Getting the Most out of Electronic Portfolios: Pedagogy and Benefits

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ABSTRACT

The benefits of using electronic portfolios (e-portfolios) in social work education have been well recognised. Yet, as technology advances, their potential outstrips the initial, relatively modest goals of producing summative documents. The latest version of PebblePad facilitates the creation of a personalised online learning environment – one product of which can be an e-portfolio – that facilitates a wide range of reflective learning activities. This conceptual article discusses the rationale for embedding such a learning environment and e-portfolio generator at the core of a new Master of Social Work (Professional Qualifying) degree. In applying social constructivist pedagogy, it explores how e-portfolio technology can support the construction of knowledge and meaning-making in a social environment, including the facilitation of skills in critical reflection. It is argued that this technology can enable collaborative learning and professional socialisation, build capacity to respond to complexity and uncertainty in practice situations, and help in making sense of, and articulating, a social work identity. Key challenges include a lack of empirical data supporting the use of this technology, adjusting to the requirements of employing new technology, and modifying staff workloads to reflect different modes of teaching and learning.

INTRODUCTION

There has in recent years been a growing awareness of the academic value of student portfolios and a developing enthusiasm for electronic portfolios (e-portfolios) that utilise the latest information and communication technology. Originally thought of as a product of a creative arts education, where samples of work are collected and presented together, portfolios (and e-portfolios) have become increasingly used by other disciplines as a means of exploring and assessing professional competencies – as an aid for learning and assessment rather than simply a final product (Margolis et al., 2000; O'Sullivan, Reckase, McClain, Savidge, & Clardy, 2004; Volland, Berkman, Phillips, & Stein, 2003). Further, portfolios can be used in versatile ways across whole degrees to enhance student learning by acting as frameworks for monitoring and improving teaching methods or curriculum (Hutchings, 1998; Sidell, 2003; Spicuzza, 2000). Social work literature proposes that, in addition, portfolios can enhance the integration of theory into practice and promote deeper self-reflection (Graham & Megarry, 2005; Rosegrant Alvarez & Moxley, 2004; Schatz & Simon, 1999).

While the learning and teaching potential of e-portfolios is increasingly recognised, concerns about the availability of useable technology and its transferability to education settings have previously limited the expansion and use of electronic portfolios in social work (Fitch, Peet, Glover Reed, & Tolman, 2008; Waldman & Rafferty, 2008). However, in recent years, the range of technology available has expanded considerably to include Mahara, Blackboard e-portfolio, and PebblePad. PebblePad, the platform used at Southern Cross University, has been employed and evaluated in a range of degrees, including pharmacy and biomedical science (Halstead & Wheeler, 2009), teaching (Welsh, 2012), and exercise science (Clarke, Litchfield, & Drinkwater, 2010). Released in 2012, PebblePad3 emphasises learner control by clearly separating a personalised learning space (Pebble+) from an institutional space (Atlas), through which academics may provide access to resources, submission of assessment tasks, provision of feedback and facilitation of discussion (PebblePad, 2013). Pebble+ is the means by which individual learners can access, store and retrieve a wide range of reflective learning experiences. They can also create their own learning resources (referred to as "assets" in Pebble+) and generate a range of products from these resources, including an e-portfolio. In this way the e-portfolio technology provides a reflective online environment suitable for a diversity of learning and teaching activities, only one product of which may be an e-portfolio. While these are positive developments, like other online learning activities, the use of e-portfolio technology needs to be underpinned by sound pedagogical principles and by a clearly articulated purpose for developing capable and reflective social work practitioners.

In this article we examine the social constructivist pedagogical principles underpinning our application of Pebble+ in a postgraduate social work qualifying degree. We draw on the work of Vygotsky (1978) and Laurillard (2002) in conceptualising and operationalising social constructivism in a learning environment. According to Vygotsky, a developmental psychologist, learning is a social activity and individual cognition develops through collaborative activities. In contrast to a Piagetian cognitive approach, where the social environment is merely a stimulus for an individual's idiosyncratic cognitive development, the social constructivist approach sees learning as embedded in social experiences. "Learners are believed to be enculturated into their learning community and appropriate knowledge, based on their existent understanding, through their interaction with the immediate

learning environment" (Liu & Matthews, 2005, p. 387). Similarly, Laurillard (2002) argued that: "(1) learning is an active process of constructing rather than acquiring knowledge, and (2) instruction is a process of supporting that construction rather than communicating knowledge" (p. 67). According to Vygotsky (1978), the zone of proximal development is the space between independent problem solving and problem solving with the support of others. The role of educators in this environment is to help students traverse this gap by creating collaborative learning opportunities.

In examining our use of e-portfolio technology in social work education, we develop the following key arguments: 1. e-portfolio technology can facilitate knowledge construction and meaning making in a social environment; 2. it can enable collaborative learning and socialisation as members of the social work profession; 3. it can assist in developing skills in critical reflection; 4. it can build students' capacity to respond to situations involving complexity and uncertainty; and 5. it can help in making sense of, and articulating, a social work identity. In this article, we seek to lay out our approach to developing the MSW (Prof Qual) degree with the expectation that the propositions will be subject to evaluation at a later date. Before examining each of these propositions, we briefly discuss the context for their development at Southern Cross University.

CONTEXT

Southern Cross University introduced a Master of Social Work (Professional Qualifying) (MSW (Prof Qual)) degree in 2013. In the context of the Australian higher education sector, Southern Cross University is a small, multi-campus regional university servicing a region of approximately 3,500 square kilometres and over 1 million people. However, it has long been a provider of distance education attracting many students residing hundreds of kilometres from the main campuses. The MSW (Prof Qual) is offered on-campus and via distance education (which includes three 7-day residential blocks), in line with the requirements of the Australian Social Work Education and Accreditation Standards (ASWEAS) (Australian Association of Social Workers [AASW], 2012). Approximately 80% of the students are enrolled for distance education.

The ASWEAS (AASW, 2012) requires graduands to have achieved a range of professional capabilities. The challenge in this mixed-mode MSW (Prof Qual) was to ensure that the professional learning requirements of students are met, especially regarding "people skills", self-awareness and knowledge integration for better dynamic interaction with clients. Two key issues thus needed to be addressed. The first was how to facilitate the breadth and depth of the learning within the timeframe available for students' study. As it is a two-year degree, students must incorporate a wide range of knowledge, develop their values, and demonstrate high-level skills in order to meet the standards expected of graduating social workers. The second was the large number of students studying via distance education. Just as "large classroom" learning environments create difficulties regarding student engagement in the reflective integration of new knowledge (Carter, Barrett, & Park, 2011; Toepell, Cole, & Lanthrop, 2002), so too, does distance education pose challenges in helping students achieve specific skills, reflective abilities and self-awareness.

Our response to these challenges was to develop a curriculum that was underpinned by the principles of problem-based learning and that was deliverable in online as well as face-to-face modes. Problem-based learning is grounded in complex situations where there are no definitive answers (Gallagher, Stepian, & Rosenthal, 1992). This is particularly relevant to social work as real-life situations are seldom straightforward. Students are encouraged to take an active role in problem solving and in developing critical thinking skills (Altshuler & Bosch, 2003). Problem-based learning provides opportunities for creating collaborative learning opportunities (in line with a social constructivist approach), that facilitate enculturation in a learning community and professional socialisation.

The university's adoption of PebblePad3, as a part of a pilot project on e-portfolios funded by the Australian Government's Office of Teaching and Learning, provided the opportunity to use this technology to facilitate social constructivist and problem-based learning. At this university, Pebble+ is accessed through the Blackboard learning management system, which includes complementary features such as online discussion groups, tutorial chat rooms, and a platform for the submission of assessment tasks. Key features of the Pebble+ e-portfolio technology that have been utilised on the degree (for both distance education and on-campus students) include:

- A private online learning space for each student, where they can access resources provided by university staff, generate their own assets and save them for future use or reflection.

- Weekly topic workbooks (for all subjects except two that are delivered by other program areas) that provide students with a range of learning resources, including text content, video resources, podcasts, links to websites, interactive exercises, and personal reflection activities.

- Case scenarios to facilitate problem-based learning and reflection, which are linked to in workbooks across multiple subjects, and that are developed over the course of these subjects.

- Reflective journals used on placement, alongside a reflection workbook, which are accessible to academic liaison tutors to provide feedback on in the online environment.

- An e-portfolio that draws on assets produced during placement and across the degree to facilitate reflective learning and present the student's learning journey and emerging capabilities. The components of the e-portfolio include: 1. About me; 2. My approach to social work (practice framework); 3. Evidencing of capabilities in relation to social work practice standards; 4. Two case examples, drawing on evidence of skills in practice; 5. Reflections on learning across the degree; and 6. Curriculum vitae.

Each of these applications of the technology will be discussed further in relation to the social constructivist propositions we present below. At this point we stress that the adoption of the technology was motivated by wanting the online experience to extend the learning that could be achieved in a physical classroom, more than just compensating for the limited number of face-to-face classes for distance students. Thus our use of Pebble+ aimed not

only to be a storage space for producing an e-portfolio, but also to facilitate reflective processes, to link to class and group discussions, and provide a forum where students could explore and document their emerging framework for practice.

FACILITATING KNOWLEDGE CONSTRUCTION AND MEANING MAKING

The starting point for infusing social constructivist pedagogy into the application of Pebble+ were the well-supported assumptions of Vygotsky (1978), Laurillard (2002), Killen (2003) and others about knowledge integration (learning) being a process of laying down new meaning in accord with the existing constructs and ontological frameworks that explain social reality for each individual. From this perspective it is less useful to think of learning as increasing an individual's knowledge store and more useful to see it as a mental reorganising of ideas to allow individuals to develop new understandings and approaches to dynamic interactions in new contexts (Thompson, 2005; Thompson & West, 2013). This mental shake-up supports Dewey's (1933) view that learning involves "(1) A state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and (2) An act of searching, hunting, inquiring, to find material that will resolve the doubt, settle and dispose the perplexity" (p. 12).

Students become actively involved in creating meaning about realistic social work challenges using problem-based learning scenarios in Pebble+. Thompson and West (2013) argued that "the creation of meaning is a personal and reflective experience [and]… the development of professional capability can happen in real or virtual contexts as long as they are meaningful to the learner" (p. 120). Across the degree, students are presented with 23 detailed case scenarios that are linked to workbooks in multiple subjects. These scenarios were developed incrementally through a mapping exercise to ensure a diversity of possible client groups, organisational settings, practice methods, and core social work knowledge (AASW, 2012) was covered in the curriculum. Examples include Malcolm, a young Aboriginal man who has experienced multiple foster placements; St Joey's Homelessness Service that is engaged in a research capacity-building exercise; and Mia (a young carer) and Pam (her mother who has depression and Multiple Sclerosis) who are the subjects of a care plan and are involved in a support group.
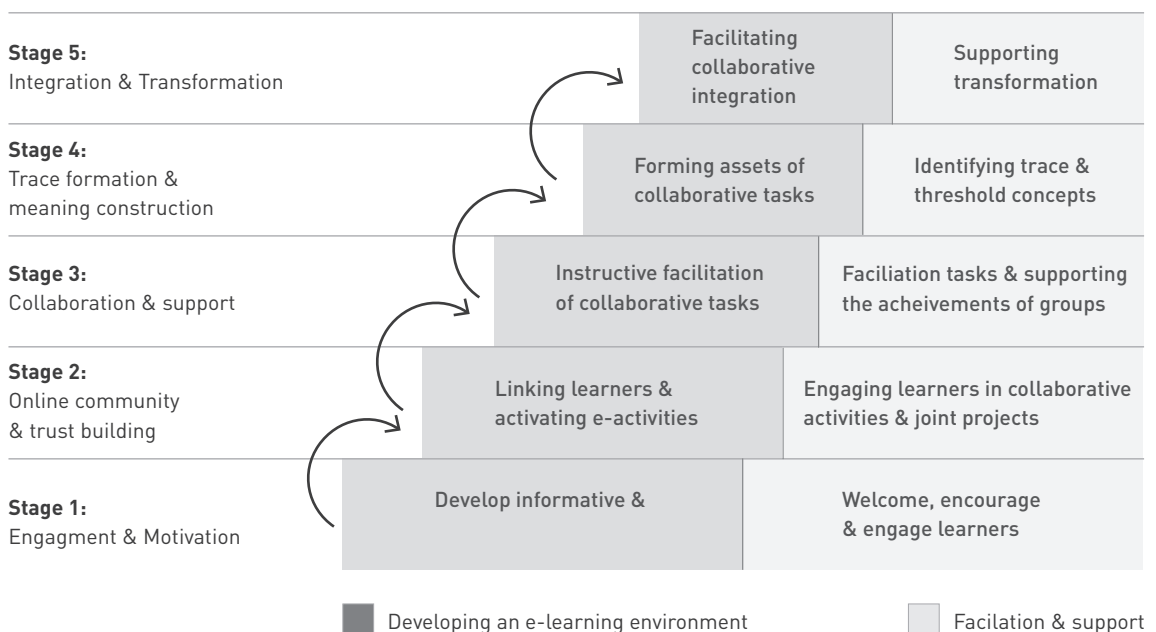
The development of the e-portfolio – a collection of assets brought together at a particular point in time – provides the scaffolding for students to make sense of their learning across time. This is compatible with social constructivist ideals as students can create, store and reflect on a range of different learning resources, including blogs, journal entries, videos, responses to reflective questions, evidence of skills and capabilities, and any other product of learning that can be uploaded and presented online. Students can choose their preferred learning formats. For example, journals can take the form of blogs, audio voice files, or typed journal entries. Educators can provide access to other material from which students can create their own assets such as online training modules, professional development opportunities and extra learning resources. Students can categorise assets by learning objectives, practice standards and any other grouping they might find useful. This process, called "tagging", means that assets can be easily retrieved and presented for different purposes such as inclusion in a page in their e-portfolio, assessment, learning circles, supervision, self-reflection and pre-placement interviews.

Therefore, we argue that the e-portfolio is not only the repository of tangible proof of the student's learning but also a tool for knowledge construction. The e-portfolio becomes a virtual space in which the student can make sense of their journey through social work education, drawing on supported and self-identified reflections, identifying frameworks for practice, analysing knowledge and skill acquisition and describing experiential learning. The student "owns" their learning space and chooses what and how to share for assessment and learning purposes. Their space becomes a storage house of evidence for assessment and facilitates guided reflection. It encourages easy linking of learning from different subjects to enhance integrated understanding across subjects and to contextualise meaning (see Bolinger & Stanton, 2014). Additionally, by integrating the core social work capabilities within this space, the e-portfolio then assists students to articulate their learning both as a student and as a professional once graduated (Rosegrant Alvarez & Moxley, 2004).

ENABLING COLLABORATIVE LEARNING AND SOCIALISATION

According to Vygotsky (1981, p. 161), it is "through others that we develop into ourselves". Salmon (2011) has shown that online learning environments that are set up well can facilitate better linkages into a community of learning that assists students to socialise online, exchange information, construct new knowledge and develop applicable understanding or procedural knowledge for professional expertise (see Figure 1). The case scenarios and many workbook activities within Pebble+ link to online discussion forums and tutorial chat rooms (facilitated in Blackboard). At least one subject per semester assesses discussion forum participation, which requires demonstration of engagement with the content, evidence of regular contributions to the forums, and positive contribution to the online debate. Workbook activities are also brought into and discussed in the on-campus classes and the residential workshops. Many of the case scenarios are used as the basis for skills development in these face-to-face learning settings. This experiential learning is then reflected upon and may be incorporated in the e-portfolio in a structured form.

Figure 1: Adaptations from Salmon's (2011) five-stage model

Legend:
- Developing an e-learning environment
- Facilation & support

Stage	Developing an e-learning environment	Facilation & support
Stage 5: Integration & Transformation	Facilitating collaborative integration	Supporting transformation
Stage 4: Trace formation & meaning construction	Forming assets of collaborative tasks	Identifying trace & threshold concepts
Stage 3: Collaboration & support	Instructive facilitation of collaborative tasks	Faciliation tasks & supporting the acheivements of groups
Stage 2: Online community & trust building	Linking learners & activating e-activities	Engaging learners in collaborative activities & joint projects
Stage 1: Engagement & Motivation	Develop informative &	Welcome, encourage & engage learners

It is useful to conceptualise professional capability not as a professional's basket of ideas, but as a three-dimensional porous system influenced by, and influencing, others; communicating ideas based upon worldviews and progressing through new interpretations and new experiences in dynamic contexts (see Figure 2). At any point in time this can be considered to be part of a cyclical online reflective learning dynamic (Figure 2) that is driven by emotional commitment (values and motives) and, if sectioned (as in Figure 3), appears directional in that it spirals towards increasing professional wisdom. According to Vygotsky (1978, p. 56), "development, as often happens, proceeds here not in a circle but in a spiral, passing through the same point at each new revolution while advancing to a higher level".
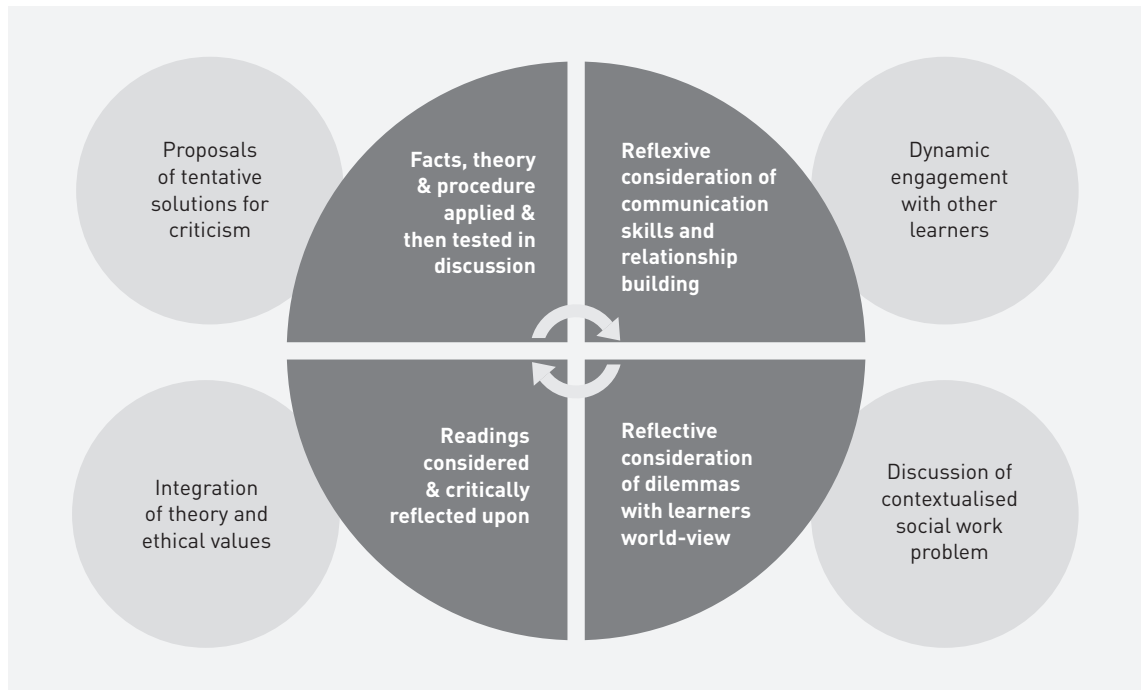
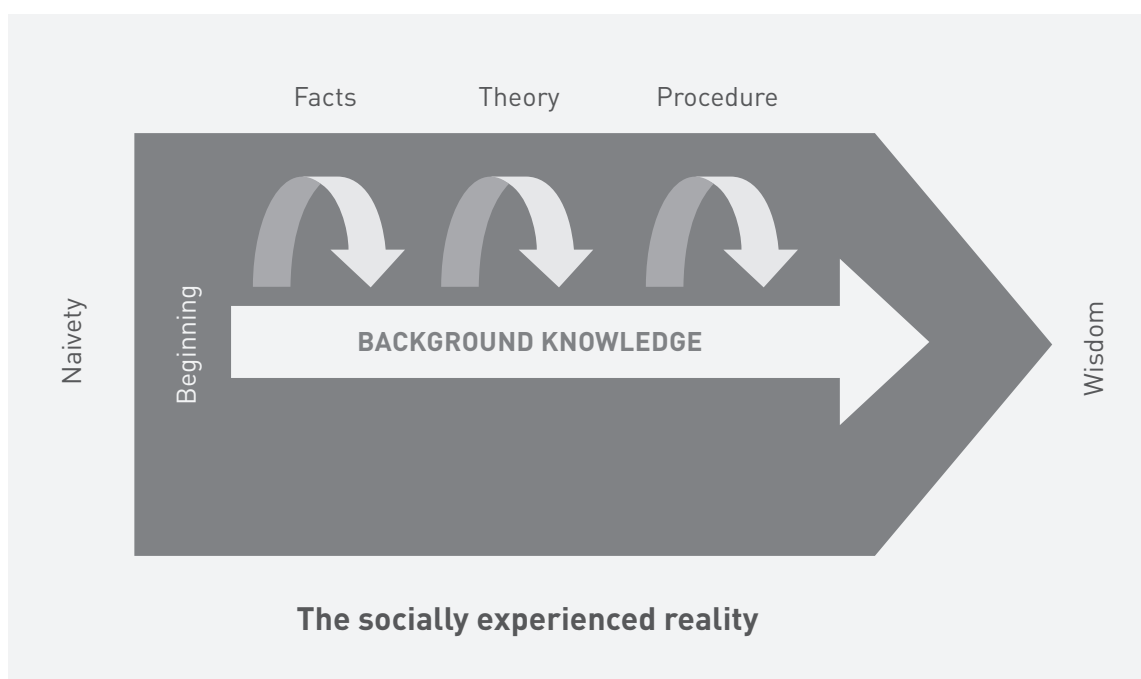Figure 2: Development of professional capability

Figure 3: Development of profdesional capability: lengthwise cross-section

The person is a transforming entity defined by social contexts, responding to social events, interpreting meaning and seeking control to meet personal needs (Bourdieu, 1986; Bozalek & Matthews, 2010; Thompson, 2005). Social work meaning can be seen as constantly adapting based upon new ideas and interpretations from interactions, including professional learning and knowledge acquisition. For social work educators, the inclusion of new knowledge is about increasing the range of meaningful learning experiences for the student. In our degree, we stagger the release of content around some particular knowledge areas so that students are able to engage with the complexity of this material over time, as well as have time for discussion and debate with other students. For example, knowledge of and skills in psychosocial assessment are introduced and applied to a case scenario in year 1 semester 1; students conduct a psychosocial assessment activity and write a clinical report in year 1 semester 2; and then they deliver a group-based case presentation encompassing psychosocial assessment during a class or residential workshop in year 2 semester 1.

Thus pedagogical devices are strategic approaches that engage learners in reflection to help them integrate new information coherently into their worldview. The personal production of quality assets to showcase professional qualities (e.g., in the e-portfolio) can be seen as a useful developmental process for seeking wisdom and as a valuable reflective tool. For example, in the collaborative case scenario, Brad, to explore the complexities of social work organisations, learners are encouraged to explore structural challenges to ethical practice and canvass their preferred solution online. As this can be a contentious discussion – students are requested to discuss the strategies that they employ in this discussion and then document these as an asset (again, for potential inclusion in the e-portfolio) to demonstrate capabilities in professional communication. The documentation process prompts reflective consideration of ideas in context to encourage the laying down of meaning.

DEVELOPING SKILLS IN CRITICAL REFLECTION

As learners, social work students are constantly integrating new ideas into their construction of reality. As they make sense of the content of their learning they inevitably retain key "traces" of knowledge that may have meaning within their experience (Laurillard, 2002; Webster-Wright, 2009). From our perspective, it is important that the value of these traces is made more evident and that students are encouraged to respect their significance. A key task for educators is thus to facilitate reflection on significant ideas, to strengthen the links between different traces (remembered knowledge), and to link them to practical applications. Laurillard (2002) argued that the "world that we experience is constituted as an internal relation between the world and the learner" (p. 69). This is a complex cognitive process and it should be recognised that the work students are doing, when learning, needs to be assisted by simplifying and synthesising processes that help them integrate ideas into their own reality.

Critical reflection plays a significant role in all aspects of social work practice and research, with the term "critical reflexivity" being used by some authors to describe an ongoing, active process of self-awareness (Morley, 2015). In developing this degree we sought to embed critical reflection moments throughout the online, face-to-face, and field education learning opportunities provided to students. For example, during their field placements,

students are given access to a reflective Pebble+ workbook where they record their responses to specific questions and activities timed at different points during the course of their placement. This is in addition to the reflective journal in Pebble+ that they maintain while on placement. Both the reflective journal and workbook can be assessed in near real time – that is, as soon as a student saves an entry it is available for an educator (in this case an academic liaison tutor) to view and provide feedback on. Potentially, this enables a feedback loop facilitating the ongoing spiral of reinforced learning and application. This may result in more (and timely) opportunities to use feedback to shape learning and practice wisdom.

Over time, the student and educator reflect on previous entries and discuss the changing awareness and perception of the student with regard to the events that were considered previously. Students are encouraged to add their new understanding (their new traces of knowledge) to their original reflections. In this way, students are expected to evaluate and integrate their learning as they move forwards on their professional journey (Rosegrant Alvarez & Moxley, 2004). This culminates in the incorporation of a synthesis of the learning journey in the e-portfolio (which is submitted for assessment in draft form at the end of the first placement, and in final form at the end of the second placement at the completion of the degree). Further, reflection activities are inevitably involved as students construct assets and evaluate which ones they will include in their e-portfolio. By developing and selecting assets for their e-portfolio, we propose that students are reflecting upon their use of self, the learning processes they have engaged with, what learning has been achieved, and where their capabilities lie.

BUILDING CAPACITY TO RESPOND TO COMPLEXITY AND UNCERTAINTY

Given the focus of the MSW (Prof Qual) on problem-based learning, the electronic learning space also provides an environment to discuss, explore and reflect on practice dilemmas across a number of topics from differing subject perspectives. As noted, case scenarios are used across multiple subjects so students engage regularly with an evolving, dynamic client, ethical dilemma, organisational scenario or political issue. For example, when students meet "Chiyo" (a young Japanese woman), she is trying to adapt to studying in a new culture, but she then experiences a mental health crisis and requires hospitalisation. Following on from this, in a direct practice subject students learn about and undertake an initial assessment, while making use of interpreting services. This is then discussed in class or in a tutorial chat room and students gather further knowledge to use in Chiyo's next assessment. The assessment task relating to Chiyo's scenario involves a video-recorded role play of an assessment interview and can be used in the e-portfolio to demonstrate communication and assessment skills. In a law and policy subject, students engage with Chiyo's example to understand mental health policy and legislation, including consideration of how an involuntary statutory admission to hospital may impact on Chiyo's situation. The workbook-reflection–e-portfolio nexus allows for simulation of real life, contextualised consideration of skills and "knowledges" that each learner might individually favour for dealing with such situations.

In another example, "Jackie" starts as a beginning social worker trying to clarify her role across a range of workplaces before finding her niche in Alcohol and Other Drug Services.

She struggles with ethical dilemmas and organisational boundaries as she learns to work in the ever-changing field of case management with people affected by the drug, ice. In the various case scenarios, students work collaboratively and individually to:

- Analyse the social work processes involved;

- Examine the social work skills and knowledge required;

- Reflect upon personal and professional values;

- Give feedback; and

- Reflect and document their skills and development needs.

Students therefore build on complex scenarios, examining each one from a number of theoretical and philosophical viewpoints to develop meaningful personal narratives. This process includes mapping of concepts, typologising capabilities learned, linking these to contexts (situations and cultural relations) and then structuring the dynamic of narratives. According to Chen, Feng, and Chiou (2009), this scaffolding, along with feedback from educators and fellow students, enables learners to move towards increased mastery and independence. In Vygotsky's (1978) terms, it helps learners move from the zone of proximal development to actual development (Chen et al., 2009).

Field education also provides the opportunity for students to explore how their learning at university translates into the complexity of social work practice in the workplace. This can be challenging for students, particularly in their first placement. By encouraging students to develop these skills in an electronic learning environment prior to placement, we propose that the transition to practice will become both easier and engender a deeper contemplation of practice challenges. Take, for example, an analysis of organisational structures. Students are introduced to a variety of organisational issues in case scenarios over a number of subjects and encouraged to build personal narratives around structural, political, social and historical contexts. An examination of these through different framework lenses and timely feedback allows students to reflect on "solutions" to problems and consider the implications for stakeholders involved in systems and processes. These activities support the student to articulate social work processes and sources of knowledge. Arguably, students who can express their learning will be better able to recognise the direct application of their studies, leading to more confidence to explore and address issues while on field placement.

MAKING SENSE OF AND ARTICULATING A SOCIAL WORK IDENTITY

While practice experimentation has traditionally been the domain of field education, if students are provided a personal space where they can store and retrieve their learning then experimentation can be integrated more easily across the whole degree. Thus, our intention in the MSW (Prof Qual) was to create space for students to be able to re-examine and reflect on their learning for meaning regarding their own professionalism, what learning has meant for them, how applicable it is for them personally, and what the limits are of their new ideas. Central to this is assisting students to make sense of what it means to be a social

worker – to have a social work identity – in the context of their own lives and experiences, and in relation to the experiences of fellow students. "The Vygotskian approach sees the development of a professional identity by trainee[s]… as embedded in the sociocultural practice in which they are participants" (van Huizen, van Oers, & Wubbels, 2005, pp. 281–282). The development of this personal understanding, rooted within a social context, we argue, also provides a basis for articulating this social work identity to other people, such as in a multi-disciplinary setting.

The e-portfolio is the primary vehicle for facilitating this understanding as it requires students to articulate their own approach to practice; that is, their own practice framework. This is supported by a practice framework assignment, which they complete during their final placement. The way in which the e-portfolio platform interacts with learning and teaching activities is summarised in Figure 4. At its simplest level (Figure 4, Level 1, left-hand side), the e-portfolio acts as a storehouse for key exemplar assets that demonstrate particular skills and achievements in the professional learning process. These documents are generated (Level 1, right-hand side) after completion of written, audio, video and graphical learning tasks. This information provides the basis for consideration of the learner's achievements at the next level (Level 2, left-hand side) regarding professional competencies (e.g., the AASW Practice Standards). Thus the e-portfolio is particularly useful because of its capacity to act as an anchor point for reflection upon the current state of student capabilities. The demonstration and "checking off" of these learning outcomes is achieved through (Level 2, right-hand side) certain specific assessment tasks, the formal competency-evaluation process on field placement, and demonstrated achievements in simulated case studies in class or on-line. Thus, at the third level of learning and development, the e-portfolio acts (Level 3, left-hand side) as a referent point for considering the dynamic nature of personal learning. Students can reflect upon the statements that they made earlier in the learning process and consider how they now perceive that they "use-self" (Level 3, right-hand side).

By considering the learning journey, we propose that students are made aware of the dynamism of the reflexive development of self and the need for monitoring development against a constantly changing set of people and pressures. In this context they can consider their own skills and knowledge according to their perception of the empirical information, theoretical knowledge, procedural capabilities, and understanding of self and needs. This framework provides for a powerful reflective tool upon which learners can move to the next and highest functional level of the e-portfolio platform (Level 4, left-hand side) in developing a picture of what is, for them, the best set of activities and approaches to practising ethically and wisely in the dynamic world of practice. This is about learning through engagement with the dilemmas of practice and working with experienced professionals and committed learner groups (Level 4, right-hand side) to understand the institution and tacit knowledge that alerts professionals as to when they need new knowledge and when they are incorrect about assumptions. Thus the e-portfolio platform potentially provides a multi-layered tool for reflective and developmental learning that feeds information from learning activities into a reflective process.
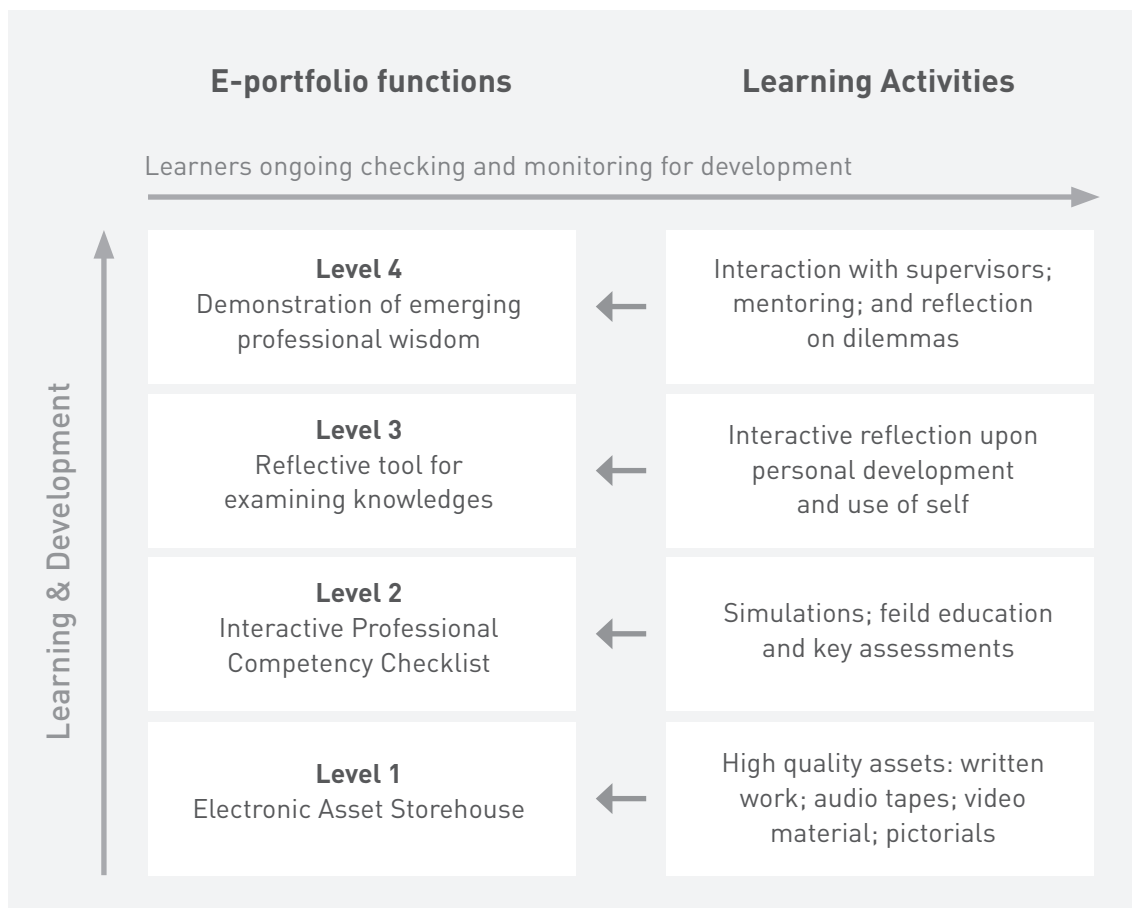
Figure 4: Interaction between e-portfolio platform and learning activities

In this way, the e-portfolio technology provides much more than a repository of information and artefacts. We argue that it can assist in the development and articulation of a professional social work identity. It can facilitate collaboration and debate, as well as provide a structured environment in which students can engage with the complexity and ambiguity of practice situations through problem-based learning scenarios. It can also assist students to critically reflect on their work and their emerging identity as social workers, thus enabling them to develop critical reflection skills. From our perspective it can assist educators to support students on their learning journey – helping them make sense of new knowledge and retain the traces of this knowledge as their learning progresses.

CHALLENGES AND FUTURE DIRECTIONS

The convergence of online and traditional face-to-face social work education is increasing (Ayala, 2009; Siegel, Jennings, Conklin, & Napoletano Flynn, 1998) with a number of universities opting for online delivery alongside on-campus classes and residential workshops. Students have reported favourably on online delivery (Petracchi & Patchner, 2000; Vapalahti, Marttunen, & Laurinen, 2013) but consideration must be given to designing online material based on pedagogically sound principles (Driscoll, Jicha, Hunt, Tichavsky, & Thompson, 2012).

In applying social constructivist pedagogy to the MSW (Prof Qual) at Southern Cross University, we argue that the use of an online learning environment and e-portfolios

may support the development of practice wisdom, problem-based learning, critical thinking and reflective practice both within the curriculum, out in the field on placement, and for students getting ready to enter the workforce. However, clearly these assertions need to be tested. As the quality of online courses relies on effective online instruction and the role of the teacher as well as the quality of the material (Lawrence & Mazur Abel, 2013; Okech, Barner, Segoshi, & Carney, 2014), it will be important to develop robust evaluations that can support the claims made in this article. Gathering empirical data to examine how to measure student outcomes and satisfaction with e-portfolios will be necessary to support the ongoing use of e-portfolios in social work education.

Prior to such an evaluation, we suggest there are some key challenges in using e-portfolio technology as a virtual learning space. From our experience, building and maintaining the online resources, as well as enabling educators to respond quickly to support students in this space, are resource-intensive activities. We argue that the technology needs to be embedded across a whole degree (rather than introduced into just one or two subjects) to achieve the aims discussed in this paper. Embedding the same learning space across the whole degree allows students to build confidence and skills in practically retrieving information, adding to reflections, collating assessable items and laying down meaning. Thus, all staff teaching across the degree need to create content, assessment items and curricula in a new technological environment. Workloads may need to be reassessed to ensure that educators have the time to create tools and resources that meet the degree requirements and that match the pedagogical principles underpinning the use of the e-portfolio technology. This involves expertise (and training) as well as motivation and commitment. One particular challenge may be resisting managerial influences on contemporary educational institutions, which push for online learning merely to achieve economies of scale rather than as rewarding learning experiences (Teghe & Knight, 2004). There is a need to ensure that the use of online technologies is underpinned from inception by sound pedagogy rather than an institutionally driven approach to meet general administrative outcomes.

For educators, the limitations of online technology are often highlighted as barriers to participation. Key obstacles include concerns about the equity of student access to technology, lack of staff expertise and confidence, and hardware or connectivity issues (Waldman & Rafferty, 2008). This is despite the fact that student social workers will need to become quickly familiar with information and communication technologies in their future workplaces and will have to become digitally literate (Young & Delves, 2009). Positively, Bozalek and Matthews (2010) found that "the e-learning experience unexpectedly created a forum for intimacy in its broadest sense (intellectual sharing and emotional unpacking) to develop across geographic locations, [thus] enhancing the participants' strengths and abilities to function effectively as professional practitioners" (p. 244). Engagement of social work students in virtual learning environments with academic support may facilitate the development of this digital literacy.

Resources are needed to ensure that staff are able to respond within a short period of time to students' online contributions. Timely and constructive feedback allows students to recognise unifying themes in their learning, to lay down new ideas and conceptualisations within their personal social construction of reality, improve their performance, and ensure

that they are on track with social work learning requirements. The electronic learning environment allows this easily and quickly. Further, mobile technologies allow for a range of possibilities in accessing student contributions and providing feedback (Waldman & Rafferty, 2009). Having the technological tools available to assist this process will go a long way in reducing the intensity of time required to implement it.

Virtual online learning spaces where students can converse, share and comment should not be confused with social networking sites. Therefore it is important to discuss the differences with students prior to engaging in this space as both allow information sharing, the establishment of special interest groups and networking (Waldman & Rafferty, 2008). The electronic learning environment differs from a social media site. The student owns their learning space and chooses what to share with individuals. This can include blogs, assessment items and reflections. It is a learning space and, although personal experiences are used to reflect on to build practice wisdom, it is done within a professional framework.

CONCLUSION

While there are challenges in implementing e-portfolios in social work education, the availability of new technology suggests an enormous potential. In Southern Cross University's MSW (Prof Qual) program the e-portfolio platform acts, in effect, as a personalised online learning space. This provides a flexible, electronic storage facility for learning items (assets), as well as a virtual learning space for both on-campus and distance-education students to access learning materials. Given its adoption across the whole program, we argue that it enables students to keep track of their learning across multiple subjects and throughout their field placement experience. As discussed here, we propose that e-portfolio technology can facilitate the implementation of social constructivist and problem-based learning principles in order to support reflective practice, problem solving, critical thinking and the emergence of practice wisdom. In this article we have sought to lay out the pedagogical principles of our use of this technology in a postgraduate social work qualifying degree. This provides the basis for a detailed evaluation of the extent to which these aims are realised. We hope that ultimately the technology will assist students to clearly articulate what they know as social workers, what they believe in and what they can do: in essence, their own practice framework.

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