Reflections on working in a collective space to design learning territories

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The paper explores how a learning environment to promote constructive alignment between an early childhood teacher education subject’s learning outcomes, content and assessment was achieved through a partnership in the curriculum design space. The design of systems for learning requires diverse skills and knowledge, which are only rarely held by a single individual. The cooperative partnership between the subject coordinator, a lecturer in higher education and educational technology consultants, to design the subject’s learning territory and resources is described. Our experience and the places for learning created for students provide useful insights into systemic design processes and the benefits of design partnerships for others contemplating entering into curriculum design to shift the focus to learning places.

Keywords: collaborative curriculum design, learning spaces, ePortfolios

Introduction

This paper explored how constructive alignment (Biggs, 1999) between a teacher education subject’s learning outcomes, content and assessment was achieved through a partnership in design to build a place for learning. The design partnership was intended to develop an integrated, flexible learning environment incorporating electronic personal learning spaces through which pre-service education students were able to follow their own lines of inquiry, to build upon the understandings they brought and the interests they had in this subject to reposition them as partners in learning and co-constructors of knowledge. The project arose from the intersection of changing demands from the Early Childhood Education (ECE) sector, reflection on past teaching practice and the opportunity provided by the need to develop a new subject as part of a larger curriculum renewal initiative. Place was a consistent underlying theme throughout the work: the place of collegial conversation, the place of multiple perspectives and bodies of expertise in the curriculum design process, the place of educational information and communication technology in the learning spaces and places.
Mounting evidence from well-respected disciplines like neuroscience and economics have influenced the Council of Australian Governments to introduce reforms to early childhood education and care. Amongst some significant changes which came into effect on 1st January 2012, were changes to the minimum qualifications of the educators who work in the sector. These requirements will create a significant, immediate demand for qualified early childhood teachers, placing increased pressure on teacher education (Productivity Commission, 2011). However, innovations in the delivery of early childhood teacher education and an increased use of technological solutions in facilitating learning are making early childhood studies more attractive to a widening pool of graduates (Productivity Commission, 2011).

We began from the position that pre-service teacher education courses must support graduating early childhood teachers to traverse the ever-changing landscape of the children’s services sector, offering more than the reproducing of current knowledge and practices. As Manning-Morton (2006) argues, affective teaching starts with early childhood teachers who are able to apply their personal awareness to their theoretical knowledge. The development of self-knowledge can be enhanced within an educational context that is process as well as content focused, a model of relationship-based learning which reflects positive early years practice (p. 50).

The educational context needs to provide places and spaces for students to explore and develop their self-knowledge and educational relationships.

The next section describes the changing conceptual context around curriculum design that was adopted to build a learning territory in which students could explore, develop their personal understanding of early childhood pedagogy and the constructs of literacy and numeracy, and reflect on their own engagement and learning. The later sections describe the roles of and relationships between the partners contributing to the design, development and implementation of the subject; the broad topography of the learning territory created for students; and in the final section, some insights into systemic curriculum design processes and the benefits of collaboration in the design space for those interested in developing places for learning.

**Shifting curriculum design from teaching to learning**

Since the second half of the 1990s there has been a seismic shift in thinking about curriculum, teaching and learning in universities and colleges calling for a shift from focusing on teaching to focusing on learning (Barr & Tagg, 1995; Biggs, 1996, 1999; Banathy, 1999; Bowden & Marton, 1998). These broad shifts in perspective and practice need to be built around specific changes in curriculum design and teaching practice that develop students’ capabilities for engaging in effective action in situations in the future. … effective actions spring from effective ways of seeing (Bowden & Marton 1998, 159).

We, following Barnett, Parry & Coate (2001) and Manning-Morton (2006), argue that effective ways of seeing and acting require personal awareness of the self. Development of such personal awareness should be an integral part of the learning experiences of students. Learning spaces should be places where students can explore and reflect.
John Biggs (1996, 1999) laid out the principle of ‘constructive alignment’ of assessment, content and learning interactions with intended learning outcomes, as a basis for assisting academics as teachers to do things differently and focus on systemic curriculum design and implementation for student learning. He advocated careful thinking about the alignment of the key elements of the learning and teaching system to create a learning environment which supports and encourages students to construct meaning and achieve higher order learning outcomes. Biggs’ ideas point to the critical importance of carefully considered design by academics of the teaching and learning system as a precursor to engagement with students. Similarly Barr and Tagg (1995) assert that the learning paradigm conceives of faculty [academic staff] as primarily the designers of learning environments; they study and apply best methods for producing learning and student success.

Banathy (1999) takes an explicitly systemic approach arguing for a clear focus on the design of universities as systems for learning. The possible design that he presents identifies five interdependent systems in the ‘learning complex’. (Two systems in Banathy’s proposed design of the learning complex are elements of a wider institutional context for the learning system and are not considered further here.)

![Figure 1: The heart of the learning complex](image-url)

The key entity in centre of the learning complex is the ‘Learning System’ (labelled System 1 in figure 1). The key element in the ‘learning system’ is the student as learner. The purpose of the learning system is to enable the learner to acquire knowledge and understanding, master functional competence, develop desired attitudes, values and sensitivities; and through all these to make contribution (sic) to the learner’s development of his/her potential” (Banathy 1999, 141).
The functions within this system include designing the particular learning program for each learner, engaging with learning resources, mastering learning tasks and engaging in assessment. The ‘learning system’ is focused on what the student does: it is the curriculum as experienced by the learner. This central system interacts continuously with the ‘Learning territories and resources system’ (System 2) and the ‘Learning resources information, planning and arrangement system’ (System 3). The function of system 2 is to organise learning resources, opportunities and situations, to provide ready access for learners to those learning spaces, and guide learners in their engagement in those spaces. The functions in System 3 encompass the role of the academic-as-teaching in designing and planning the learning program with students and guiding and monitoring students’ progress through the learning journey. The careful design and thoughtful operation of these systems creates a place for learning-focused education in which

there is an ongoing conversation between the learner and the faculty [academic staff] in order to ensure that the learner masters the learning tasks (134).

The shift in focus to design for learning has been paralleled by the promotion of new educational technologies as means to support and promote learning. Twigg (2011), Boud and Prosser (2002) and others (Vaughan 2007; Garrison 2009; Harris, Mishra and Koehler 2009, Oblinger 2012) all emphasise the importance of integrating information technology into good course design to increase the probability that staff and students, in particular, will benefit from its use in the learning space.

One recent area of exploration in the integration of information technology into course design is the use of ePortfolios. The idea of an ePortfolio as both product and process (Barker, 2006) is an important concept as

it is the process by which these tools are used and combined that effectively defines the ePortfolio experience and captures its potential (Hallam et al., 2008, p. 3).

As process, the ePortfolio functions as a personal learning space (PLS). In an institutional learning space the teacher gives students access to subject information and learning tasks. In a PLS the student is the owner of the learning environment. In this case, the PLS is both within and independent of the institutional learning space with the linkage between the two created by an electronic gateway (see Figure 2).
Using the PLS to build an ePortfolio can facilitate on-going reflection and reflective practice, support goal setting, validate informal learning opportunities, shift control from instructor to student, support instructor planning and also support learner organisation (Bratengeyer, 2008).

**Designing a place of true ‘constructive alignment’**

Effective integration of the elements in the learning space requires multiple knowledge and skill sets - relating to the discipline, curriculum design and educational technologies - that are unlikely to be found in any one individual, hence the need for partnerships between staff in the design process. The following sections of this paper describe and reflect on a curriculum design project recasting one subject in one course to shift it more fully into the learning paradigm. The integration and balancing of the curriculum domain of ‘self’ with the knowledge domain (Barnett, Parry & Coate, 2001) was a key aim of the project. A second key aim was to reduce the conceptual and practical distance between learning and assessment – to align them as closely as possible in the student experience of the curriculum and to mark out assessment activities as places for learning. The main mechanism to enable integration and alignment was the use of PebblePad – a software platform providing electronic personal learning spaces from which students could build an ePortfolio - as an integral part of the learning territory which was created for students to explore. In the subject, the PebblePad PLS offered a way for learners to direct and control their own learning, to effectively navigate their way through a much-closer nexus between the subject’s content, outcomes and assessment.

While Banathy (1999) provides a conceptual design of the learning complex and the systems within it, his writings do not provide any specific guidance on who should design the systems or how they should be designed. Nevertheless, a careful reading of his work makes clear that the systems design process cannot be seen as simply a technical task but rather as one also drawing on the philosophical commitments and self-understanding of the designers, command of the discipline and educational theory and practical expertise in curriculum design and learning technologies. It would be rare to find this full array of capabilities in one individual.
By implication the design process needs to be a cooperative activity involving and engaging multiple participants to be able to achieve its objectives. The design process in our case was a partnership involving the subject coordinator (Jess), a lecturer in Higher Education (Don) with substantial experience in curriculum design and development, and an in educational technology applications (Chris). Jess brought expertise in early childhood education and enthusiasm for re-crafting the experience of her pre-service students. Don brought extensive experience of curriculum design theory and practice. Chris brought considerable experience of educational technologies and willingness and enthusiasm to explore the integration of PebblePad as a personal learning space, into the learning terrain for staff and students in the subject.

The approach underpinning the design process evolved and operated predominantly in a conversational space. A key place in the process was the coffee shop. Another was the thinking space created through Jess’s involvement in various academic development workshops.

As part of a major curriculum renewal project across the University, Jess had the opportunity to design a new subject for students in the Early Childhood education program. But she felt ‘stuck’ with how to realign her subject with her philosophy of education to create an experience that would mirror students’ role in the early childhood education sector. As Don was partially responsible for this disquiet, having raised issues around design in an earlier academic development program, Jess organised an initial conversation with him about her teaching and, more specifically, how “to strengthen my assessment tasks/writing” and “better model the emergent approach to teaching that we advocate in Early Childhood Education” (Email correspondence 27/6/11).

In the initial meeting (over coffee), Jess ‘thought out loud’ working through her ideas to exploit the opportunity that had been presented for her to design a better more authentic, more aligned learning experience for students. Don listened. She, clearly, had taken on the design concepts that had been discussed in courses and workshops and had really good ideas about ways to closely align student learning and assessment with each other and to enact the educational theory and practice advocated to students in the Early Childhood Education course. Jess seemed to be seeking affirmation for her ideas, legitimisation of her plans and permission to try something new in her practice. Jess was to say later “I just needed someone to say it was OK”. Don was able to position her intuitive thinking in context in relation to educational and curriculum theory and to provide the ‘permission’ that she seemed to seek to move her ideas into action. Jess has also been involved in several meetings, workshops and conversations around the potential use of personal learning spaces in the curriculum. Reflecting on those conversations later she said she ‘started to get a buzz and a sense of clarity that only writing down your “mess of thoughts” seemed to give; I knew this learning resource or PLS could offer a lot to students’ learning.’

Through a series of conversations with Chris and other technical experts, she was able to gain confirmation that the technology would provide a place where students could engage in educational experiences that they might otherwise not be able to experience, and practical guidance on the design of particular elements of the learning space.

**The curriculum design outcome: a constructively aligned learning system**
Using Freebody and Luke’s (1990) four resources model as a rough framework for the subject’s content, three key factors shaped the learning interactions (student-led, based on their interests in literacy and numeracy):

- **Content** – Broadly, students wanted to know ‘how to teach’ this younger age-range and so the design offered opportunities for them to observe young children’s learning and development in each resource or module area before exploring possible approaches to planning and teaching which stemmed from their observations.

- **Assessment** – Readings were done after each workshop to ensure that students could follow their own learning interests in the subject. Reflections on these, along with artefacts from their engagement with the subject’s content, made up the basis of the assessment.

- **Outcomes** – the marking criteria and focus of the assessment work in this subject was specifically designed to support both the students’ and to gauge their progress towards the four subject outcomes over the duration of the subject. Together, it gave us a sense of ‘where-to-next’ in shaping the workshops and delving further into key discourse in their emerging areas of interest in the subject.

Specifically, students were asked to collect and collate pieces of evidence which demonstrated their capacity to meet the subject’s learning outcomes. A “profile” asset was set up for students to use to attach their evidence to one or more of the four learning outcomes. So like a virtual wardrobe, the “profile” provided the students with a structured place in which to monitor their progress. Twelve marking criteria (three per learning outcome) acted like coat-hangers for students, offering them a way to make decisions about what type of outfit (evidence) they might hang within it and how they might order these to best showcase their capabilities in the subject. Thus, the profile asset gave the students far more control over their own learning than many had previously experienced at university. It enabled them to individualise their work in ways which showed how they were able to draw upon and make connections with their previous and on-going learning in other subjects and in their own personal and professional lives.

The subject’s intended learning outcomes marked the destination for each student’s learning journey. The curriculum was designed to assist each student to plan their own individualised, flexible itinerary, which aligned their learning activities and their engagement with content and the assessment activities. Rather than an end of subject experience, assessment was integrated into the journey and deliberately and carefully aligned with other elements of the learning system and the subject learning outcomes. The eportfolio acted as their travel diary, recording evidence of each student’s journey towards the learning outcomes. Student success in this subject was high, and their Student Evaluation of Teaching (SET) feedback suggested that their emerging sense of engagement and professional autonomy drove them to delve more deeply and meaningfully into the lines of inquiry they wished to pursue. The curriculum design, and the students’ experiences, enacted Biggs’ (1996, 1999) idea of constructive alignment of assessment, content and learning experiences towards helping students to construct knowledge and understanding.

**Reflections on our work in a collective design space**

While our engagement with the design process ebbed and flowed, the combination of contributions helped ensure the success of the design. Jess and Don together conceptualised
and legitimised the concept plan for the curriculum as a system for learning but particularly the broad ‘learning resources information, planning and arrangement system’ (System 3 in figure 1). Jess and Chris together developed the conceptual and detailed designs for the ‘Learning territories and resources system’ (System 2) and the learning system (System 1). Jess played the key role alongside the students in turning the plans into their lived learning experiences. The systemic perspective provided by Banathy’s (1999) concept of the learning complex of interconnected systems for learning helped to maintain our focus on integrating all of the elements of the curriculum, including the educational technology, into a place for learning.

All of the advocates of the shift to a learning paradigm cited earlier in this paper recognise that such a paradigmatic shift does not happen quickly or easily. Barr and Tagg (1995) recognised that the transition would require modification and experimentation towards a new vision and that it would take decades to work out many of the implications of the shift to a learning paradigm. The purpose of the project described here was to attempt to shift one subject in one course into the learning paradigm through cooperative design focused on creating places for learning. It seems, from the anecdotal responses of students, to have worked to create effective learning places and spaces for the students.

We agree with Prideaux (2003) that the fundamental purpose of curriculum development is to ensure that students receive integrated, coherent learning experiences that contribute towards their personal, academic and professional learning and development. Houston (2004) argues that seeing a curriculum as a bridge to learning is a useful concept to bring to the design process: a curriculum, like a bridge, should ease the journey to learning for students, should have structural integrity and should fit its environment. A curriculum like a bridge has multiple states: it is designed, constructed, and experienced by students as learners. A systemic perspective on curriculum design for learning (Banathy 1999; Houston 2004) helps to ensure that the elements and states of the curriculum align as closely as possible to ensure the best possible journey to learning for students. Our experience suggests that, as with a bridge, it is unlikely that any one individual will have the full range of competencies and capabilities to design and construct other than the most rudimentary curriculum. For us to create an effective bridge and a usable place for learning, curriculum design and implementation needs to be a cooperative process drawing in multiple perspectives and sources of expertise.

Our experience with the scholarly process of curriculum design thus far suggests that systemic integration of technology into learning places and spaces does enhance the experience and learning for students. But integration is the key, rather than just adding on an electronic technology simply because it is available. Further, effective integration requires a range of expertise, effective communication to bring together that expertise and a clear vision of the role that the technology is intended to play in helping students to achieve learning outcomes. We were able to develop constructive alignment between the partners in the design process to put educational technology to planned educational use that enhanced student learning in the context of the course philosophy. The technology provided a means to help students to bring the personal into the professional through reflection on their learning experiences and to influence their individual paths through the learning territory of the subject.
The project has re-enforced for us the place of collaboration to bring a wide range of expertise and experience to curriculum design and development to create places for student learning. [As an aside, it has also re-enforced the importance of the coffee shop and other social spaces as places for professional learning amongst colleagues.]

**References**


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