



Revisualising Innovative Online Learning Spaces in an Early Childhood Teacher Education Programme

Lesley Pohio, University of Auckland
Maryann Lee, University of Auckland

Abstract

This paper presents a descriptive analysis of the challenges and rewards of revisualising and designing an innovative online space for a first-year Bachelor of Education Early Childhood Education course, Visual Arts in the Early Years. The perspectives offered are drawn from a design project involving collaboration between the course lecturer and learning designer. Central to the creation of this online learning space were the underpinning values and philosophy of the early childhood curriculum Te Whāriki (Ministry of Education, 1996). With this as our guide, we set out to create a rich visual online learning experience that reflected the creative learning environments in early childhood education. The challenge was to transform a dynamic and fluid face-to-face teaching and learning context into an online mode. This engendered considerable rethinking not only of the content, but also the conceptual framework that informs best practice in e-learning. That is, the educational experience supported a conceptual framework that promoted social, cognitive and teaching presence (Garrison & Anderson, 2003). In order to capture the specific qualities of the course in the proposed design, it was essential to understand the underlying principles and values that informed the course. As Edwards, Gandini, and Forman (1998) assert, “the space has to be a sort of aquarium that mirrors the ideas, values, attitudes, and cultures of the people who live within it” (p. 177). It is argued that unless these beliefs are inherent in the design, the online learning environment that supports the depth of engagement and critical reflection by the learner is compromised.

Keywords: visual arts; online learning; collaboration; flexible learning; early childhood education

Introduction

The rapid growth of e-learning technologies available to tertiary institutions, together with the widespread use of the internet, has the potential to transform all forms of education and learning (Garrison & Anderson, 2003). The opportunity for early childhood student teachers to study online and at a distance has become increasingly available through many teacher education sites in New Zealand. Online study options are considered to provide greater flexibility for students, enabling them to work at their own pace and offering an alternative to face-to-face learning (Du Plessis, Walker, & Naughton, 2008).

Teaching at a distance through an online mode presents potential challenges for teacher educators. Despite having a sound pedagogical background in teacher education, many struggle

to design effective online learning environments for their students. Factors such as a lack of adequate time to plan courses, limited technical knowledge of the online learning technologies, and few opportunities for professional development are common contributors to poor design (Tickner & Gallagher, 2010; Shephard, 2004). However, one of the most significant challenges for teaching staff is the required shift from the way they teach in a face-to-face environment to effective teaching in an online learning environment (Pallof & Pratt, 2007). Too often, face-to-face instruction is simply replicated online, whereby the learning focus is on content and knowledge acquisition, rather than interaction and social engagement of meaning (Jonassen, 2007). The online environment then becomes a depot for lecturer resources and presentations, with little scaffolding to encourage meaningful student engagement, either with the materials or each other.

Bearing these challenges in mind, it was essential for the course lecturer to access the expertise of the learning designer for support with the design process. The multifaceted layers of the course materials demanded the skills of a learning designer to help synchronise all the components and to reflect the holistic nature of the course. Collaborating in this way created valuable opportunities for critical engagement and reflective analysis of the course. The goal was to create a space that emulated the rich everyday learning experiences found within a creative early childhood education context. Garrison and Anderson (2003) support the notion that “a quality educational experience is the dynamic integration of content and context created and facilitated by a discipline expert and pedagogically competent teacher” (p. 4).

This paper first outlines a pedagogical framework that underpins the Visual Arts course (Ministry of Education, 1996) and supports e-learning best practice (Garrison & Anderson, 2003). It then discusses the design approach by examining four key design concepts that draw on specific examples of the course.

Pedagogical framework

A vital step before embarking on the design process was to ensure that there was a shared understanding of the pedagogical framework between our roles as course lecturer and learning designer. The principles that underlie the early childhood curriculum, *Te Whāriki* (Ministry of Education, 1996), and visual arts education best practice (McArdle, 2003) formed an important pedagogical guide for shaping the course design.

There are four foundation principles within *Te Whāriki* (Ministry of Education, 1996) that provide valuable reference points. *Empowerment—Whakamana* advocates early childhood education services that enable young children to develop a sense of self-worth and identity. Opportunities are provided for children to actively participate in a supportive environment where they are encouraged to contribute their own experiences and ideas that are valued and respected. *Holistic Development—Kotahitanga* provides a model of learning that brings together all aspects of the child and their experiences (physical surroundings, emotional context, and relationships with others), rather than separating learning as the acquisition of discrete skills. Children learn in contexts that have meaning and which acknowledge what children bring to them, reflecting the holistic way children learn and grow. *Family and Community—Whānau Tangata* emphasises the importance of the integral role that family and community play in early childhood education and in young children’s learning. Understanding and valuing the contributions of different communities enhances the well-being of children. *Relationships—Ngā hononga* develops responsive and reciprocal relationships with people, places, and things that are paramount in early childhood education. Creating learning environments where children can make meaning of their experiences through their engagement with each other and open-ended materials helps to increase the complexity of their learning.

In relation to visual arts education best practice (Pelo, 2007; Robertson, 2000), the ways in which visual art experiences are presented in early childhood education are underpinned by these same principles. The visual arts are seen as an integral way for children to communicate and express ideas, making meaning of their experiences and the world around them through graphic and symbolic languages. It is considered more meaningful to interweave visual arts experiences throughout the curriculum than simply present separate disjointed activities as traditional perspectives on children's art-making suggests (Kolbe 2005). McArdle (2003) proposes that "the teaching of [visual] art should also be viewed in relation to our ways of seeing the teacher and the meaning of pedagogy" (p. 38).

The e-learning conceptual framework identified by Garrison and Anderson (2003) resonates strongly with the principles identified in *Te Whāriki* (Ministry of Education, 1996) and reflected within visual arts education practices. This framework contends that the online environment needs to allow for social, cognitive and teaching presence, and these overlap to provide an educational experience. Key attributes of the e-learning educational experience include developing relationships and connecting to other learners, the construction of new knowledge and meaning, the design of the course environment, and the facilitation of engagement (Palloff & Pratt, 2007).

Design approach

The process of analysing and reflecting on the pedagogical framework provided us with a strong premise from which to make design decisions. With the learning outcomes, course assessment, and required readings already determined, the design approach specifically relates to the creation and graphical layout of the course materials and online learning activities. It was not our intention to simply transfer our face-to-face course materials online, or to replicate existing online courses by following a generic design template. Instead, the design needed to reflect the specific qualities of the course and encompass the values and beliefs that underpinned *Visual Arts in the Early Years*.

The importance of a well-designed web interface is often overlooked when creating online course materials in tertiary institutions. Consistent navigation, clear structure, and easy access to content are paramount for any course website. Lock (2007) highlights the significance of good technical design, and the effect it can have within online environments in developing communities. He states that "interface needs to be intuitive to the user, must complement the learning goals, and put learning at the forefront . . . the interaction design of the online community needs to support intuitive and user-friendly orientation, navigation, usability, and functionality" (p. 138). This concept is further supported by Sweller's (1994) cognitive load theory, which argues for the importance of presenting content in an organised and structured way that enables learners to easily access the course content rather than grappling with the layout. With this in mind, we engaged a graphic designer and technical administrator to ensure the design layout of our web pages was cohesive in form, had a clear hierarchy to scaffold the learner, and allowed spaces for different types of media content. By working closely with specialists, we aimed to ensure that our learning intentions were not compromised by the limitations of the technology.

In an early childhood context, the notion that the environment plays an active and critical role in influencing and shaping teaching and learning is also familiar. *Te Whāriki* describes how "children in early childhood education settings should experience an environment where they discover and develop different ways to be creative and expressive" (Ministry of Education, 1996, p. 80). Similarly, teachers are encouraged to critique their environments to ascertain the theories of teaching and learning they may be mirroring and how these affect young children's learning experiences (Curtis & Carter, 2003; Pairman & Terreni, 2001; Pohio, 2006). It was also important for the course lecturer and learning designer to carefully assess their online

environment and ascertain whether it restricted or opened up possibilities for student teachers' active exploration.

The following section outlines four key concepts that emerged from the design approach. These are: opportunities for collaboration and reflection; multiple pathways to learning; strong visual provocation; and a holistic and integrated approach.

1. Opportunities for collaboration and reflection

A fundamental component in early childhood education is designing environments that foster connections and a sense of belonging and community. (Ministry of Education, 1996). Brooks (2003) proposes that when “children are exposed to other ideas through the interactions with others in their community they are able to grow into the intellectual life of those around them” (p. 3). This view is no different when it comes to creating distance online learning environments for tertiary education (New Zealand Council for Educational Research, 2004). At the heart of every online course is the creation of a learning community that provides opportunities for collaboration and reflection through members of that community engaging with one another. Palloff and Pratt (2007) describe the key factors in a learning community space as: “mutual exploration of ideas, a safe place to reflect on and develop those ideas and a collaborative, supportive approach to academic work” (p. 6). Therefore, presenting students with a multitude of spaces to engage with each other and to develop a sense of community is a significant feature in our course design. Incorporating components such as discussion forums, online galleries, and online portfolios are some of the ways that can contribute towards a sense of community being engendered, as the following examples suggest.

Discussion forums

There were five facilitated online discussions throughout the course—each one was situated within a weekly course theme alongside course readings, resources, and associated activities. This guided environment played a role in provoking thoughtful and reflective participation and discussion, particularly with the inclusion of visual imagery. For example, in one online discussion students photographed and shared a sculpture that they had made out of natural materials. Reflecting on their readings and their own sculpture explorations, they then discussed the teaching and learning opportunities for young children in this experience. Two learning intentions were served through this. First, the students themselves explored the properties of natural materials and their aesthetic qualities. Second, it helped them to recognise the rich possibilities for teaching and learning the natural environment presents for young children's learning. Sharing their explorations in a visual and written format contributed to fostering a deeper connection with one another, and developing a sense of identity, both individually and collectively.

Online gallery

The online gallery exhibited a variety of paintings created by well-known artists from New Zealand and abroad. Students were asked to examine the paintings, identify different elements within the artwork, and describe the possible ideas and feelings that they evoked. Understanding basic elements (line, shape, colour, texture, space) and principles of the visual arts provides a framework of practice for teachers when engaging with children (McArdle, 2003). Exposing students to different artworks provided opportunities to interpret and reflect on new artwork together.

Online portfolio

Online portfolios provided an optional space for students to reflect on their visual art learning journey, and were also an avenue for receiving timely feedback from one another and showing their accomplishments. Barrett (2011) argues that e-portfolios should provide both *choice* and *voice*, so that students feel intrinsically motivated to engage, which in turn leads to an

environment that promotes good participation. Including students' visual imagery presented within their own portfolio can provide another rich dimension to the course, by allowing them to express their ideas through a range of different visual mediums. In an early childhood context children are also able to make their thinking visible through the visual arts. (Robertson 2000) This can be demonstrated by creating galleries of their artwork, having individual portfolios, and sharing artwork with families and communities.

2. Multiple pathways to learning

The 'hundred languages of children' is a metaphor used to describe the multitude of ways or 'languages' children (and adults) use to communicate and connect (Edwards et al., 1998, p. 3). The use of graphic and symbolic languages such as paint, wire or clay provides children with multiple invitations to construct, express, and reflect on their thoughts and feelings, and represent ideas in different ways. *Te Whāriki* (Ministry of Education, 1996) suggests that: "[t]he environment should offer a wide variety of possibilities for exploring, planning, reasoning, and learning, with space arranged to encourage active exploration, providing both new challenges and familiar settings so that children develop confidence" (p. 83).

By providing multiple learning pathways for students, we encouraged them to extend their learning outside the digital 'walls' of the course. These learning pathways were created in defined sections of the content, and displayed links to additional resources and literature, such as YouTube clips and websites. Each section prompts students to further explore in their area of interest via the internet. Opportunities for students to access multiple domains of knowledge via the internet are extensive, and are becoming more widely acknowledged in the academic arena. As Siemens (2005) states, "[i]nstead of presenting content/information/knowledge in a linear sequential manner, learners can be provided with a rich array of tools and information sources to use in creating their own learning pathways" (p. 26). With this in mind, we were conscious of providing students with a variety of learning experiences and possibilities, both within the course and through the internet.

Feature artist

An example of a multiple pathway was the profiling of a new feature artist each week, whereby students were encouraged to search the internet to learn more about the artist's work. This allowed the students to extend their knowledge about different artists and the inspirations behind their work, building a repertoire of possibilities for use with children in the future. Another facet of this exercise was to encourage students to explore their local community to take note of the work of artists that surround them. Initiating connections with local artists can lead to collaborations being fostered between the artist and the early childhood centre, thus enriching young children's understanding and appreciation of local artists' work (Loughran, 2001).

3. Strong visual provocation

Visual representation is strong in early childhood settings, whether it is through play equipment, children's artwork, or natural installations. These elements create a visually rich and stimulating environment (Curtis & Carter, 2003). When a new environment is encountered, children often scan the space to try to understand the meanings and intentions contained within the particular place. The environment gives cues or signals about what is possible or expected. The way in which an environment is constructed reflects the values and beliefs of the people who inhabit it (Edwards et al., 1998). The visual imagery displayed and how this is placed can promote certain messages about the way in which children can interact within the environment. As we approached the design, we were aware of the language or messages being promoted through visual imagery. The notion that visual imagery can be 'read' is gaining traction, although oral

and written modes of communication still retain dominance. However, in this increasingly visual world the effect of visual images cannot continue to be ignored. McArdle (2003) highlights the need to be visually literate to interpret and read these images.

Despite research, particularly in cognitive theory, that supports the integration of text and images to enhance learning (Paivio, 1990; Sweller, 1994), when it comes to creating online course materials within academic institutions the purposeful use of imagery is often overlooked. The emphasis is predominantly placed on the written word, and text-heavy web pages are a familiar sight. If images are included, they are typically used for decoration rather than intentional learning purposes. We were therefore mindful to select images that aligned with the course values, and these were used deliberately and purposefully for intended learning outcomes.

Visual provocation were also used to deepen the learning experience. These provocations incorporated children's artwork, photographs of artwork in the community, and images describing visual art techniques. One aspect included a visual image accompanied by a relevant quote. When placed together, these captured the essence of the theme for each week. For example, we presented an image of two young children drawing with sticks on the beach with a quote: "to a young child, the world is full of materials to touch, discover, and explore. To find, collect, sort, and use materials is to embark on a special kind of adventure" (Weisman Topal & Gandini, 1999, p. xii). The juxtaposition of the text and visual imagery conveyed a stronger message than if they had been placed separately (Paivio 1990).

4. Holistic and integrated approach

Weaving students' prior learning experiences and their new understanding together throughout course work reflected the principle of *Holistic Development—Kotahitanga* (Ministry of Education, 1996). Through students' journeys in creating their own artwork, disseminating relevant readings, and engaging in discussion with each other, they are encouraged to consider their own identity, values, and beliefs in relation to others around them. It is critical for students to reflect on who they are and the experiences and knowledge they bring to the course as they make new meaning, articulate ideas about the role of the teacher, and reconsider the image of the child. Loughran (2006) states: "With a recognition that beliefs and knowledge are so closely tied to one another, students of teaching need opportunities through which they might begin to purposefully confront, define, redefine and realign their practices and beliefs" (p. 116). A holistic approach acknowledges and draws upon each student's prior learning and life experiences in order for them to understand how these experiences shape teaching.

An integrated approach to course design was achieved by interlinking all the course materials—a practical task page, video clips, online activities, and readings and resources—from the weekly topic page. By providing one access point, students were able to approach their topic in an integrated way, rather than as separate components. In particular, we linked the practical visual art tasks with the early childhood visual art theoretical content to show the connection between the two. This allowed students to assimilate the pedagogical meaning behind practical visual arts tasks, rather than simply focusing on the technical 'how-to' skills. McArdle (2003) suggests that: "Without some strong philosophical underpinnings, our visual art programs could simply be a series of ad hoc 'activities', or the slavish following of a formula" (p. 36).

Conclusion

This paper presents our perspectives as the course lecturer and the learning designer, and the complexities we each confronted throughout the design process. The two different lenses created a catalyst to constantly scrutinise the course materials. Key to the design was the collaborative

manner in which the expertise of educational design, teacher education, and visual arts practices in early childhood education was drawn upon. It was essential that there was commonality in understanding about the direction and nature of the course. This entailed constant dialogue and reflection to ensure that the design framework mirrored the pedagogical principles underlying the course.

The paper seeks to foreground the importance of four key concepts that were critical to the development of this project. In summary, these were: opportunities for collaboration and reflection, which enabled students to not only share their perspectives and visual art experiences, but also critically engage with others through different avenues; multiple learning pathways that encouraged students to access a wide range of rich information from a variety of different domains; visual provocations, which emphasised the use of imagery in conjunction with the written text, to enhance learning and to capture the essence of the course; and a holistic and integrated approach that embraced and acknowledged students' prior knowledge and lived experience.

Other considerations were also significant in the design process, but have not been fully addressed in this paper. In particular, the bicultural nature of *Te Whāriki* (Ministry of Education, 1996), and how it can be reflected in an online learning environment, deserves further investigation and discussion. This area of distance education has undergone insufficient exploration. We also recognise that the course design is still evolving as we continue to reflect, re-evaluate, and further develop course materials in response to students' feedback. Several key changes have been identified to strengthen the course. One is the addition of a private online journal to allow students to engage individually with the lecturer and receive detailed feedback about their developing ideas. Another is to embed video clips within the course materials from a recently developed Visual Arts DVD, *Visual Arts Inspirations: People, Places, Things* (University of Auckland, 2011). This will enhance the content by providing greater links to authentic visual arts practices in early childhood contexts. The final change is the provision of better technical help materials to support students, with the optimisation and uploading of their personal images to Moodle.

We also plan to undertake a research project that captures student teachers' online engagement, and their feedback on the design of the course and how this affects their learning. The effectiveness of teachers' online presence will also be examined.

As Garrison and Anderson (2003) note, rather than simply addressing the course content, it is important that "the purpose of innovation must be the enhancement of the quality of the learning environments and learning outcomes" (p. 106). Through the recognition of a well-considered pedagogical framework and design process, we can begin to create an innovative online learning experience that reflects the rich learning environments in early childhood education.

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Biographical notes

Lesley Pohio

l.pohio@auckland.ac.nz

Lesley Pohio is a senior tutor in the Faculty of Education, University of Auckland. She teaches on the Graduate Diploma and Bachelor of Teaching (ECE) programmes, predominantly in the area of visual arts education through both face-to-face and distance learning. Her research interests include the visual arts and information and communication technologies in early childhood education.

Maryann Lee

maryann.lee@auckland.ac.nz

Maryann Lee is a learning designer in the Faculty of Education, University of Auckland. Her role is to provide support to lecturers in the area of online learning. Maryann's interests include designing flexible learning materials and the use of e-portfolios.

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