Multimodal approaches to reflective teaching and assessment in higher education

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Multimodal approaches to reflective teaching and assessment in higher education

Reflection is not a new concept in the teaching of higher education and is often an important component of many disciplinary courses. Despite this, past research shows that whilst there are examples of rich reflective strategies used in some areas of higher education, most approaches to and conceptualisations of reflective learning and assessment have been perfunctory and inconsistent. In many disciplinary areas reflection is often assessed as a written activity 'tagged onto' assessment practices. In creative disciplines however, reflective practice is an integral and cumulative form of learning and is often expressed in ways other than in the written form. This paper will present three case studies of reflective practice in the area of Creative Industries in higher education – Dance, Fashion and Music. It will discuss the ways in which higher education teachers and students use multi-modal approaches to expressing knowledge and reflective practice in context. The paper will argue that unless students are encouraged to participate in deep reflective disciplinary discourse via multi-modes then reflection will remain superficial in the higher education context.

Introduction

Reflection or reflective thinking is not a new concept or research area in the teaching of higher education. While there is evidence of deep and worthwhile reflective activities in higher education there is also acknowledgement that the teaching of reflection is inconsistent and superficial (Fry, 2009; Rogers, 2001). Past research shows that approaches to and conceptualisation of reflective practice have often been a result of directives from *top down* administration to teaching staff (Biggs, 1999). The teaching of reflection has been misunderstood (Moon, 2004) and is often assessed as a written activity, however, in many creative disciplines reflective practice is an integral and cumulative form of learning and is often expressed in ways other than in the written form.

The ways in which reflection can be recorded, expressed and/or sustained over time can be wide and varied. Demonstration of disciplinary knowledge and skills does not necessarily need to be discursively formed using the symbols of language. Other symbols or semiotic systems can be used in performative expressions of reflective practice (Ryan, 2011) highlighting that "the choice of expressive form is as important as the content being conveyed" (p.3). Moon (2004) suggests that reflection can be represented through various activities which use written, visual, oral, or performance modes of expression.

This paper will present three case studies of reflective practice in Fashion, Music and Dance in a higher education context. It will present examples of how creative industries educators embed reflection in their practice via multi-modal methods and encourage students to develop a reflective approach to their learning and assessment in the discourse of their disciplines.

The paper also utilises a novel methodology in that it brings together three areas of research in higher education: reflection, multi-modality, and disciplinarity. We argue that unless reflection is taught and assessed via multi-modal approaches, using discipline-specific discourses, then reflective practice in the higher education context will remain superficial: tagged on rather than constituting a way of working and learning within the discipline.

Background

An Australian funded research project entitled: *Developing a systematic approach to teaching and assessing reflection in higher education*, has endeavoured to develop an evidence-based framework for teaching and learning reflection across a number of

disciplinary areas[1]. The project was cross-disciplinary as it targeted teaching in the areas of Business, Creative Industries, Education, Health and Law. In the domain of Creative Industries, educators in the performing arts of Dance and Music and a design-based course of Fashion participated in the development of reflective teaching, assessment, resources and practices.

The project was initially devised to investigate the use of reflection in written assessment but it became evident that a number of staff were teaching and assessing reflection via multiple pedagogical modes. Consequently, the research turned to the work of Langer (1953) to consider non-discursive forms of expression, along with Schön's (1983) ideas of *reflection in* and *reflection on* professional practice and possibilities for crossing disciplinary boundaries by interpreting theory from practice.

In this sense reflection or reflective thinking is a transformative process enabling access to deep and substantive knowledge and can be communicated via multiple representations. We therefore acknowledge Sengers, Boehner, David and Kay's (2005) definition of reflection:

> We define 'reflection' as referring to critical reflection, or bringing unconscious aspects of experience to conscious awareness, thereby making them available for conscious choice. This critical reflection is crucial to both individual freedom and our quality of life in society as a whole, since without it, we unthinkingly adopt attitudes, practices, values, and identities we might not consciously espouse. Additionally, reflection is not a purely cognitive activity, but is folded into all our ways of seeing and experiencing the world. Similarly, critical reflection does not just provide new facts; it opens opportunities to experience the world and oneself in a fundamentally different way. (p. 50)

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[1] We acknowledge our colleagues Michael Ryan, Jill Ryan, Dean Brough, Steve Dillon, and Evan Jones and other QUT staff who worked on this project.

It is important to acknowledge reflection in this way as it recognises the inherent capacity of reflection in all that we do and in the ways that we learn. Although it may be more apparent in creative disciplines, reflective practice can be applied across all disciplinary domains as an essential way of working and learning. The data that we present in this paper highlight the importance of multimodal triggers for reflective learning in creative disciplines in higher education.

Theoretical approaches to multi-modal reflection in the literature

Reflection and reflective thinking

The notion of reflection or reflective practice has a long history originating from philosophy literature such as John Dewey's (1933) work on personal and intellectual growth. The approach adopted by Dewey is psychological compared to more critical and transformative inquiry by those such as Friere (1972), Habermas (1974) and others who have furthered this inquiry (see for example Hatton and Smith, 1995; Mezirow, 1990). A prominent work in this area is Donald Schön's book *The Reflective Practitioner* (1983). His work has been influential but also criticised for not moving beyond spontaneity and also for potentially perpetuating hegemonic or normalising forms of practice rather than enacting change at a broader level (Gur-Ze'ev, Masschelein, & Blake, 2001). Despite this, Schön's work enables one to theorise a framework for reflection, whether in the moment or as a reflective task looking back on professional practice.

In creative disciplines such as the performing and design arts, reflection plays a large part in the learning journey of both student and teacher (Garner, 2000; Kolb and Kolb, 2005). In dance for example, Stock (2004) notes the impact of *reflection on practice* by providing students 'a learning environment in the studio where students can consciously, actively and effectively apply anatomical knowledge, reflective/motivational skills and theoretical understandings to their dancing' (pp. 5-6).

In this sense the students are displaying active engagement through movement of the body as well as reflective thinking by consciously improving practice in situ.

These approaches align with Langer's (1953) notion that some knowledge must be expressed in non-discursive forms leading to expressive form being just as important as the content in learning situations (Ryan, 2011). Consequently, a model of teaching and assessing reflection that enables both students and staff to develop critical levels of reflection has been developed (Ryan & Ryan, in press). This model based on Bain, Ballantyne, Mills and Lester's (2002) work includes four levels of reflection or 4Rs model: reporting and responding; relating; reasoning and reconstructing. These levels increase in complexity and move from description of, and personal response to, an issue or situation; to the use of theory and experience to explain, interrogate, and ultimately transform practice. If higher education students are provided with the opportunity to use such a model and demonstrate their knowledge via these discursive and/or performative modes it will enable them to engage in the rich discourse community of their disciplinary field(s) (Ryan, 2011, p. 3).

Social semiotics – multi-modal approaches

Reflection can be expressed using symbols or semiotic systems other than language (Ryan, 2011). Depending on the disciplinary context, particular modes or forms of expression will be privileged. Haseman (2006) identifies some of these symbolic expressions as including: material forms of practice, of still and moving images, of music and sound, of live action and digital code (p. 6). Impacting on forms of reflection is the socially situated context in which the reflection takes place. Haseman (2006) continues by asserting that 'situations of practice' (p.3) determine the type of knowledge representation and expression via non-discursive or performative means.

Halliday's (1978) work in this area is notable as it explores how language and other semiotic systems make meanings in various contexts. Further, Steinberg and Kincheloe (1999) note that meaning making through performative expression allows for personal transformation through acute awareness of and reflection on one's own beliefs, knowledges and values through the process of creating artistic work.

Oral forms of reflection are often used in higher education teaching and learning. These reflections are 'dependent on the specific purpose, context, audience and medium of the speech form' (Ryan, 2011, p. 9). Effective oral reflection requires the speaker to have a deep understanding of their relationship with their audience (Dannels, 2009) ensuring higher levels of reflective thinking and expression. Oral reflection requires the 'reflector' to demonstrate performative reconstruction of their observed practice and can often take an informal structure. When oral reflection is practised effectively it can be a profound experience for students in higher education contexts as it allows them to express their reflective thoughts in a collaborative and interactive way with others.

Visual reflection can be both expressive and interpretive by encouraging multiple responses to dilemmas or critical issues (Barone & Eisner, 1997; Grushka & Donnelly, 2010). Visual modes can address the reflective issue using visual cues leading to reflexivity (Scott-Hoy, 2003). With the increase in digital modalities visual literacy has become increasingly important in the development of understanding disciplinary-specific knowledge. Hedberg and van Bergen (2008) explore the modalities used by teachers in senior science classrooms where students react to and enact upon visual language and conceptual images, affording further learning in context.

Experiencing one's physical body through performative reflection can display personal, social and cultural meaning. Embodied reflection often consists of rhythmic or

gestural elements as well as temporal value in that cognitive function and structure is not privileged over spontaneous embodiment but rather intertwined. This relationship provides more profound learning experiences to all involved. It can convey ideological meaning in context and provides opportunity for performance artists to improve their practice in a spontaneous manner. In this sense the performer relates their self to professional ideals keeping in mind the intended purpose. Cancienne and Snowber (2003) state that this enables the performer to relate to the audience by conveying emotion through bodily movements, facial expression and other gestural actions.

Reflection can therefore be carried out via multi-modes of transmission and/or acquisition however these may not be able to be 'read' or of value to those participating unless there is a common understanding of the context in which it takes place. Whether it is the teacher demonstrating reflective practice or a student reflecting on practice this may be evidenced through a combination of modes or singular approaches. Acknowledging that time, space and place can also impact on the ways that reflective action takes place is also significant. This is particularly evident through the teaching and learning of specific academic disciplines.

Disciplinarity

Disciplinary knowledge and approaches to teaching and learning have been explored extensively in the literature (Freebody, Maton & Martin, 2008; Scardamalia & Bereiter, 2006). Results show that discipline-specific approaches to building knowledge and literacies are distinct (Freebody, Chan & Barton, 2012, in press) as language and other semiotic systems are unique to the way in which particular content areas are learnt and taught (Halliday, 1978). In this sense each disciplinary area is responsible for their own teaching, learning, assessment and socialisation of their students into the specific professional domain. Davies and Devlin (2007, p. 1) state that disciplines are

"embodied in collections of like-minded people, each with their own codes of conduct, sets of values, and distinctive intellectual tasks" (p. 109).

There is little surprise then that approaches to reflection in different disciplines are diverse across these academic areas. If we consider assessment of reflection, many initial approaches involve some form of writing, for example, reflecting on certain processes and procedures applied in learning (see Carrington & Selva, 2010; Fitzgerald, 2009) or reflecting on final products of work. Often the latter type of reflection concerns an opinion on what worked well and what was not so effective and is often presented in interactive ways such as in blogs, wikis or other social media forums.

In performance and design based subjects reflection can be presented in multiple forms and can often play an integral role in the development of the 'professional' graduate. As previously stated, Sengers et al. (2005) believe that in creative and design areas reflection is "folded into all our ways of seeing and experiencing the world...[it] opens opportunities to experience the world and oneself in a fundamentally different way" (p. 50). This is largely due to the ephemeral features of artistic practice (Busch, 2009). Similarly, Csikszentmihalyi (1997) argues that creativity is not just about researching the psychological but also acknowledging the cultural and social dimensions of such 'events'.

Reflection can be an integral part of disciplinary learning and teaching and is used to communicate key messages about the subject matter in question. The discursive and/or performative elements of multi-modes can enable the development of new meanings in context. The impact of 'reflective thinking' in these environments is integral to the ways in which knowledge is built, aiming for the student to make the journey from novice to expert, from student to professional (Bolton, 2001).

Theorising multi-modal reflection in disciplinary context

This paper brings together three theoretical perspectives as described in the previous section: 1) reflection and reflective thinking; 2) social semiotics and multi-modality; and 3) disciplinarity and professional knowledge-building. As such Figure 1 shows a model on how the three frames of thinking interact and link, within the higher education teaching and learning context. Approaches to, and acquisition of, reflective skills are unique to the cultural, social and disciplinary context in which they are taught. The area 'caught' in the middle is any distinct point in time where the higher education teacher encourages students via multiple modes to become a 'reflective practitioner' and inducts them into the discourse of knowledge in their particular disciplinary field (Jones, 2009; Schon, 1983).
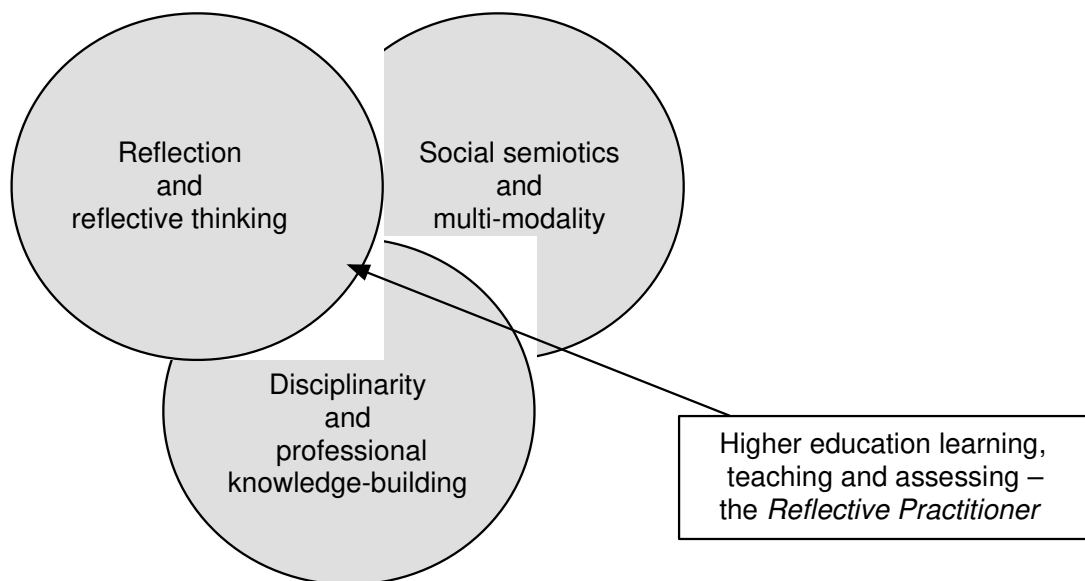
Figure 1. Theoretical framework of multi-modal reflection in disciplinary context.

The above theoretical framework is used to analyse reflective practice in three distinct higher education disciplinary teaching and learning contexts – Fashion, Music and Dance. Despite the fact that each discipline is in a Faculty of Creative Industries

they are distinct in themselves. To identify effective aspects of reflective practice, in both teaching and assessment, we selected unique 'instances' from each discipline to discuss for the purpose of this paper. These 'instances' included: teaching in action; reflective practice on action; teaching resources; and student reflective samples of assessment including: artefacts, written reflections or feedback, and multi-modal reflective work.

We developed an analytical tool to map the practice of reflection in higher education. A coding rubric was developed (see Table 1) to identify what level of reflection from the 4Rs model was being used: reporting and responding, relating, reasoning and/or reconstructing; the type of modality being employed by either the teacher or student in reflective practice: language-verbal, mathematical-symbolic, visual-graphical, gestural-kinaesthetic, and/or material-operational (see Hedberg & Van Bergen, 2008); and what particular disciplinary element (for example a design feature or performative aspect) was being explicitly or implicitly taught, learnt and/or improved upon.

Table 1. Rubric for the coding of 'situated teaching events'

Time code /resource	4Rs evident	Modalities used	Disciplinary elements presented
...	e.g. Reasoning	Gestural/verbal	Postural/Design feature/cultural significance

This paper will use case-study method to explore the teaching and learning of reflection in action.

Mapping reflective teaching and assessment in disciplinary contexts

Case Study 1 - Fashion

Descriptive Background

In a second-year undergraduate fashion course, students are expected to be engaged in iterative design activities and at the same time reflect on the processes used throughout the course. In this example students create a garment (swimwear made from black wool) and are asked to reflect on their first prototype.[2]

Each prototype made was worn by a model so that students were able to view their creation on a real body. This enabled both corporeal and visual representation of each artefact. An integral component of making the garment was the development of an online blog that featured the students' reflective comments about various disciplinary aspects of the task such as processes used (eg. understanding properties of the fabric), techniques (particular sewing skills) and design outcomes including sizing, fit, overall look and impact. It was important for students to actually see the garment being worn and moved in as this allowed them to view the product the way in which it was intended.

Overall, this reflective work used a number of different and non-traditional modalities such as oral reflections (when students spoke about their work to their peers in class), performative and corporeal (when students viewed their work on a live model), and through the use of networked media (when students provided reflective feedback about their personal journey in making, reflecting on and improving their swimwear).

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[2] The final garments can be viewed at http://www.youtube.com/watch?v=JppLrKF7bNI

Analysis and Discussion

Student A's example is used here to illustrate how the three theoretical elements of reflection, multi-modality and disciplinarity contribute to the learning process. Figures 2 and 3 show visual images of the garment they made.
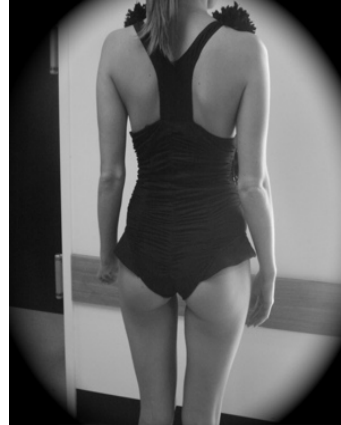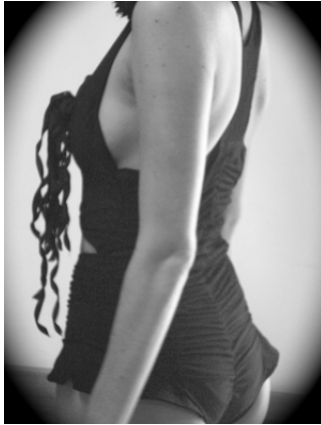
Figure 2. Side view of garment.   Figure 3. Back view of garment.

In the first reflective instance Student A created an online blog, after the Sample Review process, to highlight what she thought of her prototype once she saw it on the model and then *reported* on what she would do to improve it for the final fashion show. Students also *reasoned* about what they could do to make their swimwear better by offering *reconstructive* advice by referring to disciplinary terminology.

Making a prototype of the swimsuit was useful to discover any mistakes and reflect on the overall design and fit. We all had a look at our designs on a professional size ten model….

I wasn't too sure about the pom-poms on the shoulders. I was scared it was going to look too 'crafty'. However, using different material to the traditional yarn-made ones created a look far from 'crafty'…I also figured that the bra cups were hideously small, so these needed to be enlarged by at least one centimetre.

I was pretty happy how the ruching came out. Though I had to be mindful of the gathers bringing the swimsuit in too much. When the model tried the swimsuit on, it was really tight around the bottom and loose up the top. To fix this, I needed to expand the ruching pattern pieces by one centimetre on each side. For the top seam at the back, it needed to drop by one or two centimetres.

Overall, I was pretty happy with the outcome of my first swimsuit draft. Not much had to be changed for the final piece. Just a few tweaks within the swimsuit back, bra cups and the tassels were removed. I was on the home straight…

Reporting/responding – focus is on 'the fit' so visual/corporeal modes for the artefact are essential at this stage

She is *relating* her own ideas and explaining her decision-making eg why didn't they look crafty? Why were woollen pom-poms ok? She is *reasoning*, using discipline language and knowledge in response to a visual and corporeal representation of her design –only after she saw it on a real body.

She is *reasoning* about her choices in making the prototype & using this knowledge to *reconstruct* and improve her professional practice

Use of discipline terminology and use of *reasoning*

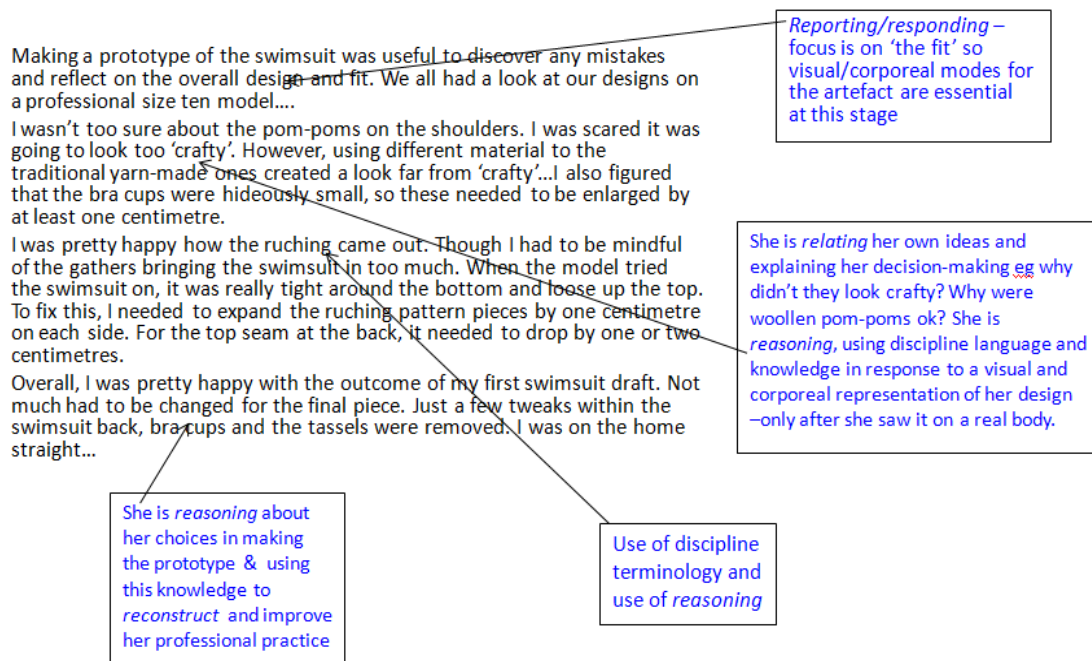Figure 4. Reflective instance 1: Annotated excerpt from Student A's online blog.

This reflection, an online blog, is expressed in written mode however, in order for the student to provide a written reflective commentary it was essential for them to have had visual and corporeal stimulus by seeing their garment worn. Feedback from both their peers and teacher also allowed for critically analytical and professional discourse. This develops the students' professional knowledge and skills as a Fashion designer.

The online blog allowed students to progressively document their feelings about the 'making' process. The blog documents how these skills transfer to their later 'making' experiences, ensuring that reflective practice is transformative.

Case Study 2 - Music

Descriptive Background

In an elective subject entitled: *Sex, Drugs and Rock n Roll,* students are expected to

reflect on a performance (live or videoed) in music. Over a period of one semester students learn ways in which to deconstruct and engage with this performance. They then select the most suitable mode to represent a reflective commentary throughout the course on aspects of the performance by relating it to their and other's personal, social and cultural lives. The 'reflective situated events' undertaken by students can take multiple forms such as improvisatory musical performance in response to the performance, podcasts, online blogs or ezines, as long as reflection is present..

Various conceptual and musical elements of the performance are discussed. Integral to this process is the cumulative nature of the reflective task so that in-depth analytical development is evident as both teacher and peers comment on each other's work.

Analysis and Discussion

Similar to the Fashion example, Reflective instance 2, Student B's online blog describes what she will do as her reflective task, again illustrates the weaving of reflection, multi-modality and disciplinarity. In this instance the student is reporting how she will present information about a particular musical style. Choosing the mode to present the final work was a reflective process for the student as an online podcast was a mode of communication that she had not previously used.

My name is _____ and I am a new wave addict...
I don't know how or when it started but all my life I've loved music coming from the late 1970's through to the 1980's and all it has to offer. As a recreational musician/singer I've always been enamoured with the strong and eclectic female vocals featured in the music of this period and genre – one of my favourites? Debbie Harry and Blondie. I've always loved how they never stuck to one specific genre and seemed to take influence from all over the music community from hip hop to ska.
I'm going to look at Blondie the band as an icon of the 1970's/1980's pop art/new wave scene as they took the kitschy and the banal – effectively turning the ordinary into the extraordinary through an artistic lifestyle and experimentation rather than a specific musical style. I am going to have a look at are Heart of Glass, One Way or Another and Rapture. I am going to have a look at the musical side – analyse the musicality and have a look at the experimental nature – pick apart some of the styling's they used in the song and have a look at how they are different, but what makes them intrinsically Blondie – and then look at Blondie the character performing these pieces – does she change with the song? Are there common characteristics of the character throughout? Just who is she?
A podcast is appropriate so I am able to use music examples in real time. Its also a chance for me to do some experimenting of my own with new software and music programs!

The student is *reporting* on and *responding* to the New Wave Style of music, using technical nouns and adjectives from the discipline

They *relate* the text to their own experience as a musician and *reasons* why the style was so popular

The students is *reporting* that their choice of podcast is best as having music played in 'realtime' was essential

They are *reasoning* and *relating* this decision to their past experience

Figure 5. Reflective instance 2: Annotated excerpt from Student B's online blog.

In the written text the student uses terms such as eclectic, genre, hip hop, ska, etc. to demonstrate her knowledge of the discipline. She also *relates* the text to herself as a recreational musician/singer and fascination with the style because of its broad and eclectic influences. She *reasons* about the elements of musicality and experimentation of character, art and lifestyle of the chosen music style and why these aspects made it so popular.

In her final assessment, (the online podcast) the student uses an oral voice-over and also audio (music) and written modes woven together to express disciplinary knowledge and critical reflection. The voice-over explains the impact of this musical style but also reflects on how this style relates to them and others personally, socially and culturally. In this assessment the modes connect and create new meanings through

this integration. As the music plays the student refers to various elements of the particular songs selected.[3]

While students were selecting a music genre to analyse they were expected to provide a review on another student's work. Here Student C comments on the benefit of this process:

> Being able to read and comment as a peer review on another students' eZine articles really enabled me to broaden my knowledge of music. I was able to read about songs I had never heard of and see that person's point of view. I realised after reading these eZines that, although I had a good focus, I lacked in my writing of the argument, which was then confirmed when I got my feedback. (Reflective instance 3: Student C)

Critical reflection in this music unit is threaded throughout the learning and teaching journey (Dillon, Seeto and Berry, 2010). At the end of the unit Student C provides a personal reflection (Reflective instance 4) on the overall approach taken, which illustrates how reflective levels and discipline knowledge are expressed through written modality.

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[3] See http://www.youtube.com/watch?v=bC26Nmy_bdU&feature=player_embedded

Perhaps first attracted to *Sex Drugs Rock 'N' Roll* (sic) by its
unit title, I wasn't totally sure of what to expect. Having
worked in the radio industry alongside independent
musicians for the last six years, I've constantly analysed
music on merit for airplay consideration and reviews.
Previously studying musicology in some depth, I went into
the unit with the preconception of an inability to in fact
learn anything new, but rather '7' my way through.

> The student is *relating*
> to the course of study
> through prior
> professional experience

Quite early on in the introduction to the unit, I developed
the opinion that it was a total wank . Here I was being
lectured on how to analyse music using terminology
invented by the lecturer. We weren't talking pitch, melody,
rhythm, harmony, texture or dynamics, but rather, "groove,
hook, sound."

> Regular use of
> discipline and
> professional jargon

Soon, though, as I was introduced to the concept of
ethnomusicology and it became clear that this wasn't about
musical theory that overanalyses, but instead focused on
studying modern music in the context of its social and
cultural surrounds (Dillon 2011a), I realised just how
different, intriguing and useful the approach was. (Student
C)

> The student is
> *responding* by
> offering opinion at
> the commencement
> of the course

> Then starts to
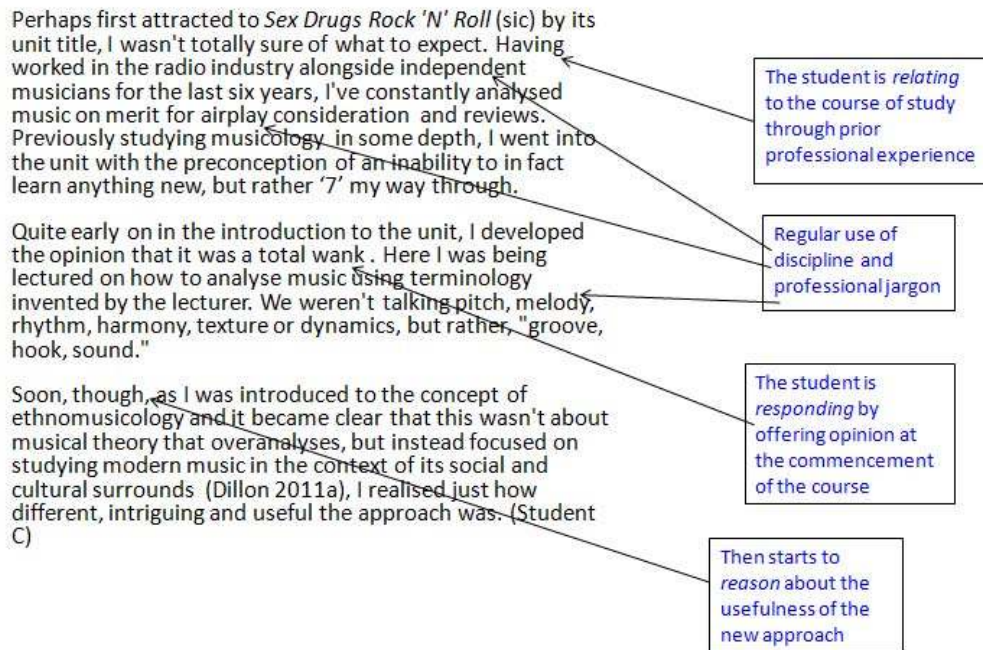> *reason* about the
> usefulness of the
> new approach

Figure 6. Reflective instance 4: Student C's annotated reflection on unit.

Taking an approach whereby students need to think how music related to them
personally, socially and culturally aligns with Cope and Kalantzis' (2000) theory that
"modes of meaning are dynamic representational resources, constantly being remade by
their users as they work to achieve their various cultural purposes" (p.5

Across the duration of the Music course students not only analysed music via the
written mode but are required to use this music as central to the conversation by
critically analysing it. Using multi-modal representations of this music they are asked to
examine their personal, social and cultural relationships with this music by reflecting on
interconnectivity. The students use both musicological and semiotic analytical tools in
their reflective discourse and students tend to work through a process of deconstruction
and then reconstruction moving from an ontological to an epistemological focus.

Case Study 3 - Dance

Descriptive Background

In Dance, reflective activity is constant and cumulative. Rather than students reflecting this skill as a written task or online interactive media at the end of a unit, they are required to develop ongoing reflective practitioners (Schön, 1983). They demonstrate these skills by reflecting *on* and *in* their dance performance throughout their course. Doughty and Stevens (2002) state that: "reflective thought and judgment are central to the artistic process and established features of arts pedagogy" (p. 1).

In the first in a series of four practical units, students are required to develop their practical skills in dance and are then examined at the end of the unit. This reflective example explores a video taken of a dance class one week before the final examination.

Analysis and Discussion

The following still shots taken from a dance class show the teacher providing feedback to a student after observing them during a warm-up exercise. The teacher is demonstrating disciplinary aspects of posture and movement through verbal and gestural modes.

1. Imagine their head being held by an invisible string from the crown

2. Have the student project their 'energy line' forward and up. (This is making corporeal reflection a continuous process.)

Figure 7. Reflective instance 5: Annotated still shots from videoed ballet class.

This reflective example is enacted in the moment. It involves visual and gestural demonstration as well as oral instruction by the teacher. As the student watches herself in the mirror it involves visual and corporeal reflection in action. She is asked to 'feel' the stretch and the position of the body. This enables her to alter movements and position in order to improve her overall dance practice. Once the student actually enacts these requests the teacher responds via oral, visual and gestural instruction and tips. It is inherently *relational* as one knows one's own body and feels its limits. The student *reasons* through the body about how to move and position the body to *reconstruct* the series of movement to achieve the most fluid, technical and aesthetic outcome.

As a 'reflective practitioner' the dance teacher reinforces the idea that students use self-conscious reflection in practice – using visual body prompts so it becomes subconscious during performance.

> You need to develop awareness of where you are. Not during the exercise. You two are still looking around at what you're doing. Make sure – you can do that when you're practising at home. "Where's my leg here, right, this is what it feels like". But when you're doing the exercise for the exams and you look around for what's going on you'll definitely be marked down. Because it changes where your weight is. By all means look into it but when you're doing the exercises carry your head – not during the exercises, not during the 'performance'. (Reflective instance 6: Teacher feedback)

The teacher here is asking the students to be consciously 'reflecting' on their dance technique and awareness of their bodies through the use of discipline jargon such as 'energy lines' and 'muscle tension'. This involves *reporting* on what they are doing; *relating* their movement to previous attempts or others; *reasoning* about what it is that their body is doing and is capable of doing and *reconstructing* their practice in order to improve professional practice by reflecting in action.

Student D reflects on the practice that takes place in the studio with the teacher:

> To think about being aware of yourself in space- Where your extremities actually are rather than where you think they are. How your body feels when it is working...He often speaks about energy lines and pathways of energy. This way of teaching makes us think about the overall finished product of a movement. It gives it a fuller and more nicely executed appearance as it makes us extend our lines and think about where the movement is going. For instance transferring balance from two feet to one foot-a whole new set of muscles must activate and he uses the term energy line to symbolise what is working...Reflection is very important otherwise there is no progression as you do not reflect upon what you have learned previously. Dancing is all about learning the muscle memory of a movement and sometimes it can take a very long time (Reflective instance 7: Student D)

Dance as a performative art form requires reflective thinking constantly. It is a critical part of the dancer's practices as it "involves the learner in questioning themselves and their situation, making judgments about their performance and prompting action" (Doughty & Stevens, 2002, p. 2).

Comparative Discussion

It has been shown that each of the courses of study of Fashion, Music and Dance approach reflective practice via distinct disciplinary and professional methods despite the discipline areas all being recognised institutionally as Creative Industries.

In Fashion, written reflections presented via online blogs and oral discourse with their peers and teacher show how students reflect on an artefact that they have created and how they might improve both their technical skills and ultimately the product. In order to do this they needed to view their original prototype on a live model so that corporeal, spatial and visual modes are enacted.

In Music, written reflections in online blogs and oral reflections via podcasts present the student's interaction with, and opinion of, a musical performance. Students are expected to comment on how this performance relates to them personally, socially and culturally. To assist this process they needed to enact audio, visual and linguistic modes to watch, listen to and deconstruct essential elements of the performance and question the purpose and impact of the performance.

In Dance, spontaneous performative reflection is enacted while the students prepare for their final examination during a ballet class. The students continuously view themselves and receive oral feedback from the teacher as to how to improve their physical practice by examining the capacity of their own bodies, impact on prospective audiences in the space, and working as a team. In this way, they are prioritising embodied, visual, audio and spatial modes of reflection.

Table 2 outlines how each discipline realised and developed the 4 levels of reflection: reporting and responding; relating; reasoning and reconstructing via multiple modes. It can be seen that Fashion, Music and Dance favour some modes over others but generally adopt multi-modal approaches to teaching and learning. This enables students to ultimately develop and improve their awareness and understanding of the unique disciplinary practices. This is realised via social discourse with peers and mentors; modality use and choice; and reflective practice. The evidence strongly points

to the fact that reflective critical thinking plays a large part in the learning and teaching journey in each of the disciplines.

Table 2. Disciplinary methods and modes of reflective practice

	The disciplines	Fashion	Music	Dance
The 4Rs	Reporting and responding	Describe what techniques they use when creating (linguistic, visual)	Present facts and samples of a particular musical style (linguistic, audio)	Being able to describe what they are doing physically to music (linguistic, embodied, visual, audio, spatial)
	Relating	Relates prior experience of either themselves or others to what they have made (linguistic, visual, spatial)	Discuss & show how the music connects with them personally, socially and culturally (linguistic, audio, visual)	Relate to their own bodies and what is achievable due to limitations and/or possibilities (embodied, visual, spatial)
	Reasoning	Discuss and use various options as to how to improve their artefact (linguistic, spatial, embodied, visual)	Reason about their selected mode of communication and style of music chosen (linguistic, visual, audio)	Reason through the body by changing their movements or confirming their embodied practice (embodied, visual, spatial)
	Reconstructing	After seeing the artefact on a body the students can see what needs fixing and then they reconstruct by finding solutions (spatial, visual, embodied, linguistic)	Reconstructs how the music style could be improved or interpreted at the time of aurally hearing and/or visually seeing it (linguistic, audio, visual)	Reconstruct their practice as a result of a number of influences: feedback, watching others, or 'feeling' it themselves (embodied, visual, spatial, linguistic)

While there are differences between the three creative disciplines, we identified certain multimodal 'triggers' that are employed by creative artists/higher education teachers that enable more rigorous and critical reflective practice. For example, the interrelationship of visual, corporeal and spatial modalities in Fashion as the garment was modelled live, 'triggered' a disciplinary reflection related to size, fit and fluidity, enabling a reconstructive learning experience. Similarly, the combination of audio and visual modalities in Music 'triggered' an embodied disciplinary response in relation to the ways in which music can move one in very personal, yet socio-culturally and historically inscribed ways. In Dance, the simultaneous spatial, visual, audio and corporeal modalities 'triggered' a self-conscious reconstruction of technical and

aesthetic disciplinary practice. These triggers are essential components of reflective practice in these disciplines as they enable the sub-conscious to become conscious, or the invisible to become visible – opening them up to informed disciplinary critique and enabling improvement with clear self-awareness.

Conclusion

Reflective critical thinking is integral to the development of professional disciplinary practice. Each of these creative discipline areas requires aesthetic and technical inquiry into their own distinct and unique elemental features. This is necessary for students to embrace professional knowledge and understanding of practice in context. As a result of these processes and structural domains, various representations of knowledge may be required depending on what is being learnt or taught as well as the context in which this occurs. Whether discursive (written or oral) or performative (visual, spatial or embodied) the practice of reflection can be wide and varied.

Despite these differences it has been argued that the purpose of reflective activity in higher education generally, is to develop students' capacity to reflect on disciplinary components of their study. This can take multiple forms and is often at the discretion of the student, with guidance from their teachers. In creative disciplines such as Fashion, Music and Dance reflective practice enables students to improve and gain an in-depth understanding of disciplinary knowledge and ways of working in professional contexts. Attending to all levels of reflection in teaching and learning, using multimodal 'triggers' to enable depth of understanding, and allowing students to participate positively in the discourse of the discipline, are highly valued and impact greatly on reflective practice. Without the interactivity of all three areas: reflection, disciplinarity, and modality; reflective practice as a whole will remain an afterthought

or a superficial exercise, rather than an integral way of learning in higher education disciplines.

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