depicted in Figure 3.

Figure 3: **Expanded typology of Portfolios for e-RPL and e-PR**
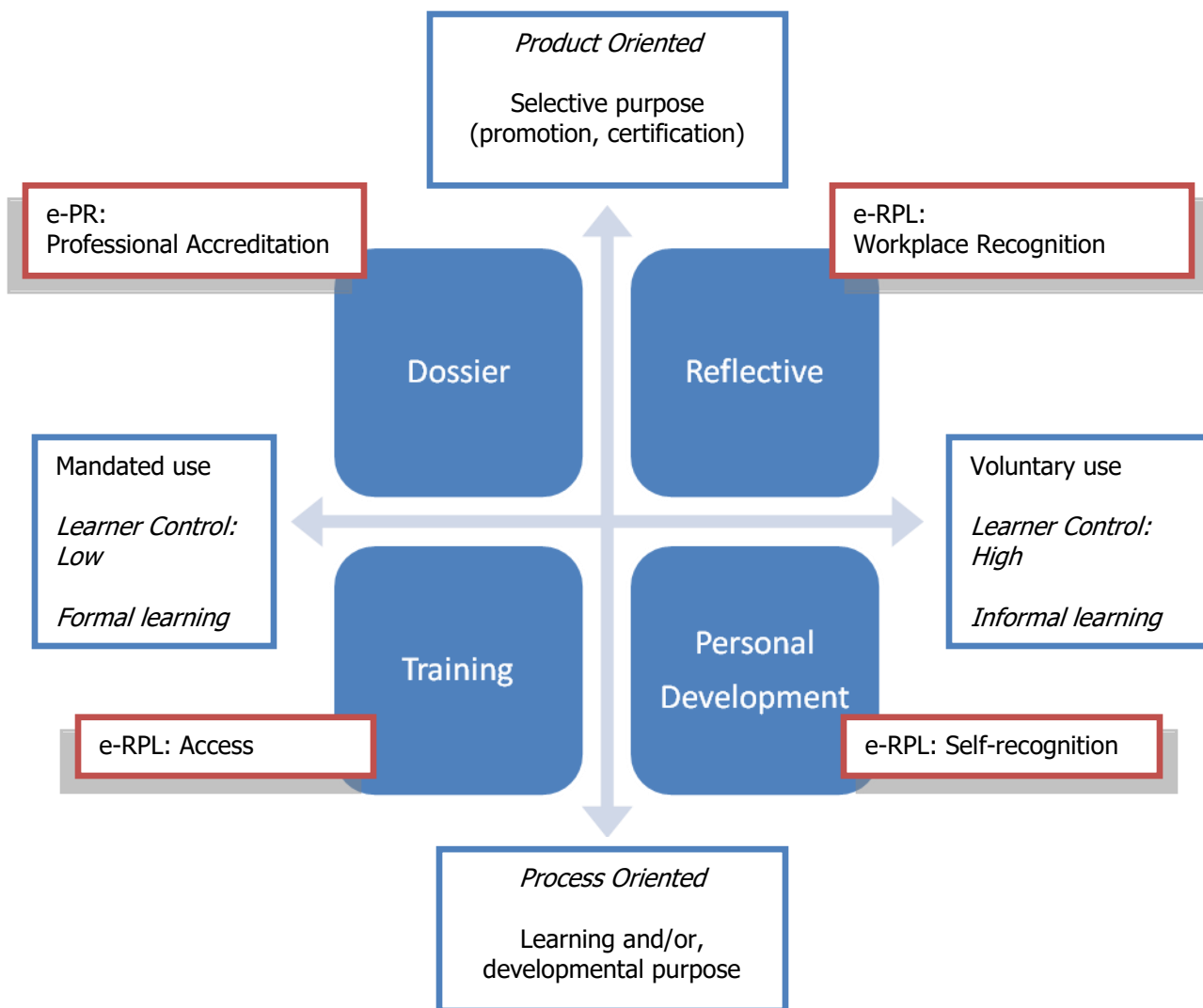
Source: Adapted from Smith and Tillema (2003) and Cameron and Miller (2004).

The expanded typology of portfolios for e-RPL and e-PR can be utilised to identify different and distinct RPL practices for different purposes. It can assist in categorising these different practices and in combating 'narrow' views of RPL as merely a form of assessment. The framework can assist with exploring the potential of RPL referred to by Cameron (2006) by looking at the possibilities of the RPL Developmental Model in relation to wider objectives of lifelong learning for all. The typology is unique in that it includes the processes and practices of PR thereby providing an all encompassing framework for recognition systems in the workplace.

 Conclusion

The use of ePortfolios in RPL in workplace and professional practice contexts has attracted little attention in the literature due to its emergent nature. This study explores the growing incidence of ePortfolio-based

RPL (e-RPL) and professional recognition (e-PR) and implications for recognising workplace learning. Small pockets of activity exist in the utilisation of ePortfolios for RPL in the Australian VET sector, primarily through AFLF-funded projects. The use of ePortfolios for PR is more prevalent across a wide variety of professions. The study found a small body of literature ePortfolios in RPL and APEL dominated by descriptive accounts of implementation. This is likely to be a reflection of the new and emergent nature of these practices and it is anticipated that once these practices become more advanced and embedded in workplace and educational settings, practitioners, educators and researchers will begin to explore theoretical and contextual implications in more depth and with a more critical eye.

The Smith and Tillema (2003) portfolio typology and the models of RPL developed by Cameron and Miller (2004) have provided the theoretical foundations for a new analytical framework for the distinct practices of e-RPL and e-PR. This has implications for the correct matching of practices and tasks to appropriate types of eportfolio-based RPL and PR which are positioned along dimensions related to 'RPL as process' and 'RPL as product', the purposes of RPL and PR, the continuum of formal to informal learning and varying degrees of learner control across mandatory and voluntary settings. The framework also:

- Enables a visioning of RPL that is broader than its current narrow confines as a form of assessment or a credit process. The framework allows for developmental models of RPL were the learner has higher levels of control over the process and the types and forms of evidence they collect (e-RPL for Self-Recognition).
- Provides a type of e-RPL for Workplace Recognition with multiple uses in the workplace related to human resource management and development.
- Acknowledges the important role RPL plays in granting individuals access to formal learning through e-RPL for Access.
- Encompasses the distinct yet important processes and practices related to professionalism, professional recognition and continuing professional development.

As such, the framework offers a new and exciting development in analysing recognition processes and practices that are undertaken in the workplace through workplace learning. The study is limited to Australia-based data sources. Research could be expanded to international contexts to increase data and evidence on e-RPL and e-PR processes and practices and the implications these have for workplace learning.

In addition to these practical applications, the framework offers conceptual scaffolding from which to position future research and lines of inquiry which can critically explore the underlying pedagogies and knowledge paradigms which dominate formal learning systems. Research questions could include:

- How can the RPL practices and pedagogies operationalised in higher education settings inform a critical pedagogy of e-RPL and e-PR?
- How does the dimension of learner control affect and impact on the agency and transformational potential of e-RPL and e-PR?
- Do the practices of e-RPL and e-PR impact and challenge traditional paradigms of codified knowledge and the value systems associated with them?
- To what extent can e-RPL and e-PR contribute to the wider goals of life-wide learning?

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