

## 2. Literature review

### 2.1 Overview

A community of practice (CoP) is conceptualised in the literature as the informal aggregation of individuals drawn together by common interests. Communities of practice are most commonly defined as ‘groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis’ (Wenger, McDermott, & Snyder, 2002, p. 4). This review of the literature allows for both a broad consideration of the concept and context of communities of practice as well as a closer inspection of the issues associated with their development, participation and community processes. Attention is paid to online networking as a channel of communication for communities and, in particular, how this may be a determinant in the development of online communities of practice. The review also explores current ePortfolio communities that have a national or international focus.

### 2.2 Communities of practice

An exploration of the concept of communities of practice reveals not only the theoretical framework that supports their development, but also a number of characteristics and lifecycle factors that can contribute to the success and sustainability, or indeed to the atrophying and demise, of these organic groups.

#### 2.2.1 *Communities of practice — what are they?*

While the term ‘community of practice’ is relatively recent, the concept is by no means novel. Wenger (1998) acknowledges that all individuals participate in some type of community, be it through family, geography, interests and hobbies, or in their work lives. It is the theories associated with communities of practice, first introduced by Jean Lave and Etienne Wenger in 1991, that have enabled the original observations around social learning to deepen, thereby establishing an understanding of the managerial perspectives of communities as applied within the field of organisational development.

Since Lave and Wenger’s initial work in the 1990s, these theories have been considered in many diverse contexts, with the central elements linked to the idea of groups of people who ‘informally share, develop and diffuse learning, knowledge and practice’ (Churchman, 2005, p. 11). Other researchers have since applied the theories of communities of practice in a knowledge management context, specifically in commercial settings (Hildreth & Kimble, 2004). Ultimately, a community is defined by its practice, with the members recognising and sharing a common knowledge and commitment to that practice.

According to Wenger (1998, p. 5), who is widely regarded as one of the principal scholars in the field, the concept of the CoP emerges from a social theory of learning, which identifies four key components of learning:

- meaning (learning as experience)
- practice (learning as doing)
- community ( learning as belonging)
- identity (learning as becoming).

CoPs may be used to support each of these components. While Wenger (1998) postulates that effective learning takes place across time, the key to a successful CoP might not be simply the passage of time (for example, a minimum time span), but rather the facility to sustain sufficient mutual engagement that will enable such learning.

The importance of collaboration between learners is central to social constructivist learning theories, with one specific aspect of social constructivism being the concept of situated learning, where learners become involved in activities that are directly relevant to the application of their learning (Brown, Collins, & Duguid, 1989). These ideas are central to the model of situated learning developed by Lave and Wenger (1991), which proposed that learning involves a process of engagement in a ‘community

of practice'. The authors argue that learning is a process of participation in communities of practice, participation that is 'at first legitimately peripheral but that increases gradually in engagement and complexity' (p. iii).

## 2.2.2 Characteristics

Wenger (1998) notes that the key features of a CoP are associated with two primary indicators: firstly, that people with a strong sense of identity are tied to a particular community, and secondly, that the practice itself is not formalised. Additional indicators that can be ascribed to a CoP highlight the need for continuing mutual relationships, a rapid flow of information, the diffusion of innovation amongst the members and a shared, evolving language with common perspectives reflected in this language.

The literature identifies the various patterns of the evolution of CoPs, often prefaced by a description of the scope of practice or situation that brought them into existence. Wenger et al. (2002) claim that all CoPs share three common fundamental elements – *domain, community and practice* – that provide the CoP with an appropriate knowledge structure.

- *The **domain** creates a common ground and a sense of common identity. A well-defined domain legitimises the community by affirming its purpose and value to members and other stakeholders.*
- *The **community** creates the social fabric of learning. A strong community fosters interactions and relationships based on mutual respect and trust. Community is an important element because learning is a matter of belonging as well as an intellectual process.*
- *The **practice** is a set of frameworks, ideas, tools, information, styles, language, stories and documents that community members share. This body of shared knowledge and resources enables the community to proceed efficiently in dealing with its domain.*

(Wenger et al., 2002, pp. 27–28)

Within the CoP the form that such learning and engagement takes will evolve, as individuals and the community as a whole negotiate practices and methods of participation. Wenger (1998) has noted that CoPs are also characterised by a shared repertoire that includes routines, words, processes and symbols that have been adopted over time by the community.

### 2.2.2.1 Lifecycles

Wenger (1998) indicates that CoPs have lifecycles and that these will often differ from those of more formal group work situations. The CoP lifecycle, when compared with a project, will generally not have clear start and end dates but may continually evolve. The literature presents examples of adaptations of the lifecycle to suit particular models of CoPs.

Corso, Martini and Balocco (2008) suggest a 'roadmap' model for the business CoP whereby each phase serves as an input for the following stage in a cyclical pattern, while Gunawardena, Hermans, Sanchez, Richmond, Bohley and Tuttle (2009) provide a Web 2.0 approach to the CoP lifecycle, with a wiki tool as a central domain in which learning and engagement occur in a spiral model. Cambridge, Kaplan and Suter (2005) discuss the design and cultivation of CoPs in the higher education context with a step-by-step guide, adapting the community lifecycle suggested by McDermott (2002) to present a sequence of phases:

- ***Inquire:** Through a process of exploration and inquiry, identify the audience, purpose, goals, and vision for the community.*
- ***Design:** Define the activities, technologies, group processes, and roles that will support the community's goals.*
- ***Prototype:** Pilot the community with a select group of key stakeholders to gain commitment, test assumptions, refine the strategy, and establish a success story.*
- ***Launch:** Roll out the community to a broader audience over a period of time in ways that engage newcomers and deliver immediate benefits.*
- ***Grow:** Engage members in collaborative learning and knowledge sharing activities, group projects, and networking events that meet individual, group, and organizational goals while creating an increasing cycle of participation and contribution.*

- **Sustain:** Cultivate and assess the knowledge and “products” created by the community to inform new strategies, goals, activities, roles, technologies, and business models for the future.

(McDermott, 2002, as cited in Cambridge et al., 2005, p. 2)

In summarising the literature around CoPs, Corso et al. (2008) observe five distinct stages of community development: *potential*, *coalescing*, *maturing*, *stewardship* and *transformation*. The authors note that often a CoP will start as a loose network that holds the potential to become more connected. As members build connections, they combine together into a community. Once established as a community, it often grows in both membership and in the depth of knowledge their members share. As they mature, communities tend to go through cycles of high and low activity. During this stage, communities often take active stewardship of the knowledge and practices they share and consciously develop them.

CoPs may develop in a variety of ways: geographically (local, regional, national, international), sectorally, around specific issues (standards, pedagogy), institutionally, or by discipline area. Disciplinary communities of practice, such as those developed by the UK Higher Education Academy (HEA), are of particular significance where qualifications need to be aligned with professional standards (Hallam et al., 2008). However, cross-sectoral communities may also be vital, particularly when considering policy and infrastructure issues; for example, when the broader education sector — encompassing the school, vocational and higher education areas — collaborate to achieve common goals that may have impact at the sector level.

At an organisational level, CoPs can help produce effective outcomes in terms of knowledge management processes, by ensuring a broader awareness and sharing of the knowledge contained within an organisation (Wenger, 1998). It is also important to note that while CoPs are, to a certain extent, influenced by the overarching context in which they operate (be that an industry sector, a discipline or a geographic sphere) they also grow organically as a result of the interaction of the community’s participants.

Wenger amplifies this to indicate that:

*... it is only as negotiated by the community that conditions, resources, and demands shape the practice. The enterprise is never fully determined by an outside mandate, by a prescription, or by any individual participant.*

(Wenger, 1998, p. 80)

### 2.2.2.2 Participation

In many situations, a CoP cannot be regarded as a formally constituted group, meaning that membership is a voluntary activity (Hildreth & Kimble, 2004). As highlighted by Wenger et al. (2002), CoPs differ from other types of organisational networks such as project or operational teams. CoP participants are not formally assigned to the group, nor are their roles defined. Probst and Borzillo (2008) add that while project teams often have a clear delineation of the members’ roles and activities, this is unlikely to be the case in a CoP. CoPs also differ from informal networks; while CoP members may share a common interest in developing practices in a specific field, an informal network might not focus on a particular domain and will only exist as long as its members continue to find it of benefit to meet their professional needs (Probst & Borzillo, 2008).

Lave and Wenger (1991) originally viewed assigned legitimacy to a CoP as the individual being accepted through group consensus. Wenger (1998) notes the importance of mutual engagement within a CoP. Members must be enabled to participate, which may require the provision of specific infrastructure (anything from sharing coffee in a face-to-face context to communication via a broadband internet connection). As such, Wenger states that community maintenance, whilst often overlooked, is essential within a CoP.

A factor related to mutual engagement is the reality that diversity in membership is inevitable and indeed desirable within a CoP (Wenger, 1998, pp. 75–76). Individuals will inevitably enter the CoP with quite different professional roles, backgrounds, and knowledge levels, and these characteristics will continue to change with, and perhaps even due to their involvement in the CoP. The infrastructure, norms and practices of the CoP should therefore not hinder or thwart heterogeneity amongst members.

Brokers are members of the CoP who tend to make new connections across CoPs. The role of the broker involves the translation and coordination of, as well as alignment between, differing perspectives, and at its best, it might help to open up new possibilities of learning. Wenger (1998) notes that some people appear to naturally gravitate towards this role, staying on the boundary of the communities of practice rather than taking a more central role.

Wenger's earlier work (1998) established a comprehensive model for the community of practice concentrated around the promotion of learning. He argued that education should not be restricted to schooling, but should be understood as a shared development process between communities and individuals, enabling new identities to form. Wenger suggested various infrastructures to allow for the formation of identities: (1) places of engagement for people; (2) materials and experiences with which to build an image of the world and themselves (imagination), and (3) ways of having an effect on the world and making their actions matter (alignment). Hartnell-Young and McGuinness (2005) summarise Wenger's architecture for learning in their research around an online educational community and claim that it can be applied to those working within one organisation, as well as professionals working across different organisations.

### 2.2.3 Success factors and challenges

Case studies in the literature offer insightful summaries of the key indicators of success and failures in a community of practice. Sustainability is a constant theme in the literature on CoPs, particularly in the business sector where CoPs may be embedded in an organisational context. Stuckey and Smith (2004) examined seven diverse online CoPs to explore those factors that support and drive a community. All seven communities believed that sustainability was only attainable with the continued facilitation of a manager or administrator. In addition, members saw the sharing and publishing of resources as an urgent need among practitioners and viewed the online environment as enriching the connectivity of the community. The authors concluded that:

*To support sustainable growth, the commitment of the core members to invest time, effort and take significant risks must parallel their familiarity with the landscape and understanding of the needs of practitioners.*

(Stuckey & Smith, 2004, p. 162)

Probst and Borzillo (2008) drafted what they understood to be the '10 commandments' of a successful CoP after extensive research into 57 CoPs in major European and US companies. This research study also identified some key reasons for the failure of CoPs in

intra-organisational networks, which McDermott (2004) had previously defined as those practices that failed to continue the momentum of sharing best practice and knowledge to further ongoing development. In the summary of findings, that is, the '10 commandments', Probst and Borzillo (2008) noted the similarity with those key factors required for change management, although without a specific key management role. The authors included the following key strategies for a successful CoP:

- Align to key objectives.
- Form governance committees around specialised areas.
- Include a sponsor as well as a leader to determine best practice.

Probst and Borzillo (2008) were also able to identify several reasons, similar to those identified by Chua (2006), for the failure of a CoP and these include the following:

- Lack of a core group or membership to sustain the practice.
- Low level of one-to-one interaction (including face to face).
- Reluctance on the part of members to share competencies.

While CoPs are viewed as self-organising, Probst and Borzillo (2008) stressed the requirement for the formation of strategic objectives as a guiding point for practice and the introduction of a sponsor as well as a manager to monitor best practice.

In a discussion of the Dutch experience of CoPs, particularly of the government-initiated practices, Kranendonk and Kersten (2007) believe that a government-managed practice will eventually develop from a management-driven activity into a member-driven practice, particularly in terms of the steering of process and content. The Dutch government initially experimented with CoPs in order to facilitate

various policy targets by providing a pre-determined structure that stimulated public debate and engagement with various issues. Kranendonk and Kersten (2007, p. 947) add that 'this results in a process of social learning and creates new relationships between the government and the CoP members and also society'. The main conclusions from this Dutch review indicated that a CoP can link a wide range of stakeholders around various and complex issues, and that early management and conceptual guidance can provide specific parameters for involvement.

A challenging CoP may only prove effective in what Churchman and Stehlik (2005) describe as a 'uniquely configured workplace' in which the members practice autonomously, engaging in learning activities outside of a traditional management doctrine (p. 12). Universities are traditionally representative of these contexts in regard to their environment of discourse and debate.

However, some caution is reported in the literature around sustaining a CoP once the practice has been established. Chua (2006) details the initiation of an eLearning CoP in a higher education environment that incorporated a specific cohort of staff who had undertaken a course together around instructional design. Four key issues were associated with the failure of the CoP to sustain participant interest over a period of time. Firstly, Chua suggests that there were no regular face-to-face activities (considering all members were employed at the same institution) that might have allowed the group to interact socially and also that online discussion sessions failed to attract a sufficient number of members. Secondly, a weak leadership structure had resulted from only a small group of core members who had initially expressed interest in the CoP. This weak leadership was also highlighted by the lack of a higher management level (or critical friend) to oversee the process. The literature suggests that while initial management is necessary (particularly in knowledge management environments), it does not necessarily guarantee success and that ongoing management should be present (Corso et al., 2008; Nickols, 2003). Finally, Chua suggests that the CoP was guided by specific projects rather than being guided by sets of values and objectives common to all (Probst & Borzillo, 2008; Wenger et al., 2002).

In addition to defining those factors essential for a successful CoP, the literature offers various strategies for the development of a CoP. Corso et al. (2008) identify the relevance of a CoP from a knowledge management perspective and suggest a framework for the design and context of a CoP to cultivate value and generate innovation. Although the framework or 'roadmap' offered by the authors relates directly to the business model of a CoP (similar to that offered by Probst and Borzillo (2008) in intra-organisational communities), there are commonalities in regard to a model that could be supported by both intra- and inter-organisational practice. Corso et al. (2008) divide the roadmap into logical phases: strategic concept, governance definition, design, implementation and launch, day-to-day community management, and assessment. Of specific interest is the day-to-day management of the community and the concentrated focus on involvement of members. The research undertaken by the authors suggests that full commitment is attained with various 'levers', including the strengthening of individual involvement (social), as well as improvements to the actual quality of individual involvement through the promotion of collaboration and connectivity.

### *2.2.4 Facilitating an online community of practice*

Participation in communities also points to other issues associated with involvement and engagement, as discussed in the earlier literature from Wenger. The internet currently provides a flexible platform to support evolving communities of practice to allow fast knowledge diffusion that can be assimilated over a wide area (Hildreth & Kimble, 2004).

A new theme in the literature is the topic of online or 'internet-mediated' CoPs. Cambridge et al. (2005) refer to online communities and the 'technical architecture' that provides the tool for collaboration and communication (p. 2). Within this online environment it becomes possible to engage with a wider audience and to overcome geographical constraints around communication, both nationally and internationally (Hartnell-Young & McGuinness, 2005).

The progression from the World Wide Web to Web 2.0 functionality has also had a profound impact, with the proliferation of social networking tools and resources. Social networking sites are essentially online spaces that can be customised, to a certain extent, by the user. Social networking activities include specific sites (Facebook, MySpace), social publishing (blogs and websites like YouTube), social bookmarking (Delicious, formerly del.icio.us) and social cataloguing (Folksonomy).

Within the education arena the wiki is viewed as a ‘collective intelligence tool’ (Gunawardena et al., 2009, p. 5). The literature suggests that these social networking tools foster interaction, collaboration and involvement, and ultimately expand knowledge by making connections with individuals of similar interests (Gunawardena et al., 2009; Mason & Rennie, 2008).

Gunawardena et al. (2009) consider the theoretical aspects of CoPs and the alignment of collaborative learning processes with social networking tools. The authors link social networking to Wenger’s three structural elements of a CoP (domain, community and practice), noting that these structural elements apply to social networking just as they do to face-to-face practice. The authors conclude that in the new Web 2.0 environment the wiki is of specific interest to educators as a collective intelligence tool that enables collaborative editing:

*Thus, Web 2.0 tools foster interaction, collaboration, and contribution. An essential feature is user generated content enabling sharing, co-creating, co-editing, and co-construction of knowledge reflecting the collective intelligence of the users.*

(Gunawardena et al., 2009, p. 5)

On a broader level, Preece (2001) considers both the social and technical aspects of interaction in evaluating the performance of an online community, labelling them ‘sociability’ and ‘usability’. Sociability is concerned with the development of software, policies and practices to support social interaction, including ‘purpose, people and policies’, while usability relates to how the individual engages with the technology (p. 349).

Hartnell-Young and McGuinness (2005) believe Preece’s sociability and usability factors impact on the involvement of a broad range of stakeholders in the educational research arena. In their evaluation of the communities of practice that developed around the implementation of a government scheme in Victoria – the National Quality Schooling Framework (NQS) – they found that use of an online platform markedly increased the participation of stakeholders, notably in the participation of members from non-metropolitan areas. The education CoP was piloted in 2001 and launched nationally in 2003. The objectives of the NQS CoP were presented as:

*... to support and enhance quality teaching and learning; build a shared understanding of how student learning outcomes can be improved by quality assurance processes grounded in professional practice and evidence-based research; ... and engage school communities in evaluating the quality and effectiveness of school practices and programs and their performance across the key dimensions of learning outcomes for students.*

(Hartnell-Young & McGuinness, 2005, p. 5)

The main elements in the CoP were the provision of resources in the form of literature, tools and strategies, a web platform to engage teachers and professional educators in interactive professional eLearning communities, and online support services. The principal means of engagement – the website – enabled users to participate in cluster projects around issues of relevance to the education environment and to link to other online education forums (p. 5). Essentially, the CoP meant that teachers could learn about and share resources implemented by other educators in the teaching environment.

Hartnell-Young and McGuinness (2005) point to key findings in their research that may be considered unique to an online CoP. Data indicated that the majority of members would browse the discussion threads rather than contribute. Members often expressed a lack of time for active participation due to their workload and additional administrative responsibilities. In addition, members had varying experience with ICT and some members claimed the lack of access or inadequate bandwidth affected their ability to participate in the community. Teleconference events or regular tele-tutorials were more successful among the non-metropolitan members. Significantly, the role of facilitator in the CoP shifted over a period of time and the authors note that:

*...[with] less reliance on facilitators to lead conversations, and more direct exchanges between teachers, the facilitator’s role has shifted from instructor to knowledge builder, entering the conversation at strategic points to clarify discussion or to introduce new knowledge.*

(Hartnell-Young & McGuinness, 2005, pp. 10–11)

## 2.3 ePortfolio communities of practice

Communities of practice have a particular role to play in areas of emerging practice. In certain situations, people might be interested in a specific idea, technology or activity but not yet fully understand or know 'how to do it'. Churchman (2005) argues that the value of CoPs is particularly pronounced in times of emergent practice or rapid change. Examples of ePortfolio communities of practice have been established in Europe (specifically the Netherlands and the UK) and also in the USA. In both Australia and New Zealand, ePortfolio communities are also emerging within educational institutions or where the use of ePortfolio tools is being explored. CoPs can support ePortfolio research and practice through a range of activities and roles, including:

- *Research projects to support innovation, development and evidence-based practice*
- *Pilot programs*
- *Special interest groups*
- *Single issue working groups (e.g. scalability, standards)*
- *Workshops*
- *Conferences, symposia and congresses for dissemination, sharing and networking*
- *Consultancies*
- *Provision of online portals for collaboration and resource sharing*
- *Provision of online resources*
- *Facilitation of dialogue to feed into broader forums (e.g. policy and standards development)*

(Hallam et al., 2008)

### 2.3.1 Europe

The European Institute for eLearning (EiFEL) was established in 2001 as an organisation that could focus on the policies and practices underpinning the 'knowledge economy' and 'learning society' concepts. EiFEL is a membership organisation that began as a tight-knit community but has since opened up to a broader membership base of both individuals and organisations, and embraces workshops, special interest groups, conferences and consultancy. The organisation has a specific role to play in supporting the initiatives introduced by the European Parliament, such as the Europass, professional qualifications and employment competencies (EiFEL, 2009).

Individual European countries have also produced CoPs around ePortfolio use, such as the Netherlands. The organisation SURF Foundation (SURF) evolved in response to government policy issues in the 1980s, with Dutch universities challenged to develop and introduce ideas associated with the use of information and communication technologies (ICT) in higher education. SURF NL Portfolio is a special interest group (SIG) within SURF, established in 2004, which aims to 'combine, share and develop further the knowledge in the field of digital portfolios in higher education' (SURF NL, 2008). Currently, the SURF NL Portfolio team coordinates research projects across the higher education sector to explore the potential for ePortfolios in learning and assessment and to support academics with scalability issues as they move out of the experimental phase of ePortfolio practice to face the challenges of implementation at the institutional level. International collaboration is also a key focus of the NL Portfolio activities. A team of six community members manages the CoP with funding for logistical support provided by SURF. A limited amount of funding is offered for a number of small projects that draw on the distributed enquiry process to resolve a range of questions associated with ePortfolio practice. Knowledge is shared via the NL Portfolio portal, publications, seminars and congresses.

### 2.3.2 United Kingdom

As with the Netherlands, ePortfolio activity in the UK was also initially stimulated by government policy, with the National Committee of Inquiry into Higher Education, chaired by Sir Ron Dearing (1997), recommending the development of 'Progress Files' that consisted of a formal academic transcript and the ability to record and reflect on personal development planning (PDP). The Centre for Recording Achievement (CRA) operates as an Associate Centre of the Higher Education Academy (HEA), with a specific focus on supporting higher education institutions and their communities with the implementation of Progress Files, personal development planning and ePortfolios (CRA, 2009).

Membership encompasses major higher education institutions, smaller organisations and individuals, providing a forum for dialogue about policy and practice in the area of ePortfolios. The organisation has close links to the Joint Information Systems Committee (JISC) and the Quality Assurance Agency (QAA).

An alternative community of practice model – the Scottish PDP Forum – has been established as a geographically based entity. The forum is jointly managed by HEA, QAA Scotland and CRA, with the aims of discussing areas of common interest, sharing effective practice, and identifying other forms of institutional level support (Higher Education Academy, 2008). The members are interested in both discipline-specific and multi-disciplinary research activities and see the Scottish PDP Forum as the opportunity to build links via individual members to other networks such as the National Action Research Network (NARN) (CRA, 2008) and the Inter/National Coalition for Electronic Portfolio Research (I/NCEPR) (2009), as well as to submit collaborative bids for funding or to develop shared resources (for example, toolkits and resources for students). The Midlands Eportfolio Group is an analogous example, supporting ePortfolios as part of eLearning initiatives in further, adult and community education. Similar ePortfolio CoPs in the UK are beginning to emerge, for example, ‘PDP for ePortfolios’ is a young CoP established for practitioners and lecturers involved in the higher education subject area dealing specifically with PDP.

The UK has further avenues of support for specific academic communities through their Centres for Excellence in Teaching and Learning (CETLs) and Subject Centres. Seventy-four CETLs were established in England in 2005 by the Higher Education Funding Council for England (HEFCE). CETLs seek to recognise and promote excellence in teaching, covering a wide range of disciplines and pedagogical research. One example is the Centre for the Advancement of Integrative Learning at the University of Nottingham, which includes an ePortfolio strand that focuses on ePortfolio developments and initiatives (University of Nottingham, 2008).

### 2.3.3 United States of America

The CRA also plays a role in the Inter/National Coalition for Electronic Portfolio Research (I/NCEPR) (2009). This agency was established in the United States in 2003 to promote research on ePortfolio practice at colleges and universities. The coalition was principally founded to engage institutions in collaborative research efforts using a cohort model. Each cohort is composed of about 10 higher education institutions that commit to a three-year research project. Cohorts I and II involved US institutions, but UK and European universities have been involved in Cohorts III and IV. Cohort V (2008–2011) was convened in August 2008.

I/NCEPR conveners facilitate a virtual community of practice through the Electronic Portfolio Action and Communication (EPAC) wiki and blog (EPAC, 2008). The EPAC CoP has been active since 2001 and membership is essentially focused on the use of ePortfolios in learning, teaching and assessment in education. The Electronic Portfolio Consortium, or ePortConsortium (2008), is another collaborative venture established by a group of universities in the USA; it focuses on the ePortfolio application environment and working towards appropriate definitions and standards to support and encourage interoperability and transportability between ePortfolio systems. There are three types of membership: conceptual members (individuals who are interested in the conceptual or technical issues of ePortfolios); invited corporate members (interested in the technical standards); and developing members, such as higher education institutions using the Epsilon ePortfolio software system. The consortium currently has members in 68 different countries, with around 870 corporate members and over 1100 conceptual members. There is a collaboration group site that provides the opportunity for members ‘to discuss and share know how, documents, case studies, and information about ePortfolio initiatives and projects within their institutions’ (ePortConsortium, 2008, para. 1).

In 2009 the Association of Authentic, Experiential and Evidence-Based Learning (AAEEBL) was established as a:

*... a global academic association working toward new designs in learning and assessment, increasing connections among the portfolio community, and building the new learning enterprise.*

(AAEEBL, 2009, para. 1)

The Board of AAEEBL has sought international representation, with one director representing the UK and one representing Australia. Although not specifically a CoP, the association has set up committees — smaller groups representing specific areas (K–12, research, standards, conferences) — that operate more organically and align with many of the key indicators of a CoP (T. Batson, personal communication, May 20, 2009).

### 2.3.4 Australia

Collaborative ePortfolio activities to date have been limited to a small number of largely university-based ePortfolio symposia, forums and workshops. RMIT University is undertaking a trial of an ePortfolio product during 2008 and 2009 and has instigated a community of practice across the institution for internal staff. Staff use a wiki that acts as a space for collaboration, the dissemination of ideas and research and professional development (Botterill, Allan, & Brooks, 2008). RMIT provides education within the higher education sector as well as a college of Technical and Further Education (TAFE) and the CoP brings together staff from both the teaching and professional support services (careers, learning and teaching and student support). The authors add that the CoP will focus on developing:

*... collaboration, connectivity, community, culture, capability, content and curriculum across the university, for both staff and students. It is also an important vehicle for developing interdisciplinary and inter-university collaborations.*

(Botterill et al., 2008, p. 74)

In addition, collaborative activities are being undertaken by the University of South Australia and RMIT, with a shared interest in the PebblePad ePortfolio platform. The key players have reported that the ePortfolio pilot projects at the two institutions have been championed by the Deputy Vice-Chancellors (Academic) with the belief that ‘a ground-up collaborative implementation’ (Faulkner & Allan, in press) would contribute to the potential to create a culture to support the embedding of ePortfolio practice, with a mechanism to share knowledge and experiences. A bi-annual forum organised by the two universities has further increased interest and added to the profile of the pilot projects. RMIT and the University of South Australia are both members of the Australian Technology Network (ATN) of universities, which has proved a further enabler for effective collaboration, with an established model of knowledge sharing. Staff at these universities have the opportunity to participate in community activities both within and across the universities to consider the discipline-specific issues, platform-specific factors and pedagogical ideas associated with ePortfolios.

The introduction and piloting of PebblePad in more than a dozen Australian universities has led to the emergence of several groups of users. The Australian Pebble Pad Users Group (APpUG) coordinates a CoP which, among other activities, hosts national workshops in the higher education environment for 15 universities trialling or using PebblePad. In conjunction with the AeP2 project, the Australian Library and Information Association (ALIA) is participating in a pilot activity (2009–2010) using PebblePad in a professional career development context (Randle, 2009). A group of Australian library and information students and practitioners has become part of a community that participates in developmental and evaluative activities, meeting regularly (in either virtually or face-to-face contexts) to share and discuss progress with their PebblePad webfolios.

In the context of vocational education and training, Education Network Australia (edna) has facilitated various CoPs around ePortfolios, in conjunction with education.au (edna, 2009). edna also supports ‘me.edu.au networking’, based on a networking site for educators. Members can create a profile of themselves and their educational interests to share and connect with others. The Australian Flexible Learning Framework has instigated a CoP in response to the eLearning strategies that seek to embed eLearning across the VET sector. The VET CoP takes a number of forms, including a website, blog and an annual face-to-face event.

The mission of the ALTC itself is to ‘enhance learning and teaching in Australian higher education’ (ALTC, 2008a, para. 1), with specific objectives that seek to develop ways to identify, develop, disseminate and embed good practice in learning and teaching, especially through national and international relationships. The ALTC Exchange has been developed as an online service that provides ‘learning and teaching resources and facilities to support professional communication and collaboration across the higher education sector’ (ALTC, 2008b, para. 1).

As such, it can support the identification, dissemination and embedding of good individual practice, as well as best institutional practice within the higher education sector, to 'connect people, interest groups and communities of practice' (ALTC, 2008c, para. 1).

### 2.3.5 *New Zealand*

The profile of ePortfolios in New Zealand education has continued to increase with the development of the open source ePortfolio system 'Mahara'. Ako Aotearoa, New Zealand's National Centre for Tertiary Teaching Excellence, works across the tertiary education sector (university, vocational and community) to support and enhance teaching and learning. The Centre also accommodates various CoPs with the provision of an online space to share resources. 'ePortfolios in New Zealand' was established in mid 2009 'for anyone who's interested in ePortfolios and associated topics such as reflective learning, lifelong learning'. The community is managed by Ako Aotearoa, but members prescribe how the community should operate (Ako Aotearoa, 2009, para. 1). An example of an institutional CoP is the University of Canterbury, which has developed an internal CoP as part of a pilot project around ePortfolio use in the university.

## 2.4 Summary

The review of the literature has provided a summary of the integral aspects of communities of practice – encompassing the characteristics, lifecycles, success factors and the challenges faced – in order to emphasise how such communities can be successfully sustained. The technical and social architecture of CoPs has been reviewed within the current context of many CoPs, with a particular focus on communities that support ePortfolio practice. A number of existing ePortfolio CoPs, both national and international, have also been introduced. The project's research activities seek to set the participants' understandings and experiences against the theoretical concepts of communities, with the goal of providing sound direction for the future.