Aesthetic pedagogy and digital resource design:

Some considerations

KYLIE READMAN, QUEENSLAND UNIVERSITY OF TECHNOLOGY
JOSEPHINE WISE, QUEENSLAND UNIVERSITY OF TECHNOLOGY

This article discusses pedagogical imperatives for arts educators in relation to Information Communication Technologies (ICTs). It asks, what pedagogical expertise do arts educators bring to the development of engaging and innovative digital learning resources? As first time instructional designers creating an interactive CD-Rom in an arts context, a number of discoveries were made regarding the place of pedagogical knowledge, specifically in relation to the aesthetic framework, visceral engagement and multiliteracies. The design of the CD-Rom “Physical Theatre, Performance and Pre-text” developed for Drama Queensland in 2004 highlighted the benefits of engaging aesthetic pedagogy in design. In this article, we argue that when teachers and students are central to the design process the benefits of digital learning resources in educational arts contexts can be more fully realised. Arts educators are productive pedagogues; our territory is the creation of supportive learning environments, connectedness, intellectual quality and recognition of difference. Therefore, our challenge is the transference of this pedagogical expertise into digital environments.

INTRODUCTION

This paper proposes that it is imperative for arts educators to be central to the development, design and critique of digital learning resources. Arts educators have expertise that can inform the design process through a pedagogical framework. When applied, this framework heightens visceral engagement, provides deep learning and teaches the multiliteracies required to navigate in the digital world. Theories of contemporary performance, arts pedagogy and socially critical education informed the design of our own digital learning resource, an interactive CD-Rom.

Drama Queensland, the peak professional drama association in the state, commissioned this interactive CD-Rom Physical Theatre, Performance and Pre-text. The original intent was to document and extend the life of a major performance project called
XL-D. This performance in a state theatrical venue combined the skills and assets of 120 secondary students supported by tertiary students, drama teachers, physical theatre artists, major arts companies, film-makers, instructional designers and an author. It was a student-devised reflection on a macabre aspect of Brisbane’s history told through the contemporary performance form of physical theatre.

The CD-Rom includes performance highlights from student, community and professional companies; visual, aural and textual pre-texts; two teaching units; live links and interviews with artists, teachers and students. It frames all the performance material within pedagogically driven links that develop the user’s ability to critically reflect upon the material and apply these understandings to their own context.

Our experience of designing a CD-Rom allows us to draw some conclusions about the potential of harnessing synergies between instructional design and visceral engagement through aesthetic pedagogy.

**IMPERATIVES FOR ARTS EDUCATORS IN ICT DEVELOPMENT**

Arts teachers have a central role in preparing young people for a post-modern marketplace. Employment has changed significantly in recent years, with business calling for employees who are ‘flexible’, ‘creative’, ‘innovative’ ‘transformational’ ‘team players’ and ‘life long learners’. Toomey (2001) identifies the key resource for economic growth in Australia as knowledge, driven by the requirement for rapid innovation in competitive global markets, enabled and supported by ICT use. The DEETYA Report, *Learning for the knowledge society; an education and training action plan for the information economy* (2000, p.10) identifies outcomes that the education and training industry must achieve if it is to play its enabling role in supporting Australia’s transition to the information economy. Education serves as a function of the greater economy and arts educators have an opportunity to apply their pedagogy and creativity with the intent to teach their students how to navigate effectively and productively in a marketplace.

At a systemic level education departments are responding to market forces with a futures orientation, which encourages students to think about and take responsibility for decisions and actions that affect individual and shared futures. (Queensland School Curriculum Council, 2002, p.7) Education Queensland has developed the New Basics Framework (2002) which incorporates the Productive Pedagogies: Intellectual Quality, Connectedness, Recognition of Difference and Supportive School Environment which form part of our argument for innovative ICT design later in the paper. The Department has also endorsed an Arts Syllabus (2002) that uses an aesthetic framework across the five art forms of Dance, Drama, Media, Music and Visual Art. This context provides opportunities for effective integration of digital design and ICT use. Educators should capitalise on this opportunity to develop a comprehensive framework of critique for digital learning.

Students are “digital natives” and many teachers regard themselves as “digital immigrants”. (Prensky, 2001, p.1). Today’s students are growing up with new technology
whereas many of their teachers are adapting to it. This becomes problematic in a school environment when the ‘natives’ and the ‘immigrants’ come together for learning. Teachers need encouragement to participate in virtual spaces so that their pedagogical expertise influences the quality of learning and teaching in those spaces. ICT is part of the contemporary educational and artistic landscape yet Carroll (2002) reminds us “there is an ambivalence towards technology in the educational community that is commonly expressed through a series of oppositional positions.” (p.130)

Some common challenges to ICT integration in arts education were articulated at the 2004 Drama Australia Conference. The participants argued that ICTs impede aesthetic engagement between the artist or artwork and the live audience. There were concerns that technology is sometimes unreliable and unpredictable. Limited IT resources within schools continue to be a stark reality for some. There was a lack of knowledge regarding what might be achievable using an existing range of technological hard and software as well limited access to professional development in specific Key Learning Areas (KLAs). Teachers were concerned that while ICTs can support multi-modal learning, they can also significantly increase the teacher workload (Brabazon, 2002) without necessarily enriching learning outcomes for students.

Putting aside the imperatives of the market, the requirements of government reform and resistance to ICT use, the choice for teachers is not whether to engage or disengage with the ICT agenda but how to shape the nature of that engagement. Flintoff (2002) says “As educators we need to remind ourselves that learning means negotiating the potential discomfort of the unfamiliar.” (p.8) Ultimately teachers need to be encouraged to engage with digital learning despite dissonance because we work with young people in a learning context and the digital world is their context for learning.

Prensky (2001) reminds us that young people, even if they aren’t particularly turned on to all aspects of digital technology, are used to operating in an instantaneous, networked, multi-modal, hypertext environment. They value the artistic and visceral elements, and digital learning resources work best when these factors are considered in the design process. This process can open up an interactive, dialogic place for learning.

South American theatre director and politician Augusto Boal (1979) argues that “when a dialogue becomes a monologue, oppression exists” (p.142). It might appear easier to maintain traditional pedagogy via the monologic discourse of ‘the expert’ and digital learning resources can be used to this end. However, this underestimates the possibilities for engagement and learning inherent in digital learning resources.

Arts educators bring unique skills to the learning and teaching process and their pedagogical expertise can be used to direct the navigation of the digital world. In order engage students’ voices, Gangi (1998) calls on arts educators and in particular drama teachers, to use their inheritance of arts criticism to give students a vocabulary for navigation. The Queensland 1 -10 Arts syllabus (2002) states that in the Arts, students “learn to think critically as they analyse and critique arts works and identify the influence of contexts” (p.2).
The socially critical component of aesthetic pedagogy requires all learning to be connected to real and lived experiences. It follows then that an aesthetic approach to design involves intrinsically critical explorations of digital learning. Carroll (2002) argues "students already appear to take from the new and emerging technologies those aspects they want and reshape them for their own pleasures and ends including their own dramatic engagement with the content" (p.131).

RELATIONSHIP BETWEEN ARTS PEDAGOGY AND ICT DESIGN

Brabazon argues (2002) "While technology continues to 'advance', it will not be used appropriately unless crafted within pedagogy" (p.14). We believe that there are three aesthetic pedagogical elements that are vital in conceptualising digital learning resources, especially in an Arts context. These are visceral engagement, aesthetic framework, and multiliteracies.

VISCERAL ENGAGEMENT

Visceral engagement refers to a sense of liveness (Gattenthal, 2004), the heightened emotional and physical experience of being in the moment, as felt through the body. Analysis of visceral engagement and its impact in the mediation of lived experiences is vital to works of art. This principle can similarly be applied to digital learning resources, which in themselves can be works of art. They must have artistic qualities, must be situated in a context and relate to the lives of the end users. Gallasch and Baxter (2004) argue "It's often about getting the mix right, smoothing out the relationship between 'the visceral and the virtual', not losing live presence to the seductions of the screen" (p.1). Performance elements are vital to sensory and cognitive engagement. These might include management of role, time, space, sound, image, and symbol contextualised through authentic connection to real contexts and lived experiences.

Validating consideration of the visceral component of digital learning and design is evident when reflecting on end-users' general passion for interactivity and technology. Using phone-cameras, chat rooms, SMS text, on-line communities and engagement with reality television indicates a desire to participate through the senses in a mediated world. Instructional designers and those engaged in the planning of digital learning should consider the impact of visceral components as they develop strategies to engage with teachers and students.

The first level of engagement for a user is the visual and aural design of a digital learning resource. Optimum engagement is linked to ease of use (functionality). Innovative programming and coding, must reflect the purpose of the resource and link directly to end users expectations, requirements and sensory responses.

Many instructional designers consider virtual space as performative, that is, as having "an interactive, intelligent surface...with a spacio-temporal dimension" (Novak in Imperiale, 2000, p. 45). In this case, a digital learning resource becomes a portal. This portal links end users with content through authentic, contextualised experiences. When
students are given the opportunity to apply knowledge in a new context, particularly through use of role, deeper learning can occur.

Visceral engagement demands end users apply their own understanding, experiences and imagination. This is best achieved through the use of open texts. When considering the potential of open texts in aesthetic education, Haseman (2001) comments that:

The key to understanding open works is their internal mobility of form and, in making them artists adopt a non-traditional approach to artistic productions. Open works are created first and foremost by skilfully editing together a range of materials from a wide range of sources and contexts to create the final work.(p.5)

Haseman refers to this process as “redactive creativity”. Hypertextual approaches to navigation and visual design, and engagement with wider web based communities makes many digital resources open texts. Internal mobility in digital learning resources is created with the skilful selection, composition and editing of assets. Therefore the concept of an open text becomes a pedagogical link between digital resources and aesthetic pedagogy.

Utilising a digital open work as a pre-text (O’Neill, 1995) to live exploration provides multiple engagement opportunities yet relies on the creativity of the teacher to direct the learning. O’Neill (1995) says that pre-texts “launch drama worlds with economy and clarity” (p.33). The ideal pre-text “frames the participants effectively and economically in a firm relationship with potential action. It will establish location, atmosphere, roles, and situations.” (O’Neill, 1995, p.33) Digital resources with aesthetic pedagogy and framework central to the design can be the pre-texts that launch engaging and challenging learning experiences and new understandings.

AESTHETIC FRAMEWORK

The link between cognition and lived experience makes aesthetic pedagogy a powerful frame for developing innovative and engaging digital resources. The elements intrinsic to performance in terms of immediacy of place, space, time and symbol resonate with the creation of avatars, online games and asynchronous and synchronous communities.

However, the aesthetic foundations underpinning our method of instructional design also include Neelands’ (2004) description of a para-aesthetic approach, which acknowledges the social/artistic dialectic intended to develop a broader range of social and cultural learning. Boal’s (1979) desire to influence reality not merely reflect it and Friere’s (1985) urge to identify the transformative purpose of education and see it as a humanistic and liberating task are critical components of our approach. McLean’s (1996) and Abbs’ (1987) research into the aesthetic link the broader philosophies of aesthetics to the pedagogical practice central to this design.

McLean (1996) explores Foucault’s idea of the aesthetic extending into the way in which we live our daily lives, shaping the moral and ethical decisions that characterise
who we are (p.18). She proposes that teachers engaging in aesthetic practice not only make the classroom experiences relevant but also problematic and critical. McLean’s Aesthetic Framework (1996) promotes the importance of dialogue, the centrality of experiential learning, teachers and students working as co-artists and acknowledges the importance of critical reflection processes to promote rigorous aesthetic experiences (p.60).

Our design strategy recognises the human desire to engage sensuously and completely with all experiences, but particularly experiences that generate new learning and understanding. Abbs (1989) explains aesthetic understanding as the “mode inherent in human life which operates through the senses and feelings and constitutes a form of intelligence comparable to, though different from, other forms of intelligence such as the mode of logical deduction” (p.4).

Dewey (1934) expresses the phases of aesthetic engagement as Immersion- students initial engagement with materials offered by the teacher; Surrendering - the students are creating, experiencing and experimenting and the Perception Phase; upon reflection a new way of knowing arises. The generation of new knowledge through a visceral or lived experience is vital to Dewey’s description of the power of teaching and learning through the aesthetic field.

Aesthetic learning can be defined as a means of inquiry that operates cognitively and affectively through the senses to offer a particular way for students to understand the world (QLD Senior Syllabus 2001, p.1). The dimensions of learning in the aesthetic field of Drama are described in this curriculum document as Forming, Presenting and Responding. Other art forms have described their learning framework similarly. For example, Dance offers choreographing, performing and appreciating; Visual Art addresses making, displaying and appraising images and objects. The same aesthetic framework underpins each of the art forms.

MULTILITERACIES

Practitioner at both ends of the drama-theatre spectrum have articulated the requirement for the participant to be active in the construction of meaning, whether it is from inside or outside the drama. This has been the case since the time of the Ancient Greeks. Aristotelian poetics required the viewer to ‘read’ the Greek tragedies as cautionary tales. Boal (1979) goes further and believes the spectator and actor can exist as the one person – the ‘spect-actor’, who both views and participates in the drama. As arts educators, we equip our students to ‘read’ art works for a variety of contextualised meanings as well as engaging them in the making of new texts, the production of which may include visual, kinaesthetic and spoken elements.

The multi-literate student is one who, according to Dunn (2004) “understands and can use not only the literacies of a range of texts and technologies, but also those of social responsibility, active citizenship and a socially, culturally and linguistically diverse world” (p.7). Multiliteracies empower teachers and students to move beyond the dictates
of their immediate context. Teachers and students become simultaneously designers and critics of the teaching and learning experience.

These skills are significant in a digital world. We draw on Lankshear and Knobel’s (1998) socio-cultural perspective where the three dimensions of literacy – operational, cultural and critical – work simultaneously. Digital learning resources bring together a wide range of assets that have multiple readings in a hypertext format. In order for the user to make sense of this, s/he requires functional competency to navigate; cultural knowledge to decipher meaning in context and critical literacy to critique meaning in relation to power and social practices. As Luke says (2000) hypertextuality “demands a multi-modal reading of laterally connected, multi-embedded and further hot-linked information resources variously coded in animation, symbols, print text, photos, movie clips or three dimensional and manoeuvrable graphics” (p.73).

The processes of literacy are complex and when confronted with hypertextual information that requires sophisticated navigation to create meaning, it is clear that students require assistance as they gain skill. Lichty (1995) calls the digital learning resource a “site of engagement” (p.4) and it is through this site or portal that we can examine the societal and aesthetic issues intrinsic to our increasingly digital world.

When responding to a text, arts students are asked to look for layers of meaning that resonate in the sub-strata of an artwork. In fact, when forming and presenting new texts, it is precisely this kind of layering and multi-modality that art investigates and employs. Drama and other arts forms allow students to do this from within the text, as well as from an outsider’s vantage point.

**ICT AND ARTS PEDAGOGY IN ACTION – AN EXAMPLE**

“What do I know?” The drama teacher thought.

Will, the instructional designer, asks “What do you want to make a CD-Rom for? What do you want it to do?”

Over the next few hours, weeks and months the dialogue around these questions shapes all the planning. The partnership between the aesthetic pedagogue and the technical design expert leads to mutual respect and appreciation for the teacher’s expertise and the technician’s desire to make meaningful, engaging and aesthetically rich resources that meet end-users needs.

**CONTEXT**

Drama Queensland is responsible for creating resources for teachers and students in a state with significant geographical, cultural and socio-economic diversity and these are key considerations in professional development and resource design. Embedding an awareness of these contextual considerations and the pedagogical philosophy underpinning syllabi, state initiatives and best classroom practice in Queensland was
intrinsic to the instructional design of this resource. Very limited funds and a tight
timeline as well as the constraints of being linked to a living theatrical process required the
final resource to be highly relevant and very functional to ensure market returns. It
became paramount then that the pedagogy of the designers and the requirements of the
end-users were aligned. This is the first resource of this kind to be made by and marketed
to drama teachers. It attempts to close the gap between the perceived needs of users and
the designer’s concept by virtue of shared pedagogical knowledge.

OBJECTIVES

The content and design of the CD-Rom highlights the organisation’s attempt to create
professional development opportunities in two ways. Firstly by providing resources that
engage teachers and students in the practice of the contemporary form, physical theatre,
filling the perceived gap of interest and information regarding this form. Secondly the
attempt was made to design the resource so that it encouraged increased application of
digital learning in arts classrooms and competency in the users.

The design challenged the traditional hierarchy of knowledge (Usher and Edwards,
1994) so that all the possible end-users participated in or were considered in the design
process. As Boal (1979) suggests exchange of skill, ideas and knowledge further
democratises the teaching and learning process. We spoke with XL-D participants,
teachers, students, and artists. Knowledge was shared democratically and the voices of
all significant stakeholders are articulated through the various assets presented.

The CD-Rom documented a unique performance process, which used digital
technologies such as chat rooms and discussion boards to facilitate the making of the
physical theatre performance, between groups who were geographically separated.
Through application of redaction theory (Haseman, 2002), we developed creative
educational opportunities beyond the final performance in order to ‘add value’ to the live
event and the participants’ experience of the forming and presenting process. The end
users including teachers, artists and students are encouraged to contribute their work on
the Drama Queensland web-link to the resource. This is updated regularly and the new
practice emerging from the CD-Rom is recorded and presented so that facilitation and
documentation of new visceral experiences continues beyond the resource. This
openness is central to the design.

Because design of this resource shapes the way knowledge is used and organised
and provides more engagement modes than either a book or a video, it works as an open
text by itself and conjunction with a live classroom space. The user creates his/her own
narrative. Teachers and students can engage through multiple applications and pathways
that reflect their confidence and experience with digital learning. Users can print
developed lessons units and tasks, utilise the visual, aural and text resources in a new
exploration of the form. They can visit and participate in on-line components including
directed forums and research tasks and use individual or combinations of assets as pre-
texts for the development of new work.
PRODUCTIVE PEDAGOGIES AND DESIGN

Neelands (2002) describes the Productive Pedagogies as a means of implementing a future oriented, humanising curriculum that focuses on clusters of pedagogic practices. They include Intellectual quality: Are students thinking, talking meaningfully and responding to the learning? Connectedness: is learning made relevant to the world and it’s problems and to the students lived and imagined experiences of the world? Supportive school environment: Are students personally and socially supported and supportive? Recognition of difference: Are ideas about the world and who and why we are given sufficient attention? (pp.26-27)

Intellectual quality is exemplified when students demonstrate higher order thinking, deep knowledge, deep understanding, hold substantive conversations, and understand knowledge as problematic. Through dramatic exploration suggested by materials on the CD-Rom students are, as Dunn (2004) states, “provided with an opportunity to engage with the given context” (p.71) and this engagement regularly leads to deeper understanding. An example of this would be the inclusion of a Year 12 student’s exemplary written response to a selected physical theatre performance excerpt from the CD-Rom and the teacher’s commentary on its success as an assessment task.

Connectedness means making learning real for the students. Teachers place learning in a context and this is most effective when knowledge is integrated, problematised and connected to real life or real world experiences. The CD-Rom generates new learning by engaging students with real artists and companies; links an historical pre-text to present day themes and experiences via the students’ XL-D performance excerpts and through the learning experiences embedded into the resource. It also draws on the students’ pre-existing knowledge and connects it to new material.

Supportive classroom environment is critical to the teaching and learning of any artistic forms but is particularly important in drama, and in this case physical theatre. The choices that the XL-D students made in the student-directed devising process were sometimes dramatically risky yet worthwhile and valid in terms of the narrative. The articulation of student voices was honoured by using some of these moments of high drama as the performance excerpts. For students to engage in this kind of work, a trusting relationship between students, teacher, parents and other artists, must be explicitly created. A strong connection to the material needs to be generated. The resource provides examples of this kind of engagement for teachers and learning experiences that may engage students in the same way.

Recognition of difference is most evident in the teaching units. Physical theatre is primarily about the body in space so these concepts informed the development of the units. Rip.Mix.Burn. for Level 5 (year 9-10) focuses on the body and its mediation through technology. Students discover physical theatre as a visceral theatrical form that explores ‘the body’, contrasting their real actor’s bodies with the mediated, sometimes disguised bodies they experience through film, TV, advertising, online gaming and chat-rooms. Students are encouraged to take a socially critical stance on the labels and limitations
placed on the body and explore these through active participation. Contact, a senior unit (year 11-12), addresses space and its impact on cultural and personal identity. In this unit, young people are required to critically examine meaning generated by their navigation through public and private, virtual and real spaces. They participate in an intense study of the visual and metaphorical language of movement to identify and exploit the symbolic communication that occurs between young people, their environment and the community. Opening up the dialogue about how people are differently positioned in society and what this might mean for students is vital in a socially critical approach to education.

AESTHETIC LEARNING AS SCAFFOLDING IN DESIGN

Forming, Presenting and Responding describe phases of aesthetic engagement in teaching and learning. Teachers approached the resource more confidently as they recognised their own pedagogy reflected in navigational and design features and a teaching and learning pattern advocated by their community as best practice. The design aimed to make the concept of the aesthetic field (Abbs, 1987) the key to high level of functionality as aesthetic learning is the predominant mode of engagement for students in the arts.

Management of this framework for learning in best classroom practice requires scaffolding. The techniques of scaffolding in drama classroom practice were embedded
in the functional design of particular pages, activities and navigational options. Love (2002) describes the use of scaffolding as a pedagogical model in the construction of another digital learning resource and refers to Vygotsky’s Zone of Proximal Development (ZPD) as a means of describing this process. Vygotsky (in Love, 2002) describes scaffolding as “the identification of a ‘gap’ in student’s understandings and the constructions of ways of helping learners bridge that gap and move into a new ZPD” (p.6). The scaffolding is created when pre-texts, activities and information are framed through the aesthetic field of Forming, Presenting and Responding. This scaffolding enables teachers and learners to engage with materials on multiple levels, functionally, aesthetically, viscerally and educationally. The teaching and learning outcomes are enhanced as a result.

Scaffolding teaching resources through the aesthetic frame also created a teaching and learning cycle. In the forming and engaging mode students and teachers are encouraged to use the pre-texts on the CD-Rom. Focus questions and activities alongside all of the pre-texts encourage deeper exploration and the creation of new work. There is regular opportunity to reflect, respond and evaluate performance materials on the CD-Rom as well as the new work created by students beyond it. Both formal printed units of work utilise this cycle of learning through Forming, Presenting and Responding, in their overall unit and individual lesson structure.

END-USER COLLABORATION

![Site Map Diagram]
Collaboration with end users should work to ensure the digital learning is engaging and appropriate for them. If digital learning resources are collaboratively developed between teachers, students and designers then opportunities for enhanced pedagogical exchanges occur that open creative pathways for new lived experiences. Functionality and authenticity were two key areas improved through a collaborative design approach.

Functionality was developed in negotiation with end-users and involved identification of market constraints on the application of CD-Roms in multiple school contexts. New coding was developed to realise the students’ and teachers’ desire to pause, go back, forward and to show full-screen video image without downloading net software. Making the resource stand alone resolved several application obstacles for teachers. Removal of a site-licensing fee had a similar effect.

Beyond the initial phases of discussion, gathering assets and documentation of their performance process, the end-users were central to the quality assurance process via a reference group. Their input reshaped the navigational design to include access to the site map on every page and the site map being hypertextual. Teachers new to interactive navigation wanted a linear page-by-page next and back button and an explanation of how to use the resource immediately after the animated introduction.

By incorporating the authentic practice and voices of young artists, teacher-artists at work and contemporary arts industry practice from a range of contexts, an authenticity was maintained which lessened the initial opposition of some users to the application of the technology itself. An example of this kind incorporation with young people is the asset titled ‘Student Performance’ which always generates lively discussion and responses. This art film made by a year 12 student is a movement piece exploring the concept of sanity. It incorporated, in the artist’s own words, the ‘influences of Butoh dance theatre and German expressionism’ (Bonetti as cited in Drama Queensland, 2004). This asset is also used as a central pre-text in the senior unit. Users are encouraged to cross-reference the work to other pages.

**VISCERAL ENGAGEMENT IN DESIGN**

The macabre and Gothic nature of the original pre-text for the XL-D performance and the common use of epic and supernatural mythology and symbols in physical theatre influenced the first elements aimed to enhance a user’s visceral engagement with the resource. A sunrise, morning, evening and sunset animated background, the representations of stone and glasswork from cathedrals and the general colour palate where deliberately chosen to reinforce the performance and dramatic qualities of the project and assets. The sound track throughout and the aural pre-texts supported the Gothic quality of the design. These elements were particularly useful in contextualising core factual content within the overall thematic intent and the general atmosphere of the resource. However the most critical aspects of visceral engagement through this resource are the pre-texts within each aesthetic frame forming, presenting and responding.
Included in the Forming component are heightened visual pre-texts like images of a car on fire; powerful stills from the XL-D performance and descriptions of ancient and contemporary epic narrative structures. These are framed by teaching suggestions for ways of introducing these pre-texts however all of them are suggestive enough to allow the user to develop their own narrative from their visceral response to them.

The Presenting dimension includes powerful images of physical theatre companies work and training, students performing Butoh and a description of physical theatre activities. These examples were selected as they represent broad and challenging cultural issues particularly representations of gender and sexuality. There are daring and inspiring physical feats. The excerpts explore challenging aesthetic problems and can be interpreted on multiple levels.

The Responding dimension includes carefully selected and edited moments from the XL-D performance and a dynamic excerpt from a professional physical theatre performer. Included alongside the student work are responding activities that are scaffolded in order to teach the user how to critically evaluate the work. A complete student response to the professional work is included, with teacher comments on it to demonstrate ways to critical reflect on physical theatre in performance.

The teaching units inspire visceral engagement because the are developed through the Forming, Presenting and Responding frame. Students engage with pre-texts from the
CD and their own social or cultural context. They reflect on their engagement with these stimulating pre-texts as they design original work. The students presenting work combines the virtual tools and information from the CD-Rom and the physical skills suggested on the resource but taught by the teacher and artists. Then they respond to and evaluate these experiences. This responding work occurs continuously through personal journals and group discussions (on or off-line) and then in more focused critical analytical modes as well. They draw connections to issues related to cultural access and consider the impact of applying aesthetic understanding within their own contexts.

The resource acknowledges the teacher’s central role to translate and direct the learning. It also operates in a way that allows the individual student alongside their teacher to explore the form, gather information, link to other students in different contexts and springboard into wider research and learning experiences. The pedagogical intent of best practice is has shaped the elements designed to stimulate visceral engagement.

IN THE FUTURE

Conclusions drawn about this resource and the application of this design process on future digital learning tools in other educational contexts depends on further research. This research may include the development of a comprehensive critical framework to:

- identify the impact this resource has had on the end-users understanding of the theatrical form and the technology,
- gather more information regarding impact the aesthetic framework has had end-users application of this resource and their expectations of future resources,
- examine the impressions of teachers who not previously engaged with ICT in their classroom, compared with teachers who have,
- consider the changes that need to be made like the further development of web-linking to enhance longevity and the quality of interactivity in this resource,
- consider the engagement with DVD format as an alternative CD-Rom in schools in order to overcome some of the current barriers to engagement with digital learning.

CONCLUSION

This paper has identified the market, government and student-driven imperatives that require teachers to engage in ICT use and design in a contemporary educational context. Teachers’ current reservations about the role of ICTs in their classrooms are valid, however digital learning resources are most useful when they are collaboratively designed with teachers who engage in best educational practice and utilise students’ preferred modes of learning.
We identified key educational and aesthetic philosophies that influenced the design phase of the CD-Rom, *Physical Theatre, Performance and Pre-text*. These promoted end-users’ critical, cognitive and affective engagement. The outcome was pursuit of intellectual quality and connectedness. The application of these philosophical elements in individual assets demonstrated recognition of difference in the context of a supportive classroom environment. These pedagogies are familiar territory to the arts educator and when applied to digital learning resources, promote innovation and end-user engagement with new technologies.

It is imperative for arts educators to engage with ICTs, as there are some significant synergies in the pedagogical approaches to both art and digital learning resources. Both have internal mobility of form and openness in the work, and must be situated in a context that relates to the lives of the end users. Because arts educators can scaffold learning experiences within the aesthetic framework of Forming, Presenting and Responding; consider and plan for visceral engagement through powerful pre-texts reinforced by visual and aural components; and apply multiliteracies, this positions them as pedagogical experts in the design of digital learning resources. To achieve the best outcomes for themselves and their students, we encourage all teachers to engage with digital learning and ensure that their expertise drives the creation of educational software.

REFERENCES


