Electronic portfolios and learner identity: An ePortfolio case study in music and writing

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Although the employability of graduates is of concern across further and higher education it is particularly problematic in the Arts disciplines, from which few students transition to a traditional, full-time position. Arts graduates shape their work to meet personal and professional needs, and the successful negotiation of this type of career requires a strong sense of identity and an awareness of diverse opportunities. The challenge for educators is how we might develop these capacities whilst being mindful of students' dreams, which are often focused on artistic excellence and recognition. This paper reports findings from a collaborative study undertaken at four Australian universities. With a focus on developing an electronic portfolio (eP), the study involved students in classical and contemporary music, music education, music technology, creative writing and professional writing. The combination of music and writing provided points of comparison to identify issues specific to music, and those that might apply more generally. This paper reports findings related to learner identity, drawing evidence from survey and interview data. The study, which was driven by the learning process rather than the technological tool, revealed that students' use of eP transitions from archive to self-portrait. Moreover, the eP emerged as a vehicle through which identity is negotiated and constructed. Indeed, the process of developing of an eP prompted students to adopt future-oriented thinking as they began to redefine their learning in relation to their future lives and careers. These findings were common to all students regardless of discipline or technological platform.

Keywords: electronic portfolio, eportfolio, identity, arts, higher education

Introduction

This is the fourth in a series of papers that discusses aspects of a national, inter-institutional project that integrated an electronic portfolio (eP) into student learning in Arts higher education. The project concerned students at four Australian universities and included a range of eP types, formats, uses and expectations. As discussed by Ittelson (2001), storing students' academic records and ePortfolios in a central

repository offers students a way of developing an e-identity, or e-dentity. Rather than focus on the eP itself our interest lay in the interactions and processes of constructing and critiquing an eP, through which we believe students increase the personalisation of their learning. As we have argued previously (reference hidden), our work in bringing ePortfolios into higher Arts education awareness is innovative. We see it as a way to inspire active engagement among students, to influence teaching practices, and as an important aspect of students' professional training.

The ePortfolio (eP) and identity

The relationships between eP and identity are of growing interest to educational researchers, in part because the narrative aspect of the eP allows a self-constructed identity to be imagined, conveyed and refined over time (McAlpine 2005). ePortfolios developed as a process of storying are acknowledged to have the potential to house these self-constructed identities, "weaving an individual's learning and feedback to provide a reflection of who they are and what they have learned" (ibid, 384).

The eP and identity are integrally linked through the process of selecting, gathering, reflecting and critiquing one's own work. In a recent study, Brooks & Rowley (2013) introduced music students to the core characteristics of reflection and reflective practice when using technology. Asked to comment on the effectiveness of the technology in relation to this learning, students responded positively. The authors noted that in using technology as a strategy in their knowledge management, students were actively engaging in the higher levels of thinking required for active and meaningful reflection.

Central to the discussion of eP development is what competencies students choose to display (Janssen, Berlanga and Sloep 2012; Skiba 2005). Whereas in some professional programs (nursing, teacher education and engineering for example),

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accreditation requirements determine the types of evidence to be included and the rationale or purpose of each artefact, Arts students have to determine for themselves what persona or personas they wish to present to future employers and clients. Further, the complex labour market into which they will transition will require regular renegotiation of professional identity against each new task and skillset (author hidden), which heralds the potential for the eP to be a useful and flexible tool.

Identity and the Arts labour market

This research adopted a social constructivist approach to career development, which sees the creation of personal realities as something that is done through one's interactions with others. These interactions continuously influence, reshape and reinforce these realities. As representations of the self, ePortfolios have to be considered in the context of the labour markets in which students will work. In Australia, Arts graduates consistently have the poorest graduate outcomes of the 40 broad disciplines measured in Australia's annual graduate destination statistics (Graduate Careers Council of Australia 2012). In most part this is because Arts graduates face challenges including competition for entry-level jobs; the highly individual self-initiated and self-managed portfolio career pattern; and informal, networked ways of obtaining or creating work through reputation building (ref hidden).

Arts graduates have to quickly become resourceful, life-wide learners who self-manage their careers and skills development (Bridgstock 2009). This often means moving across the boundaries of employers, clients and task orientations, and between traditional, online and digital environments (Arthur and Rousseau 1996). Arts careers commonly encompass multiple concurrent roles that combine to create a 'portfolio' of work (Handy 1989). Overlapping employer/client arrangements can be full or part-time, casual, employed or self-employed, with each project drawing upon the creative skills

of different combinations of different people (Daskalaki 2010). Remaining employable within this context often necessitates periods of work linked by periods of learning (Mirvis and Hall 1996).

Internship style 'professional practice' opportunities are a common way of exposing students to the world of work. Internships offer students the opportunity to create an eP of artefacts and reflections according to their industry experience. The eP, therefore, serves as a basis for a collection of both experience and learning, and it can encourage students to better understand the relationship between theory and practice. The eP also enables students to articulate their learning in a holistic way as their own stories, in which they reflect on the outcomes of their internship. It is true that not all recollections are positive, and the portfolio offers students the opportunity to reflect on challenges as well as achievements. Such reflection elicits an honesty and authenticity to the learning process alongside a synthesis of the concept of research into practice (Piihl, Rasmussen and Rowley 2013). In line with Bennett (2009) we contend that preparing students to imagine and prepare for their careers necessitates the consideration of not only extrinsic factors such as the characteristics of work and career, but the intrinsic aspects of self and identity.

The role of identity

Career identity is the definition people have of themselves in terms of work or career (Meijers 1998). Career identity changes throughout the lifespan and reflects individual motivations, meanings and values. Moreover, research indicates that students whose courses are not associated with accredited career paths experience a significant period of personal and professional identity uncertainty in the early career phase (Nyström, M. Dahlgren and L. Dahlgren 2008). Identity has a strong effect on career-related behaviour, acting as a "cognitive compass" (Fugate, Kinicki and Ashforth 2004, 17) that

directs, regulates and sustains individual learning, job creation and acquisition actions, and career building strategies (reference hidden). Careers in the creative sector are much less likely than in other sectors to rely on formal application processes and qualifications; rather they are often dependent on informal networks and reputation. In this setting the ability to evidence previous work is crucial; hence an eP has the potential to become a valuable resource.

The union between practical problems, theory and theoretical reflection has the potential to open new opportunities for action. This is particularly true within an industry context (Piihl, Rasmussen and Rowley 2013). The construct of a successful internship, then, is not merely about solving practical problems - it is rather a matter of students developing a real life 'case' in order to develop their identity as graduates (rather than students) through generic competencies in knowledge production within local contexts (Piihl, Rasmussen and Rowley 2013).

Against this background, in this paper we first summarise each institution's use of the eP and then present and discuss the findings that were common across discipline, institution and eP platform. We conclude by suggesting how these findings might inform future practice in Arts higher education.

Approach

The study sought to understand the extent to which the ePortfolio—a "digitized collection of artifacts, including demonstrations and resources, and accomplishments" (Lorenzo and Ittelson 2005, 3)—might provide students with the skills and motivation to document their academic and artistic outcomes for enhanced employability. (ePortfolio is one of many terms used for such digital collections, also called ifolios or webfolios.) In this paper we address the question relating to identity: *To what extent might the process of creating an ePortfolio influence students' identity development?*

The study sample was drawn from undergraduate students in music and writing at four Australian urban universities. The majority of students (N=186) were studying musicology or music performance, technology or education; the remaining students (N=34) were majoring in creative or feature writing. The combination of music and writing provided points of comparison to identity issues specific to music, and those that might apply more generally.

The study adopted a qualitative approach and was informed by the theoretical framework of possible selves (Markus and Nurius 1986) in which people are understood to be influenced by their awareness of possible future selves that are perceived as desirable, disconcerting, and/or achievable. The literature informed the development of common themes and questions, which were trialled and refined before being adopted for use across the four research sites. Two formative instruments were central to the initial research design. These were the Identity Status Interview developed by Marcia for his Ego-Identity Status research (1966), and the Possible Selves Questionnaire originally constructed by Markus and Nurius for their work on positive selves (1986). The topic questions most pertinent to this paper's identity focus are listed at Table 1.

Students were invited to participate in the study as part of their enrolled courses, most often over one 12 or 13-week semester. Data collection, which was delivered independently at each location, involved regular written reflections, surveys, and focus group discussions. Whilst most data collection was conducted in class, the submission of reflective journals and completed surveys for inclusion in the study data was entirely voluntary. Each instrument drew from the set of common themes and questions illustrated at Table 1, prioritising in each case the questions most pertinent to that research phase and cohort.

Table 1: Topic questions with an identity focus

Identity focus: Student topic questions for reflections, surveys and interviews
What do you think an ePortfolio should contain, and why?
How did producing an ePortfolio impact your learning?
How has it contributed to your thinking about your professional identity?
How would you describe your professional identity?
What might be the relationship between an ePortfolio and your own creative expression?
What role did the supporting workshops and activities have on your interaction with the ePortfolio?
Identity focus: Educator topic questions for reflections, surveys and interviews
To what extent and in what ways did students utilise their eP as a form of representation?
In what ways might an eP play a role in supporting identity development among students?
What supports and strategies are needed?
What challenges did students encounter when assembling their eP?
If there were challenges, how might these be overcome for future cohorts?

Recognising that the anonymity of a questionnaire "encourages greater honesty" (Cohen, Manion and Morrison 2001, 128) but mindful of the need for rich data, each survey included closed questions, open questions with ample space for comment, and repeated items for the purpose of triangulation. Each of the surveys was divided into two sections. Section one comprised questions relating to the use of an eP in seeking work. The second section addressed the development of an eP and asked about professional identity. Students were also asked to reflect on the process of eP development using guided reflections, and some students (n=58 at SCM) attended a focus group interview. In total, 34 writing students and 186 music students submitted

materials for analysis. The five researchers responded to the same sets of questions from the perspective of an educator, reflecting on student engagement and impact.

Textual data were transcribed, coded and analysed for emergent themes. Analysis involved inductive coding by at least two team members, after which coding was compared and refinements applied. Quasi-quantification was applied to some questions to summarise qualitative material. This analysis led to the categories from which the research team generated the structural discussion to follow.

In this paper, music students are identified with the letter m followed by their respondent number, or with the letter p in the case of performance students. Writing students are identified with the letter w, and educators with the letter e.

Institutional context

As Goode (2010) has argued, individuals develop a specific 'technology identity' that is constituted of four blended areas of an individual's belief system. These are beliefs about technology skills, about opportunities and constraints to using technology, about the importance of technology, and about one's own motivation to learn more about technology. Goode (2010) has illustrated ways in which holding a particular technology identity impacts the academic and social development of post-secondary students. In this study we sought to understand which identity-related aspects of eP development were variable according to context, course and technological tool, and which were common across all cohorts. To facilitate this the team members were drawn from different backgrounds (ranging from educational psychology to musicology), worked with students in different disciplines and years of study, and adopted a variety of eP approaches and platforms. The following section describes the institutional context of the four research sites.

In 2009, (institution hidden) developed an ePortfolio platform known as 'iportfolio'. One year later it had more than 17,000 users (von Konsky and Oliver 2012), but few of these were from the Arts. Delivered into a third-year capstone unit with 34 writing students, the (institution hidden) project set out to discover whether an eP could be a strategy for exploring possible future selves. Given the complex nature of careers across the creative sectors, one of its aims was to assist final year writing students with the transition from student to graduate professional.

Students at the (institution hidden) used the Pebble Pad platform. Prior to the study, the eP had been used with music education students to collate capstone objects for use in job applications and in meeting the requirements for teacher accreditation (reference hidden). This study marked the first eP engagement for approximately 50 first-year students in composition, musicology and performance. The range of specialisms necessitated a variety of assessment and delivery strategies, including the adaptation of assignments to include the eP as a tool for housing student work as evidence of achieving learning outcomes.

At the (institution hidden) the use of ePortfolios in music was entirely new. The study saw ePortfolios applied to the work of 66 third-year students as a portfolio of material to be developed over one 13-week semester, creating a professional portfolio suitable for a potential employer or client. In addition, eighty-eight second year performance students wrote collaboratively about group music performance. Pebble+ was the platform for both cohorts.

At the (institution hidden), ePortfolios are integrated across the undergraduate Music Technology degree and receive critical feedback and assessment at regular points. Each student maintains one institutional ePortfolio intended as a lifelong, professional tool. This study involved 70 music technology students, who were

expected to learn by themselves, to select how they wanted their ePortfolios to be constructed, and to decide how they would present themselves through them.

Findings and Discussion

Three themes dominated the student experience of ePortfolios in this study. These are the ePortfolio as a self-portrait; identity constructed through the development of an ePortfolio; and the ePortfolio as a prompt to adopt future-oriented thinking. These themes provide the structure of the following section.

The ePortfolio as a self-portrait

According to Windley (2005) a digital identity contains data that uniquely describe a person, and it also includes information about that person's relationship with other identities. It follows that how students choose, craft and manage their online identities is significant in assessing whether or not the eP is serving their needs (Snider and McCarthy 2012). The first significant finding from this study is that students' use of ePortfolios evolves over time from archive to self-portrait, and that the extent to which this is achieved depends on the length of their exposure to eP and their year of study.

First and second year students were understandably the least able to select artefacts for their ePortfolios. This was noted by one of the team members, who found that "students at different stages of their degree program varied. … For example, the final year students who had been doing eP for 3+ years and were about to finish their studies, were better at selecting evidence and describing their professional self" (e2). Students immediately saw the potential to create "a neat little package containing all the vital info about yourself" (m3), and this gave them the initial motivation to engage. However, only the newly conceived ePortfolios reflected Lorenzo and Ittelson's (2005,

3) description of an eP as an "administrative tool to manage and organize work created with different applications".

As suggested by Zecker (2012), the reflective nature of the eP as a documentary record of a student's intellectual journey was observed to impact the development of professional identity. In line with this, some students developed new ways of looking at themselves and their work. A number of music performance students, for example, began to use their ePortfolios to compare and discuss their performances over time. Similarly, writing students realised that the eP could facilitate reflexive practice by enabling them to track their development and skills: "As a writer, I believe it is important to keep an exposé of every experience and published work in order to reflect personal growth and to showcase work achievements and recommendations in an easily accessible online context" (w6). As such the eP emerged as far more than a repository; rather, it represented student "portraits … based on multiple sources of evidence collected over time in authentic settings" (Antonek, McCormick and Donato 1997, 15).

As mentioned, this deeper engagement related to two factors: the length of time in which students had been exposed to an eP approach; and the year level in which the student was enrolled. Whilst final year students introduced to eP for the first time quickly realised the potential to showcase their work, students who had already been exposed to ePortfolios earlier in their studies had a far more developed and nuanced understanding of their potential as a reflective tool and a potential interface with clients or employers. The link between reflective practice and identity was voiced by one of the researchers, who noted: "especially when reflective practice takes place, ePortfolios provide a place for compilation of artefacts that can help students see the development of their academic and professional identities" (e1). It is to the construction of identity that we move next.

Identity constructed through the ePortfolio

Blair and Monske's (2009) exploration of graduate students' ePortfolios positioned technological documentation as a rhetorical choice that impacts the development of professional identity. In line with this, the second significant finding from this study is that ePortfolios are not merely the place where a student's academic and professional identity, or self-portrait, is deposited; rather, they are vehicles through which identity is negotiated and constructed. ePortfolios facilitate, make explicit, and enable the online negotiation of aspects of identity (Janssen, Berlanga and Sloep 2012; Roberts 2006). In this sense the process of building an eP is the equivalent of constructing a digital identity (Ravet 2005) and-/or an identity manifested in a digital form. Students tasked to develop ePortfolios quickly found themselves considering issues of self-representation. This prompted students to reflect deeply, and to imagine an identity that might meet the multifaceted requirements of a complex career in the Arts (Snider and McCarthy 2012).

The finding confirms Graves and Epstein's (2011) belief in the ePortfolio's narrative potential for students to identify their strengths, enhance their professional development, and begin to formulate a professional identity. Indeed, as students' identities become increasingly represented, negotiated and reflected using digital tools, they become the artefact of what Roberts (2006) refers to as 'personal identity technologies'. Identity is socially shaped by the discourses, content and purpose of the setting (Gee 2005). With the absence of standards or professional accreditation, Arts students need to work through their own multiple identities (as student, individual, expected or desired professional self, for example) to determine which facets of identity might be enacted within their ePortfolios. Among these is the challenge for students to develop their professional identity with multiple communities in mind, including their

university and course, internship hosts and potential employers and clients (Piihl, Rasmussen and Rowley 2013, 2).

The eP represents an "eSelf, a digital extension of a physical self ... that will interact through a digital world with other individuals, networks and organisations" (Ravet 2005, 19). The process of crafting their ePortfolios brought home to students the importance of deciding *what* that self might look like: "Really got me thinking about how to present yourself if you want to be taken seriously" (p61). This was often new thinking: "I was under the impression that I would get the job from the charisma I showed in the interview; but how would I get that interview? … it's about displaying your skills and experience in a professional manner…" (w9). St. Amant (2002) encapsulated the significance of the ePortfolios' potential to convey identity with the warning that: "until the interviewer meets you in person, you are your portfolio" (w12). This became clear to one of the students, who considered how she might phrase the "opening words to a potential employee or work colleague". Admitting that before the study she "never really gave this much thought", the student realised: "it is the first thing they will see, and there goes your first impression with it" (w3).

Whilst individuals can have multiple identities that are privately owned and shared only with selected audiences (Ravet 2005), ePortfolios are a great stimulus for these conversations because ultimately the eP audience is a public one. The task of portraying their professional selves yielded huge benefits for some students, one of whom reflected: "It has helped me to identity with who I am as a musician" (p70). Initially, however, students found the process challenging and often "had trouble seeing links between ePortfolio work, job application, and professional directions" (e4). Self-determination theory (Deci and Ryan 1985) tells us that when students consider an activity to be meaningful and important, their motivation and interest is heightened.

Some students deferred deep engagement because their event horizons were not extensive and their long-term thinking was poorly developed. The data revealed a strong relationship between year of study and ability to engage in this thinking, which strengthens the argument for the early introduction of ePortfolios:

> Early year [music performance] students feel unprepared to engage in thinking about life after university because they feel they do not know enough to make quality judgements yet; however, late year students find the question uncomfortable in the main part because arts is predominantly not a day-job discipline and therefore the unknowns are extensive, anxiety causing and, for some, very stressful". (e5)

The findings were similar for the music education students: "Working with students in only second year, it was obvious that for many, they were still developing a sense of their professional self" (e1). Despite this, the team member from music education noted that the specific requirements of evidencing the standards for professional teacher accreditation "made it less troublesome for them" (e5). This observation aligns with the findings of Sanford and Hopper's (2010) study of ePortfolio use by 45 pre-service teachers. Sanford and Hopper (2010) also found that the development of ePortfolios, which includes the selection of, and reflection on, artefacts, contributed to the education students' understanding of teaching and to their shaping of teacher identities.

One team member described the process of eP development as the 'unpacking' of self. Only then did he see it possible for students to begin answering questions such as: "who am I? Who am I becoming? What evidence do I have of this? and What is missing from my evidence: what might I need to create/adapt/modify (e5)?" At the heart of these questions lies the question that students in this study found most troublesome: namely, *there is the person I like to think I am or can become, but what evidence do I have that I am or can be that person*?

The ePortfolio as a prompt to future-oriented thinking

The third significant finding from this study was that the process of developing an eP prompted students to adopt future-oriented thinking by "encouraging them to think about their life and supporting evidence *during* their studies" (e2). This enhanced students' motivation to think creatively about their future lives and careers, and it prompted them to engage with their studies as preparation for those possible futures. In line with this, the eP experience challenged students to consider what evidence they might need to collate in order to open new opportunities.

Many students engage in higher education courses with only a vague notion of what they might do afterwards or how their intended industry works. In Marcia's (1987) classic identity status mode this is known as a 'diffused' career identity, and it was illustrated by one of the writing students with her question: "…what do I want to do with my degree? To be honest, I still have absolutely no idea" (w1). In contrast, and perhaps guided by unrealistic, media-influenced ideas about the world of work, some higher education students over-define themselves by presenting a rigid, 'foreclosed' career identity relating to artistic success. Career identity foreclosure is a particular risk in the Arts, where the existence of highly visible, successful star individuals and companies can skew students' views of what a creative career involves (Bridgstock forthcoming).

Not surprisingly, students in their final year of study were more able and motivated to think beyond their degree programs. This was not always, however, the pro-active process that might be assumed. Shifts in career goals were often a reaction to students seeing gaps in their evidence. No matter how they described themselves, when students collected eP artefacts and started to write the accompanying narratives they did one of three things: some saw gaps and reframed themselves; others saw gaps and

worked to fill them, and by doing so refreshed and invigorated themselves in particular knowledge and skill domains; and still others saw gaps and chose to "sweep them under the rug" (e5), indicative of foreclosed identities.

The tensions between defining themselves, over-defining themselves, and portraying themselves as a jack-of-all-trades, dominated discussions with third-year students. In part, students' responses to the eP were indicative of their looming transition to the workforce; however, they also reflect the nature of careers in the Arts, which are such that graduates are likely to engage in multiple roles. At one institution, for example, students were observed to struggle with the eP format because they "felt there were several careers they could be interested in and were uncertain how to present themselves because of this" (e3).

Change can be so natural or so fluid that students often don't recognise or even think (until discussed) that they have changed their thinking, their skillsets and their competencies; however, as Wallace (2009) has demonstrated, over time the eP can assist learners to recognise their skills and knowledge, to note changes in their thinking, and to develop more empowered learner identities. For those students in the study for whom change was self-evident, the educators' focus shifted to students refining, focussing and developing, discovering, and learning, strategies to translate their actions and thoughts into self-aware representations of self. This process helped provide clarity and an underpinning confidence in the career directions students had chosen.

Across the study, students found it difficult to select and prioritise the information that would represent them in their eP. The level of uncertainty was unsurprising given that for these students a traditional job *per se* is an unlikely graduate outcome. This is at odds, however, with the orientation of many eP platforms towards demonstrating the capacities for traditional employment. One student brought this to

life, asking: "who should we send this to?" (p1). Graduate life emerged as a taxing concept, eliciting comments such as: "This is a rough subject! I'm in my last year. I don't want to think about it!" (p52).

The study also revealed a lack of confidence, with students worried about sharing their work with potential employers or clients. One of the most uncomfortable aspects of building an eP was the need for students to write positively about themselves. This was often seen as being self-centred. As one of the students voiced: "I have trouble writing optimistic things about myself and my prospects as an employee, as I don't want to come off looking conceited" (w11). Throughout the study, the researchers prompted students "to communicate ourselves in the most succinct and professionally appealing way possible" (w6). This took encouragement and time.

We contend that the selection of materials for an eP should always be challenging, and that this challenge needs to be proposed to students as a positive, on-going negotiation:

> Rehearsing this and preparing for this using ePortfolios is one mechanism for preparing for graduate life. Whether entering a 'day job' context or not, and especially at a young age, this needs to be made explicit to students. … If they have none of these reservations, they should question why: is it arrogance, or is it real – based on a well-prepared and well-thought out body of evidence that is an accurate reflection of who they are at the moment? (e5).

Concluding comments

With a focus on the ePortfolio and identity, this study yielded three significant findings. First, as students' ePortfolios are developed they quickly transition from being an archive to being a fluid a self-portrait. Second, ePortfolios represent vehicles through which identity can be negotiated and constructed. And third, the very process of

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developing of an eP prompts students to adopt future-oriented thinking.

Before we conclude, we take this opportunity to mention some of the limitations of this study. We note for example that our students were in their late teens or early twenties, having gone on to university study soon after leaving school. We would anticipate a different result from a cohort of mature learners. Alongside this is Snider and McCarthy's (2012) assertion that international students bring cultural assumptions about online self-representation and identity construction. With a more culturally diverse group of students we may well have encountered this issue, and we caution eP researchers to be mindful of cultural difference. We also take this opportunity to defend the sample size. Although the sample was relatively small (220 students and five educator researchers), students and educators were located at four different institutions across nine different degree programs, and they utilised four different approaches to the technical platform. Only the themes found to be common across the whole sample were reported here.

The common themes evidence the potential for ePortfolios to play an important role in supporting the development of salient digital identity during higher education Arts study. In particular we have learned that ePortfolios should be introduced early within a program of study and utilised throughout that program; they should be developed using a user-friendly platform, possibly determined by the students themselves; they should remain accessible to students once they have graduated; and they should accommodate the variety of evidence and media required by graduates moving into the non-traditional, complex working arrangements so typical in the Arts.

Setting aside the potential to develop the eP as a reflective tool, final year students discussed the practical difficulties of retrospectively amassing eP evidence: "I certainly struggled to locate past examples of work that have dispersed themselves

throughout various thumb drives and computers … it would have been useful to be introduced to ePortfolios sooner because they are definitely accumulative projects" (w4). Not surprisingly, negative student responses to the use of ePortfolios were often related to their ability to access their ePortfolios after graduation. Drawing on Maxwell, Angehrn and Sereno's (2007) suggestion that the development of professional identity extends to career transition, we suggest it could be further extended to the multiple transitions into and through higher education. It is essential therefore that the eP still available at the critical point of graduation.

Identity formation is a dynamic process of being, rather than of becoming. Likewise, the portrayal of identity is dependent on audience and context. In line with Janssen, Berlangs, and Sloep's (2012) concept of negotiation, students in this study rethought their identities in the process of developing their ePortfolios. Across all cohorts and platforms, students found that the creation of a professional portfolio impelled them to become more aware of their professional selves. Moreover, students used this awareness to evaluate their own thinking in relation to their progression, goals and achievements (Miles 1994). It is no small matter that for many students a sense of self-efficacy was heightened in the process of reflecting on their study and its potential relevance to their future careers. Some students viewed this as creating resilience in the face of obstacles such as self-doubt.

A crucial component of the study design was the integration of an eP into existing classes, selected because of their potential to engage students in reflexive practice. The addition of ePortfolios influenced the educators to incorporate explicit discussion of work and career, reflective writing, and the development of practical resources such as a capacity statement. Students were certainly challenged by the eP process, and we assert that this should not be seen as a barrier. Students need to learn

how to portray themselves as focussed and capable individuals with definable skillsets, and also as adaptable, life-long learners who can reshape themselves to different contexts and develop new skillsets as required.

Finally, social computing has changed the ways in which identities are managed and used, with many users creating multiple digital identities related to the different contexts of their lives (Delaitre 2007). These digital identities—their nature, formation, assertion and negotiation—are challenging issues in today's environment of mobility, ambient intelligence and increasingly complex and evolving digital representations and interactions. As digital interactions become ubiquitous, the representation of identities plays a significant role as a gateway into these interactions. Evolution requires chaos and unpredictability with any points of stasis being momentary and fleeting, and evolution as human beings and graduate professionals is no different. Arts graduates will constantly refine and redefine themselves as professional people. As part of their natural existential angst this is not something to be afraid of, to shy away from, or to defer until later; rather it is to be engaged with and supported during higher education. Regular dialogue with students underpins their decisions relating to personal and professional identity, and helps build their self-efficacy and resilience. This study suggests that ePortfolios represent an effective place from which these conversations can be facilitated.

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