Blended Learning and the Flipped Classroom: The affordances of cloud based, located, and virtual world environments to support student learning

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Abstract. In this paper the author reports on the introduction of the flipped classroom integrating located, online and virtual world learning environments to support the collaborative lived experiences of a group of students and the educator participating in a higher education undergraduate art unit, Navigating the Visual World. A qualitative narrative methodology, A/r/tography, incorporating both image making and textual recording is used to explore and identify interwoven aspects of the artist/researcher/educator relationship in the creative artistic process of exploring concepts of identity within inquiry based art practice. Selected student examples, including a collaborative group assessment project demonstrate effective student engagement with experiential blended learning within the flipped classroom.

Keywords. Flipped classroom Blended learning, experiential learning, located and online learning, multiuser virtual worlds, art education, visual literacy, collaboration, learning community.

1. Introduction, Background and Context

It is Wednesday morning, and students, singly, in pairs and in groups, arrive for class at the visual art studio. They carry an assortment of equipment, portfolios, rolls of paper, containers overflowing with art materials, laptops, and other ubiquitous technologies. Observation reveals that the majority are young people, second year undergraduate students, intermingled with multiple age students who are returning to study or attending university for the first time. Among the students, there is general agreement that the introduction of asynchronous online study materials accessed before the timetabled class provides them with greater flexibility to engage with the theoretical underpinning of their course work. Audio, visual, video and text based readings linked to preliminary online activities located in discussion spaces and in the virtual Deakin Art Centre in Second Life prep are students to engage with studio based art practice. Amid the general social interaction, the conversation focuses on a recent field trip to Hosier Lane, Melbourne, and other locations, rich in street art (Figure 1b). They comment on art activities they have undertaken in the virtual laneways environment located on Deakin Island in Second Life. (Figure 1a).
Figures 1a&1b Journal Entry: But is it art? Is a key theme for students enrolled in the unit Navigating the Visual World. During a field excursion, students explored street art sites found in the alleys and lanes of Melbourne. Using apps uploaded on mobile devices, students navigated from one site to the next in the inner city. On arrival, they accessed a purpose-designed app providing questions, brief and descriptions of various styles and techniques specific to the repertoire of the street artist. They photographed art works and made annotated notes for further discussion and action in the studio and in world. Journal Entry Art Educator (2012)

These incursions stimulate discussion about immediacy of the visual message, the range of styles, the use of media, and techniques including “pasties, stencils and digital images prevalent in street art. Focused online activities, exploring the posters and artworks of Toulouse Lautrec, Banksy, Kruger, and Holzer make links to off campus excursions and studio art practice. Today, students will collaborate to explore ideas, design and develop visual responses around the theme Identity: A social commentary.

2. The flipped blended learning environment, the Art Educator and the Student

Within the context of contemporary higher education, the flipped classroom incorporating concepts of blended learning represents a technology driven shift from passive face to face lectures to interactive online world-to-the-desktop interfaces [7], virtual worlds and located learning environments, designed to promote independent learning, encourage greater student participation in rich authentic learning tasks and support students individual learning styles. Figure 2 represents the development of a model of blended learning implemented in the undergraduate art unit Navigating the Visual World.

Underpinning the model was the concept that immersive blended learning encourages synchronous and asynchronous student participation in collaborative practice and creative problem solving [3,12]. It was further contended that when students engage with co-learners in immersive situated learning, online, in virtual and located environments, the applied knowledge from one setting is transferred to another in increasingly complex learning episodes leading to higher level engagement on the transfer task [9].

2 Image courtesy J. Grenfell 2014
Within a flipped learning environment, the central concept of establishing a collaborative learning community is not new. What was innovative, however, was the formation of an integrated cohort of students engaged in authentic learning to construct knowledge within the disciplines of art and education. This concept is supported by [17] and [22] who believe that participation in common or linked experiences and projects has the potential to establish communities of learners resulting in enhanced student interaction, knowledge exchange, experience sharing and creation. The more participants believe they can learn from a communal sharing of their experiences, processes and project outcomes, the more they are likely to engage and participate as active thinking members of that community.

2.1. The Art Educator

The development of a second year undergraduate art education unit, *Navigating the Visual World* provided the art educator with the opportunity to scaffold a blended learning strategy incorporating a flipped classroom environment. Information accessed from the Deakin student unit evaluation (SETU) database, reporting on study preferences attributed to 21st century learners, their use of ubiquitous technologies and their attitudes to online and interactive blended learning environments were critical elements in determining the structure of the unit. Further student responses revealed that not all participating students conformed to a generational learning preference, particularly when some mature age students displayed more sophisticated skills than those of their younger colleagues.

In developing the unit of study, another concern was whether an educator’s lack of advocacy of new technologies and the role they play in active learning, contributed to students’ initial perceptions and reluctance to participate in technology based learning communities. Limited expertise in the application of digital technologies as a creative medium and as a learning tool was also identified as a potential concern.

These findings encouraged the art educator, to initiate a transformative process.
Students and the educator, who traditionally relied on their own individual creative processes and skills, were afforded the opportunity to access the diversity of expertise exhibited among class members, to value the contributions of colleagues and as a group, to develop a learning environment that embraced a shared culture of continually advancing collective knowledge and skills [11]. This does not mean that each student was required to assimilate the collective knowledge of the community, but that individuals, identified as possessing specialized expertise, were invited to facilitate group participation in specific art activities. This is a departure from a traditional teaching model that emphasizes individual knowledge and the expectation that all students simultaneously acquire the same body of knowledge.

Throughout the project, the art educator engaged in a process of self reflection, articulating her own journey to identify ways in which her role among the group evolved and to record whether the educator’s teaching style may influence students’ interpretation of issues and their responses exhibited in their art works.

**Journal Entry Art Educator:** Having the confidence to “let go” and encourage students to take the lead was the first step in establishing a learning community within the group. The move from a traditional to a more collaborative teaching approach required a clear shared understanding of the art learning focus and needed both the educator and students to have a communication of ideas, diverse but complementary. Journal Entry Art Educator 2011.

### 2.2. Profile of the Student Learner

Oblinger & Oblinger [14] describe student learners populating a twenty first century technology rich educational environment as neo millenial and characterize them as experiential, digitally literate, interactive and socially collaborative. Within the undergraduate student cohort enrolled in the art education unit, further investigation revealed another diverse student cohort, each with his or her own unique learning preferences. They are variously identified as traditionalists, baby boomers, gen X, and the net generation [7][8][15][16]. Described as inhabiting a technological “melting pot” [14] these students and their neo-millennial colleagues, pose, for the art educator, a unique problem of how to engage all students in establishing a participatory community of practice. Researchers Willms, Friesen and Milton [23] report that some students favor regular contact with educators, and prefer learning environments that build inter-dependent relationships to create a culture of learning. Independent engagement with online and located learning artifacts enabling students to explore and engage with ideas separately or in small groups is another preferred study option. For the educator, this may require a shift from the ‘sage on the stage’ to collaborator, working with students support their learning styles in order to actively construct knowledge incorporating immersive real world learning experiences.

### 3. The Navigating the Visual World Project

The focus of the *Navigating the Visual World* project was to investigate the lived experience and multiple art learning perspectives of participants and to profile the 21st century higher education student learner to ascertain whether immersion in a
technology rich environment resulted in more effective immersive learning practices. It is contended that well-designed online digital and located learning environments incorporating ubiquitous technologies, online activities, located studio projects, and virtual simulations in the Deakin Art Centre in Second life, enabled second year undergraduate students and the art educator to establish a collaborative learning community. This synergistic collaboration [18] incorporating weekly group discussions enabled students to reflect and comment on their participation and contributed to the ongoing development of a vibrant learning environment.

3.1. The research process

The adoption of an interpretative narrative research process enabled students to explore the creative processes associated with image making, individually, collaboratively and with the viewing audience. Throughout the project, the research methodology implemented by both the art educator and participating students, A/r/tography, is identified as a form of practice-based research within the arts and education. Drawing upon the professional practices of artists and educators, the process can be described as rhizome like in character [19] an assemblage of objects, ideas, and structures that move and reconfigure to create new understandings and forms of engagement. Students’ visual journal entries, aural recordings and videos, digital artifacts, photographs, art educator observations and documented student led forums, articulated new ideas, and knowledge in the process of recording their engagement and participation in art activities and assessed projects.

3.2. The narrative of visual journals

Visual journals were introduced to enable students to research their own practice and to develop an embodied and relational understanding between self and others [10][19]. Throughout the trimester, the students’ visual journals became a platform in which they recorded explored ideas, beliefs and opinions through image and text.

For example, during an introductory computer workshop designed to minimize the ‘digital divide’ encouraged students with advanced skill levels and capabilities to work collaboratively, to develop creative and technical digital manipulation skills among lesser competent class members [8]. The positive outcomes from this activity are
recorded in the images and accompanying journal entries (Figure 4a and Figure 4b) from two students who worked together on the exercise. Their comments illustrate the diverse range of computer skills identified in the class.

Figure 4a. Exploratory exercise appropriation and digital image manipulation.5

Figure 4b. Exploratory exercise appropriation and digital image manipulation.5

**Figure 4a. Journal Entry:** In this activity I appropriated Da Vinci’s “Drawing of a Woman”. The original image depicts a serene woman, with the face beautifully rendered but the hair and neck merely suggested with sketched lines in order to keep the face as the focal point. The face almost appears to be coming out of the drawing, as though peering through a veil. I chose to appropriate this image because I admire the woman’s beauty and serenity, as well as the skill displayed by the artist. I was trying to show my appreciation of Da Vinci’s skill and my desire to learn by paying homage this way. Instead of drawing with conté-crayons, I created my image with photo-shop by selectively cropping an image of myself and then merging it with the original drawing through various filters and careful editing. I ended up with a much warmer hue than the original, but decided to leave it that way because it better suited my personality.

Journal Entry from Y Generation student. (2011)

**Figure 4b. Journal Entry:** Wow, what a process!! For a Photoshop virgin I think I did all right! There’s obviously much room for improvement, which I think, can be seen most in top right- appropriation (where mazzas face is coming through way too much). It was tricky for me to change the colour of my face to the vivid colours that Andy Warhol used, but I think it still has a level of success. Keen to practice more!! Journal Entry from Baby Boomer student. (2011)

During a class activity, students applied their online research into David Hockney’s technique of photomontage and adapted the concept using a drawing medium in their explorations of Personal Identity: They recorded personal responses to the concept of self identity embedded in the process of portraiture, linking image and textual responses to accompany their image making.

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5 Image J Grenfell 2011
Figure 6. Students explored David Hockney’s technique of photomontage and adapted the concept using a drawing medium in their explorations of Personal Identity.6

Figure 6 Journal Entry: Art is important in my life because of it’s freedom, art is subjective and does not stereotype it allows you to explore issues that are not commonly spoken about. Having that freedom has allowed me to find something that I enjoy and is for me, it enables me to have fun and explore. I feel that art is not just paint and canvas but is music, ink, drama, film, cooking, anything creative or that shares something about you. Being in a large family and having somewhat of a challenging childhood I love having this freedom to express myself without others involving themselves. It is my voice. Journal Entry Comment from student D.

Throughout the trimester, students engaged with selected ubiquitous technologies and traditional artistic processes to focus on the theme Identity: A social commentary. In researching their artistic practice, students participated in visual journaling to record and explore individual creative artistic processes and to inquire into the role of collaborative learning in image making.

Figure 7a. Take a Rest Banksy, Retrieved from Banksy vs Bristol, an exhibition at the Bristol museum, June 20097.

Figure 7b. What could be? Karen Kupresanin,8

Figure 7b Journal Entry: I really like Banksy’s piece ‘taking a break’ so when it came to doing my activity on appropriation I used it as a base idea. After thinking of a number of issues I could address in my work I decided on child labour. Due to my studies in primary education the issue of child labour is of importance to me as it prevents the children from receiving an education. The images I used to make my piece were all found using Google images. K. K. Student Journal entry 2013

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6 Image courtesy J.Grenfell 2012
7 http://news.bbc.co.uk/local/bristol/hi/people_and_places/arts_and_culture/newsid_8096000/8096891.stm
8 Reproduced with permission. J.Grenfell. 2013
Connelly & Clandinin [5] contend that humans make meaning of experience by telling and retelling stories about themselves. Students’ personal learning journeys [1] and the interpretation of the lived experience [21] encompass art making and engagement with virtual scenarios and online learning. This notion of the lived experience was chosen for its ability to capture the immediacy and subjectivity of experience[20]. The introduction of contextual and personal frames enabled participants to explore how meaning is constructed as they visually interpret personal experience and the world around them[6].

Figure 8. Traditional student exploration of the theme Identity using traditional art techniques . (Image courtesy J Grenfell 2011)

**Figure 8 Journal Entry**: My artistic decision-making included the construction of a visual dialogue, incorporating image, text and video and recorded responses that I published in the online discussion room and in class in my visual diary. Student online discussion entry 2011.

Throughout the trimester, the collaborative role of the art educator was to encourage active participatory dialogue between individuals and within the group (Barnacle 2001). All participants including the art educator engaged in regular journaling activities that included reflection and interpretation of individual and collective artistic experience. The process captured a “phenomenon of life in linguistic description that is both holistic and analytical “ [21]. Students documented their creative exploration of ideas, experimented with media including traditional mark making techniques, and the digital manipulation of images. While some students’ visual dairies used a more traditional format (Figure 6), other students developed online repositories including websites and blogs (Figure 7).

Figure 9. Extract from Journaling Blog 2012⁹.

**Figure 9. Journal Entry**: These series of images are part of my visual art practice and focus on a visit to the Northern Territory. As an artist I continually look for new

⁹ Image courtesy J.Grenfell 2012
opportunities or experiences to stimulate my senses/emotions to sketch/paint. The thumbnail sketches are my process of working through how to depict a certain subject and create a clearer image in my mind with which to work with. I used a wide range of materials—ink, ink pen, coloured pencils, acrylic paint, canvas and tin sheets as well as documenting my artistic journey in a diary on video and digital stills. Here, Identity relates to the land and to the relationships that individuals including myself, and different cultural groups have to it. Extract from student blog 2012.10

3.3. Art and Virtual environments


Devised as an assessment task, students participated in a collaborative project to design, build and curate an exhibition of their artworks in the Deakin virtual art gallery in Second Life.

At the beginning of the project, participating students chose Identity as the theme for the art exhibition. The concept that the artist is a cultural agent who individually and collectively creates visually aesthetic objects for public viewing, underpinned this strand of the project. Students began the creative processes of researching and exploring ideas, experimenting with digital media and techniques to create a collection of artworks. The project encouraged frank discussion of issues relating to gender, class and identity, and how these issues impact on individual lives and personal experience. Students selected artworks and critically examined the definition of art within historical, social and cultural frameworks. They debated the use of irony and parody as strategies for critical social commentary and the appropriation of artworks to fuse fine art traditions and popular culture imagery. Many of their own artworks reflected these discussions. They also considered the practical roles of artists, gallery directors, and curators in the creation and presentation of the artwork within a wider real and virtual community. They debated whether aesthetic contexts are socially constructed through collaborative interactions and conversations about the art works.

Interviews with staff from a regional gallery in Victoria, Australia provided students with valuable insights into curating an exhibition of their artworks in the Deakin virtual art gallery in Second Life.

Building on the concept of a community of practice, students with more highly developed technological skills worked in partnership with less technologically competent colleagues to build an exhibition space to display facsimiles of artworks completed in the art studio. Throughout this process students recorded their experiences, individually in visual journals and collectively using the online discussion

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11 Image courtesy J. Grenfell 2012
Throughout the project, it was evident that peer group encouragement was an important factor in retaining student interest and engagement:

**Journal Entry Art Educator:** One of the most rewarding outcomes was the willingness of students to support each other, both verbally and through shared knowledge to acquire new technical skills. Individual success in achieving a positive outcome from what may initially have been a frustrating process was met with great enthusiasm within the group. (Journal Entry by Art Educator).

This observation is supported by Salmons’ [18] concept of the learning community, in which participants, joined by mutual interest, exchange existing knowledge and work collaboratively on shared problem solving activities. Within the virtual environment, increased proficiency in using in-built communication tools, uploading objects including image textures into personal inventories, experimenting with building and ‘rezzing’ objects in the ‘sandpit’ further enhanced students growing confidence in navigating and working in a virtual environment. Many students carried out these virtual world tasks away from formal class times. For some, the virtual Deakin Art Centre became a regular meeting place, where their alter ego avatars congregated before teleporting to other Second Life sites, returning to report their experiences to fellow classmates and the art educator.

During timetabled classes students held regular meetings to facilitate group decision-making and information exchange. Later, asynchronous in-world meetings became more frequent as students continued to work outside timetabled classes to upload artworks to personal inventories, to collaboratively design and construct the exhibition space and curate the virtual exhibition. Students continued to work in the studio and to upload images and comments onto the online discussion site in Cloud Deakin. Their reflective journals recorded individual experiences relating to their art making and engagement in the project.

Observation by the art education revealed that student participation was underpinned by two of the most powerful developments to impact on their art experience, the use of blended learning strategies for art making and the acceptance of technology enhanced artistic practice. The virtual environment offered its simulation platform as open land for students willing to explore digital expression in tandem with studio based art activities, blurring the edges between reality and fantasy to create and reflect student artistic imagination.

Figure: 17. Student images of self using digital imaging technologies were exhibited in the student curated virtual art exhibition space in Second Life. [12]

[12] Images reproduced with Permission J. Grenfell. 2011
**Journal Entry Art Educator:** One outcome of this development was that the divide between, what is traditionally categorised as high and popular art, diminished as art students pushed the boundaries of innovative creative practice. Giresunlu (2010) supports the idea that when digital artworks undergo a transformation from real life to a simulated digital environment, new contextual avenues for their aesthetic re-evaluation occur. The virtual environment became a social space for its residents to generate three dimensional art works using digital graphic media and creation tools available within the virtual platform. Digitally rendered installations were scripted and built to rotate. Journal Entry Art Educator 2011).

### 4. Conclusion

Throughout the trimester, the art educator journal observations, recording the level of individual student and group engagement reinforced the view that the progressive development of a strong technology skills base was crucial for successful participation in the blended learning environment of the flipped classroom. This conclusion was reinforced by individual student journal entries, notes from weekly meetings, including virtual world sessions, and online discussions. End of trimester group discussions reported that the establishment of a technology focused blended learning within a flipped classroom environment had resulted in a more effective community of practice, and a high degree of student satisfaction.

Students reported, that overall, they were fully immersed in problem solving activities that enabled them individually and collaboratively to explore, experiment, research, improvise, reflect, discuss, critique and evaluate their digitally manipulated artworks. However, there were a small number of students who indicated that, although they had developed higher levels of technology and digital manipulation skills, they would prefer to continue to make artworks using more traditional media and techniques in a studio environment.

Finally, the intention of creating a community of learners involving students with different generational characteristics, technological capacities and aspirations, was forged through unified, collaborative, participation in a flipped classroom environment. As technology and educational practice continue to bridge the divide between the virtual and the real, the test for educators is to develop meaningful collaborations relevant to the 21st century learner. This development is only confined by the imagination of the educator, and the willingness to transition from conventional teaching methods to a more collaborative, and social model of learning with discernible real-world relevance.

### References


