Craft, Process and Art: Teaching and learning music composition in higher education

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This paper explores models of teaching and learning music composition in higher education. It analyses the pedagogical approaches apparent in the literature on teaching and learning composition in schools and universities, and introduces a teaching model as: learning from the masters; mastery of techniques; exploring ideas and developing voice. It then presents a learning model developed from a qualitative study into students' experiences of learning composition at university as: craft, process and art. The relationship between the students' experiences and the pedagogical model is examined. Finally, the implications for composition curricula in higher education are presented.

Introduction

Like any creative endeavour, music composition has often been seen as a mysterious process that is undertaken by an elite few. At university and conservatoire level, composing has usually been taught using the 'eminence' model (Barrett & Gromko, 2007 p. 7; Barrett, 2006), where there is a one-to-one relationship between the teacher (expert composer) and student (novice composer). Under this model, the aim is to train the student to become a professional composer. However, over the last 20 years, as composition has become a more prominent component of a general school music education, higher education has responded by introducing general

composition classes which emphasise learning composing as a way of understanding music, rather than to necessarily train professional composers. As Wiggins (2007 p. 465) concludes, 'since all people are capable of inventing musical ideas, it would seem that all music learners should, at some time in their education, have opportunities to explore this capability as part of their learning.'

Given the development of general composition courses in higher education, one might expect there to be a body of research into teaching and learning music composition in higher education. However, as Barrett (2006 p. 196) argues, 'our understanding of those factors that contribute to teaching and learning in musical composition is still limited'. We have found a range of case studies of primary and secondary school students' experiences of composing (see for example Stauffer, 2002; Kennedy, 2002; Kennedy, 1999; Hogg, 1994; Younker, 2000; Folkestad *et al.*, 1998; van Ernst, 1993; Bunting, 1988; Bolden, 2009), and some of professional composers (see for example Collins, 2005; Nuhn *et al.*, 2002; Reed, 1990; Han, 2004; Emmerson, 1989), but few that examine student's experiences of composing in universities and conservatoires.

One small body of research in higher education used case studies to illustrate the contrast between novice and expert composers (Barrett, 2006; Barrett & Gromko, 2007; Younker & Smith, 1996; Kennedy, 1999), while another study looked at the compositional process of a group of university music students being introduced to composition (Martin, 2002). Other studies investigated the processes of pre-service education students undergoing composition tasks designed to model teaching composition at school level (Byrne *et al.*, 2003; Hewitt, 2002; Kennedy, 2004). Finally, a small body of work explicitly addresses composition pedagogy at university level (Carbon, 1986; Barrett, 2006; Barrett & Gromko, 2007; Beck, 2001).

In this paper, we explore pedagogical approaches to teaching and learning composition. We present this paper in 2 parts. In part 1, we present a teaching model based upon our analysis of the literature. In part 2, we present a learning model based upon an empirical study into students' experiences of learning composition in two distinct third-year university courses. We conclude the paper by discussing the relationship between the models and proposing the implications of the pedagogical models for music composition curricula.

Part 1 – Teaching composition

There are explicit and implicit pedagogies of composition that are used to design and deliver composition curricula in schools and universities. These pedagogies are exemplified in the design and delivery of composition courses, the approaches illustrated in the literature on learning and teaching composition and the empirical research into teaching and learning composition. In this

section, we will discuss the latter two areas as the former is explored in another paper (Lupton & Davidson, manuscript). Even though our emphasis is on higher education pedagogy, we have drawn on the school composition literature due to the more extensive body of research into teaching and learning composition at school level versus higher education.

It should be noted that we have drawn upon a sample of the literature in order to extrapolate pedagogies of music composition that seem to be prominent, and that our analysis is not exhaustive. Thus, we see our examination as exploratory. Accordingly, we recommend that more work be carried out in identifying a range of pedagogies of music composition, both theoretically and empirically.

Can composition be taught?

Before examining pedagogies of music composition, a debate that should first be addressed is regarding whether composition can actually be taught. Brindle claims that that 'there are two strongly held opinions: one is that composition *cannot* be taught; the other that composition *should not* be taught' (1986 p. 1) [our emphasis]. Further, Brindle declares 'we are born composers and not made' (1986 p. 1). But there must be some belief that composition can be taught and that composers can be 'made', otherwise there would not be courses and textbooks devoted to teaching composition.

Perhaps it is possible to teach some aspects of composition such as knowledge, techniques and processes, while other aspects such as creativity, intuition, aesthetics and imagination are qualities that are somehow learned, or that one is born with them (Brindle, 1986; Wilkins, 2006; Hindemith, 1942; Miller, 2005; Cope, 1997; Dogani, 2004). In addressing this issue, some authors propose that the role of the teacher is to draw out creativity (Lockwood, 1955; Beck, 2001). Such views are exemplified by Beck (2001 p. 55):

> "How do you teach composition?" is a question I am sometimes asked. My answer is generally "You can't." Composition cannot be taught, in the strict sense of the word. Technique can be taught via such forms as counterpoint, harmony, instrumentation, and computer programming. Aesthetics can also be taught (to a degree) through extended analysis of and familiarity with the broad range of compositional approaches and styles found in music history…The creative aspect of composition cannot be taught. I can nurture, I can guide, I can suggest, I can cajole, but I cannot teach a student how to become creative. To be creative requires a leap of faith, tenacity of will, and a spirit of adventure. All students must discover the spark of creativity within themselves in their own time and at their own pace. My job as a teacher is to see the spark of creativity

within my students and then encourage their journey to its realization. Along this journey it is also my job to help the student find his or her own creative voice.

At this point, it is worth noting that the literature on teaching composition at school level does not seem to engage in the above debate, rather, this perspective seems to be expressed primarily in the literature relating to higher education. This may be due to composition being a compulsory part of the national school music curriculum in many countries where children and young adults are encouraged to engage in composition for 'self-expression' and 'individual growth' (Barrett, 2003 p. 5), rather than as training to be professional musicians and composers.

Composition pedagogical model

We developed our composition pedagogical model through analysing the selected literature for the implicit and explicit aspects relating to teaching and learning music composition. In particular we asked 'what are the conceptions of music composition pedagogy portrayed in this source?' and 'what are the processes of teaching and learning music composition presented by this source?' Our analysis was necessarily coloured by the empirical study, as we naturally noticed aspects of similarity and difference between the experience of students in our study and the pedagogies of music composition as presented in the literature. Thus the empirical study to some degree informed the theoretical model.

The outcome of our analysis was a group of themes which we have constructed as a composition pedagogical model. The themes are: 1) *Learning from the masters;* 2) *Mastery of techniques*; 3) *Exploring ideas*; and 4) *Developing voice.* The first two themes deal with content to be learned, while the third and fourth themes deal with the creative process.

In deciding on a theme as being related to content or creativity, we asked of the theme 'what knowledge and skills; and what processes need to be developed in order to learn music composition?' We allocated these as content or creativity based on our judgement of what is *taught* (i.e. teacher-centred) versus what is *learned* (i.e. learner-centred), which is consistent with the debate mentioned previously on whether composition can taught or is learned. Specific knowledge and skills were considered able to be taught and thus were bounded, whereas creating an environment which allowed students to develop processes was considered as unbounded. Freedom, reflection, experimentation, imagination, intuition, divergent thinking, personal style and individual expression were common unbounded aspects associated with creativity as seen in the music composition literature. When taken together, the content and creativity themes are consistent with the idea of creativity as being about creating a product that is somehow novel and original, through an open process that may be transformative for the creator (Sternberg & Lubart, 1999 p.3; Kleiman, 2008).

It should be noted that the themes do not exist independently of one another; rather they are all used to a greater or lesser degree within all composition pedagogies examined in the selected literature. Also, as we will demonstrate, some themes are more prominent and developed in the literature than other themes.

Learning from the masters

The first theme, *Learning from the masters,* is a time-honoured approach based on *knowledge*. In the traditional sense of *Learning from the masters*, the student is apprenticed to the master and learns from watching and emulating the style of the master (Hindemith, 1942p. 3). In a more contemporary approach, this theme may involve explicit imitation of particular composers and reproduction of musical styles. It would also incorporate listening, transcription and score analysis of various composers, time periods, styles and genres (Cope, 1997 p. 11; Miller, 2005 p. 7; Beck, 2001). These activities would result in students building a knowledge base with which to frame their own compositions (Wiggins, 2005; Wilkins, 2006; Beck, 2001; Berkley, 2001; Berkley, 2004), and to broaden their 'musical perspective…so that they are less apt subconsciously to plagiarise the styles, ideas, or contexts of other composers' music' (Cope, 1997 p. 8).

This theme lends itself to the use of teaching strategies such as lecture, demonstration and modelling. As described above, learning activities and assessment tasks might consist of the completion of short exercises emulating particular composers or styles, and where students identify compositional techniques through score analysis and listening.

Mastery of techniques

The second theme, *Mastery of techniques* is based on *skill*. It holds that one must learn the compositional techniques for them to become a set of tools which are then drawn upon subconsciously (Emmerson, 1989 p. 136, 142; Keane, 1980; Hindemith, 1942). In this theme, students are encouraged to try out various compositional techniques, with some textbooks providing suggested exercises at the end of each chapter (see for example Cope, 1997; Miller, 2005). In its most limited form, this theme could be considered atomistic, where students are mastering discrete skills in an approach akin to 'painting by numbers' (Stephens, 2003 p. 115), while in its most expansive form, it could be considered holistic where students are freed from the techniques (Hindemith, 1942 pp. 11-12; Berkley, 2001; Berkley, 2004).

Like *Learning from the masters*, teaching strategies would include lecture, demonstration and modelling, and learning activities and assessment tasks might consist of the completion of short exercises demonstrating understanding and application of particular techniques.

Both *Mastery of techniques* and *Learning from the masters* concern the learning of disciplinary content in the form of knowledge and skills. Teaching strategies involve creating an environment where students will learn and practise content knowledge and skills deemed important by the teacher. As such, both these themes could be regarded as teacher-centred. The remaining two themes are qualitatively different as they concern the creative *process*.

Exploring ideas

The third theme, *Exploring ideas* is based on *process*. In this theme, students are encouraged to work continually to refine their compositions (Miller, 2005; Brindle, 1986). The emphasis is on students 'revising and extending' their work (Wiggins, 2005; Webster, 2003), and engaging in action learning where self-reflection is an important part of the process (Emmerson, 1989; Wiggins, 2003; Burnard & Younker, 2002). Trial and error and experimentation is an accepted and encouraged problem-solving approach (Hewitt, 2002; Kennedy, 2004; Bolden, 2009; Berkley, 2004; Burnard & Younker, 2004) .

The stimuli that students draw upon to explore ideas may be the skills and techniques from the previous two themes, but might also be objects, sound samples, literature, visual art and other musical and non-musical stimuli (Martin, 2002; Kennedy, 2004; Hewitt, 2002). Students may also be encouraged to draw upon their senses, feelings and intuition (Carbon, 1986; Keane, 1980).

In this theme, teaching strategies allow freedom and space for compositional ideas to develop and opportunities are provided for students to receive formative feedback (Miller, 2005; Wilkins, 2006; Wiggins, 2003; Cope, 1997; Bolden, 2009; Wiggins, 2007). The teacher's role is as consultant, guide and advisor (Burnard, 1995; Ruthmann, 2007; Barrett, 2006; Berkley, 2004). Learning activities include presenting and workshopping work-in-progress, collaborative composition, peer feedback and reflective practice (Fautley, 2005; Faulkner, 2003; Kaschub, 1997; Burnard, 1995; Kennedy, 2004; Byrne *et al.*, 2003; Wiggins, 2005; Bolden, 2009; Wilkins, 2006; Wiggins, 2007; Burnard & Younker, 2008). Assessment strategies could include reflective journals and peer assessment (Kennedy, 2004), and would allow freedom for the student to choose their own path (Burnard, 1995; Burnard & Younker, 2002; Burnard & Younker, 2004). As such, this theme could be regarded as student-centred.

As a 'creative' theme, *Exploring ideas* is inclusive of both the content themes (*Learning from the masters* and *Mastery of techniques*). Accordingly, *Exploring ideas* depends upon the previous two themes to provide the material to develop. Thus, this theme could be considered holistic, as the emphasis is on the whole composition and 'learn[ing] from the process' (Miller, 2005 p. 7) rather than on discrete exercises and techniques of particular composers.

It seems that *Exploring ideas* is particularly prominent and developed in the school-based music composition literature where trial and error and experimentation is actively encouraged (Hickey, 2003; Kennedy, 2004), where composition is taught as 'creative problem-solving' (Berkley, 2004), and where the process is usually deemed more important than the product (Younker & Smith, 1996). It is also prominent in group composition approaches (Kaschub, 1997; Fautley, 2005; Faulkner, 2003). Not surprisingly, it is also seen in the research on teaching and learning composition with pre-service teachers in higher education, where group composition tasks are used to model approaches that pre-service teachers might be expected to use in their own classroom (Hewitt, 2002; Byrne *et al.*, 2003; Kennedy, 2004) .

Developing voice

The fourth theme, *Developing voice* is based on *expression*. *Developing voice* is an overarching theme, as it includes the previous three themes. It is assumed that if a student learns composition based on the previous three themes, that they may 'discover the spark of creativity' (Beck, 2001 p. 55) which will allow them to develop their personal style (Cope, 1997p. xii), individual voice (Miller, 2005; Barrett, 2006; McMillan, 1999) and ownership of their work (Berkley, 2004).

This theme is the most underdeveloped in terms of suggesting teaching strategies, which is consistent with a more 'hands-off' approach to allowing creativity to emerge (Beck, 2001). Thus, the role of the teacher recedes, with the emphasis on giving the student freedom to find their own creative impetus resulting in a personal style and individual expression. The teacher's role is as advisor and mentor as in the previous theme. Teaching strategies that are explicit are based on 'probing intentions', 'picking up cues' and problem-solving where the teacher's intention is not to impose their own views or be prescriptive (Barrett, 2006 p. 211-212; Beck, 2001). As for *Developing ideas*, teaching and assessment strategies are student-centred in allowing the student a range of choice and freedom without constraints or limitations (Burnard, 1995; Burnard & Younker, 2002).

It is worth noting that the emphasis on group composition in school music composition pedagogy could mitigate the development of individual voice (Stauffer, 2003 p. 108). This seems

appropriate, given that in the case of school-based composition, the emphasis seems to be on expression, meaning making (Barrett, 2003) and empowerment (Hogg, 1994) rather than necessarily the development of a unique and individual voice.

To summarise, four themes were identified in the literature on teaching and learning composition which we have combined to form the pedagogical model (see Table 1). We will return to the model later in this paper.

Table 1 - Composition pedagogical model

1. *Learning from the masters*	knowledge	content	teacher-centred
2. *Mastery of techniques*	skill	content	teacher-centred
3. *Exploring ideas*	process	creativity	student-centred
4. *Developing voice*	expression	creativity	student-centred

In the next section we report on the results of an empirical study into university students' experiences of learning composition.

Part 2 - Learning composition

The students participating in the study were drawn from two distinct university composition courses at an Australian university. The courses were *not* designed for students who wanted to major in composition; rather they were general composition courses that were offered as electives within the music degree. The first course was entitled *Sound Composition*, and was offered as a third year elective in the Bachelor of Music Technology degree. The second course was entitled *Jazz Composition,* and was offered as a third year elective in the Bachelor of Music degree (jazz studies).

Sound Composition

The *Sound Composition* course was designed with creativity as its basis. The course description stated:

> This course is designed to facilitate creativity in students who wish to produce original compositions for audio, MIDI and/or multimedia. Lectures and tutorials include compositional techniques, basic aesthetic principles, listening and analysis of seminal works and individual tuition (Coulter, 2005).

The music technology students (MT) worked individually on an abstract piece throughout the semester, regularly presenting work-in-progress to their peers and teacher for feedback. They

were then invited to submit their composition for the end of semester public concert. The teacher presented compositional techniques and listening examples, modelled the composition process and acted as a guide and mentor. The class learning activities were based around listening, discussion, formative feedback, trial and error and experimentation. The assessment for the course was entirely based around the one composition. This was broken down into work-in-progress reports on the composition, public performance of composition and a digital portfolio presenting the composition, artwork and program notes.

Jazz Composition

The *Jazz Composition* course was designed with craft as its basis. The course description stated:

> This course examines the work of key figures in jazz composition from Ellington to the present. The craft of composition, including rhythmic and melodic phrasing, motivic development, and form and structure is addressed. The emphasis will be on composing in various representative jazz styles (Denson, 2005).

The jazz students (J) worked individually on nine compositions (in the form of lead sheets) in the style of particular composers (e.g. Thelonious Monk, Antonio Carlos Jobim, Charles Mingus) that were submitted piecemeal over the semester. There was no concert or performance of the compositions. The teacher presented compositional techniques and listening examples. The class learning activities were based around listening and discussion. The assessment for the course consisted entirely of the submission of the nine compositions.

Participants

The participants were 19 students studying music composition (8 females, 11 males) as part of their music degree (only one participant was studying composition as their major study). The students were aged from 19 to 51 years, with 18 of the students aged between 19 and 24. The participants had a varied musical background. To enter the music technology degree, students were required to have a music background but were not required to be of performance standard. By contrast, the jazz students were enrolled in a performance degree and were required to pass an audition to enter the program. Over half of the students had previous experience with composition, at school and/or as a private endeavour. Therefore, when asked about composing, many of the students drew upon their previous experience, and often compared their experience in the course with their other composing experiences.

Methodology

The research approach underpinning the study was phenomenography. Phenomenography is a qualitative, interpretative approach that maps variation in the ways people experience a phenomenon (Marton, 1996). Phenomenography holds that there are a limited number of critically or qualitatively different ways that people experience a phenomenon (Marton, 1996).

The outcome of a phenomenographic study is a set of logically ordered categories, presented in an 'outcome space'. The categories are delimited from each other by the critically different aspects of the phenomenon as it is experienced. The categories are related, thus each of the categories gives meaning to the other. The categories are often related in an inclusive hierarchy (Marton & Booth, 1997).

Phenomenography is regarded as a reduced and 'stripped' description as it is only the critical variation that is represented, that is, the non-critical features are not described. The categories and outcome space map the variation in the experience of the group rather than of the individual. Thus, the experience of individuals can be distributed across the categories (Marton & Booth, 1997p. 114).

The study data consisted of semi-structured interviews with 12 students from music technology and 7 from jazz. The interviews ranged from 50-90 minutes and were subsequently transcribed verbatim. In the interview students were asked about learning to compose in the course and about the information they used to create their compositions. Specifically, they were asked what they learned by creating the composition/s, how they would use what they had learned, what information sources they used to create their composition/s and how they drew on that information. They were also asked about the practices of professional composers in relation to information sources. The students' compositions were not part of the data collection as the study was focused on their *reported* experience of learning to compose rather than on the product of this experience.

The transcripts were analysed via an iterative, non-linear process where similarities and differences in experience were compared and contrasted (Marton, 1996; Åkerlind, 2005). These were eventually mapped into categories that included a number of themes that exemplified the qualitative differences between the categories (Bowden & Green, 2005; Åkerlind, 2005). These themes were illustrated by quotations from the transcripts which demonstrated the essential characteristics of the categories. This research was part of a larger study and the results reported here constitute only part of the findings. A detailed report of the full study including methodology is published elsewhere (Lupton, 2008).

Learning composition: Craft, Process and Art

Three categories were created as a result of the data analysis. The categories are an aggregation of the two student groups, and as such they represent the similarities and differences between the ways students' experienced learning composition in the two courses. Overall, the music students reported experienced learning composition as:

1. *Craft*: Creating a composition through applying techniques
2. *Process*: Creating a composition through a process of discovery
3. *Art*: Creating a composition through expressing oneself

The categories are inclusive and hierarchical i.e. *Art* includes the experience of *Process* and *Craft*. There are two pathways that represent the two distinct groups of students. The music technology students experienced learning composition as C*raft*, *Process* and *Art* (see Figure 1) while the jazz students experienced learning composition as *Craft* and *Art (*see Figure 2*)*. In other words, the jazz students did not experience *Process*, a finding that will be discussed later in the paper.

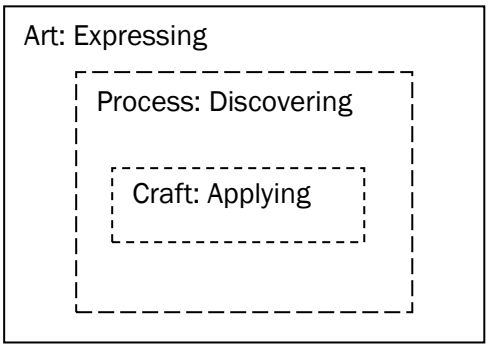

Figure 1 - Music technology students

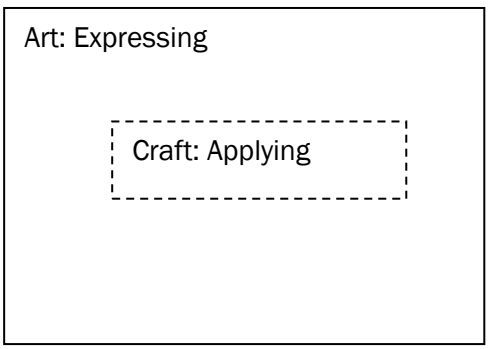

Figure 2 - Jazz students

Category 1 –Craft: Applying

In Category 1, students experienced the *Craft* of creating a composition through applying techniques. The music technology students applied technical skills and techniques in using sound manipulation software, while the jazz students applied compositional techniques that involved using the characteristics of particular composers, styles and genres. The students' aim was to demonstrate they understood and could use the techniques.

> Thomas (MT): The main reason I did that was so I could test out the software… It started off for me as an exercise and then the composition bit came afterwards really.

> Emma (J): I drew on the information, the dot point characteristics of the artists that we studied …I was just pretty much going by the formula.

The music technology students used a range of technical and sensory stimuli based around manipulating the sound. Thus, technical information consisted of using and understanding the sound manipulation software (such as Pro Tools and Cecilia). Sensory information included the student's aesthetic and affective reaction to the sound sample and subsequent manipulation; and their visual and aural analysis of the acoustic characteristics of the sound sample.

The jazz students drew on traditional music structures. These included the characteristics of a particular composer's approach (melodic, rhythmic, harmonic, stylistic, influences on the composer) and the characteristics of a particular musical genre (melodic, rhythmic, harmonic and stylistic).

> Emma (J): Okay, we studied a Wayne Shorter piece, or maybe four of them and we looked at his compositional elements as in how fast his chordal movement goes. Is he using rhythmic displacement? Is he using lots of minor chords, lots of major chords, how is the minor related to the major, if he does that? Is his melody moving around the chordal notes, or is it veering off somewhere else? Is his melody moving around the key signature of the piece? Sometimes they'll put a key signature and they won't even touch the key, or you'll end up in the key at the very end. Rhythmic displacement, melodic displacement, and syncopation, timber, colour, instrumentation, time feel, double time feel. Style, whether it's latin or funk, a ballad form. Is it through composed? Does it have a form? Is it an AABA? Does it not repeat itself? Is it a completely different half way through? Is it just an A section and a B section? Is it using the blues form? Is it using 'Rhythm' changes? [chord progression of 'I Got Rhythm'] Is it using the same chords to another standard but with a new melody? They're all the characteristics that we looked at.

Students developed their technical skills while creating their composition. The music technology students learned the software in order to manipulate sound, while the jazz students identified the characteristics of composers in order to reproduce the style of the composer and to demonstrate they understood the elements of music theory. Students were focused on doing the composition assignment as an end in itself, rather than self expression as will be seen in Category 3: *Art*.

Category 2 – Process: Discovering

In Category 2, creating a composition was experienced as applying techniques (Category 1) within a cyclic *Process* of discovery (Category 2). It is notable that this category was seen only in the experience of the music technology students, not the jazz students. This could be as a result of the course design, as the music technology students had the luxury of developing their composition over a semester, with frequent opportunities to present work-in-progress for formative feedback, while the jazz students were required to submit a composition for summative assessment almost weekly throughout the semester and did not gain formative feedback on their compositions in class.

The music technology students experimented with sound manipulation techniques using a process of trial and error. The composition was a two-stage process as students created the individual sounds and then created a composition using the sounds. The process was seen as individual problem-solving.

> Nicole (MT): [It was a] bit of a shock at first because I wasn't expecting independent learning…this course did say in the course outline it wasn't going to be teaching technical skills, it was up to you to use the programs and find your own way to achieve things, so it was very much an independent learning course… maybe it encouraged me to get out and find more information on my own…It very much encouraged me, the class, to go out and find your own answers or solutions because they weren't going to provide answers and why should they? Or why could they? It's a very personal thing composition, you can't really tell someone exactly what to do in the creative process.

Information was generated by the process itself. Each time the student experimented with sound, information was created that would further inform the process. The particular sounds generated their own intrinsic information which not only included the acoustic qualities of the sound (envelope, harmonics, frequency, sound wave), but the mood and feeling the sound evoked. The students' personal aesthetic was heavily involved in this creative process.

> Roger (MT): Information comes from probably the sounds I already have and what does that sound lend itself to, and the gap is probably information that you need to find out and so you research it

by applying the software and trying different things. Guess and check kind of method….It was so time consuming because you're learning as you go but it's more than that, it's that you're finding the best ways to use the information that you've got, so I would say that if I took a sound and I've treated it five different ways then those five different ways or five different sounds would be the information I've got.

Thomas (MT): I drew on the information I got from experimenting

Students' found that responding to this cyclic process led them to 'letting go' of the composition and not trying to control it. This included allowing the sounds to 'do their own thing'.

Craig (MT): I think most of the class realised that the composition actually took a form of its own. It actually took some of the control away from the composers themselves, but we were all actually quite surprised in how we thought we were the ones in control making this whole thing up, and in the end it was controlling us, making us do what it needed us to do for it… I had to let it go.

Margaret (MT): I'd hear this sound and the other sound was telling me to put it in so, then it'd have its own information… it ended up just being completely drawing on the sounds to do their own thing and follow their own noses.

Category 3 – Art: Expressing

In Category 3 creating a composition was experienced as the *Art* of expressing oneself. This category includes the preceding categories; however (as described above) this inclusivity is different for the two groups of students. The music technology students used the *Craft* of applying techniques in a cyclic *Process* of discovery in order to express themselves through an *Art* form. By contrast, the jazz composition students did not experience the *Process* category. Their experience consisted of using the *Craft* of applying techniques to express themselves through an *Art* form.

The students' aim was to create a composition that expressed their personal aesthetic and identity.

Aaron (J): I think the most important thing is that you sort of, build your identity. Not just build a bunch of techniques [Category 1] but build your own identity [Category 3] …The idea is not to just be a base of like compositional techniques or whatever because then you'll just be like a robot or a computer…So the idea is to learn the techniques [Category 1] and then you can free yourself up to make your identity known [Category 3].

Roger (MT): You're taking something personal that means something to you and expressing it in the most artistic way possible.

Students said that it was important to understand the compositional techniques in order to draw on their own creativity.

> Anne (MT): You've got to know those principles to start off with [Category 1] but really they don't matter because the creativity comes from inside of you [Category 3].

The music technology students in particular made a strong distinction between the 'craft' of music technology and sound engineering, and the 'art' of abstract sound composition.

> Margaret (MT): I've always wanted to do an art of some type and then when I started here you learn [sound] engineering, and you learn [sound] production and it's all general knowledge that it's good to know but there's no art in it whatsoever. It's all just craft and so I've been waiting, and waiting and waiting for a discipline inside music technology to come along where I could apply art…I learnt the actual discipline of sound composing… It [music technology] was being taught as a craft and not as an art.

Craft, Process and Art

As evidenced by the empirical study, students experienced learning composition as *Craft*, *Process* and *Art*. The categories are nested, where *Process* includes *Craft,* and *Art* includes *Craft* and *Process*. There are a number of similarities between the empirical study and the pedagogical model presented in Part 1 of this paper. In the next section, we discuss the implications of these similarities for music composition pedagogy.

Teaching and learning music composition

In juxtaposing the pedagogical model with the model from the empirical study a strong relationship can be seen (see Table 2). In both models, the themes and categories form an inclusive hierarchy. Both models include knowledge and skills in relation to compositional techniques and both include the creative process that seems essential in developing the composers' identity and self expression.

In comparing the two, it can be seen that the emphasis placed on various pedagogical themes in the two composition courses influenced the students' experience, as the music technology students experienced all three ways of learning composition (*Craft*, *Process* and *Art*), while the jazz students did not have *Process* explicitly built into their course. The distinction between the two courses as seen in the course description cited earlier is also borne out in the experience of the students, as *Sound Composition* explicitly focused on 'creativity', while *Jazz Composition* explicitly focused on 'craft'. Furthermore, *Sound Composition* seemed to be student-centred,

while *Jazz Composition* seemed to be teacher-centred. Thus, in *Sound Composition* the emphasis was on *Mastery of techniques* and *Exploring ideas*, while in *Jazz Composition* the emphasis was on *Learning from the masters* and *Mastery of techniques.*

Table 2 - Teaching and learning composition

Teaching composition	Learning composition	
Learning from the masters (knowledge)	***Craft*** - applying techniques	Content
Mastery of techniques (skill)		
Exploring ideas (process)	***Process*** - process of discovery	Creativity
Developing voice (expression)	***Art*** - expressing oneself	

How, then, does the pedagogical model and empirical study inform pedagogies of composition in higher education? The contrast between the experiences of students in the courses seems to confirm that there is a relationship between the design of composition curriculum and the learning experience. We therefore propose that academics designing and teaching composition courses in higher education could use both models to analyse existing curricula and to design curricula. For instance, a methodology to analyse composition curricula would be to analyse where particular pedagogical approaches may emphasise particular themes, and to consider the implications of this emphasis. This will serve to make pedagogical choices more explicit and purposeful for both teachers and students.

The empirical study was based on the experience of students in general, elective composition courses in higher education, while the pedagogical model was based on both school and higher education research. We recommend that more research be conducted into teaching and learning in composition courses in a variety of higher education contexts in order to build a range of pedagogical models.

Conclusion

Given that we have identified hierarchical models of teaching and learning composition it follows that university courses designed to target higher levels in the hierarchy would be likely to offer a richer and more complex experience for students. This is due to the higher levels incorporating,

but going beyond lower levels of the hierarchy. Likewise, it means that the lower levels of the hierarchy are necessary as a foundation for the upper levels. For instance, a higher education curriculum that was designed for Developing voice / *Art* would incorporate activities that encourage:

- understanding of stylistic context including prominent composers, time periods, styles and genres;
- application of compositional techniques;
- extensive experimentation and exploration, workshopping, presentation of work-in-progress and revision;
- informal and formal self-reflection;
- formative feedback from peers and teachers;
- individual and collaborative work; and
- student choice and freedom.

Assessment items that would target Developing voice / *Art* would include:

- submission of work-in-progress for formative feedback;
- reflective portfolio where students document their personal learning journey through developing their compositions, including the meaning they make from the process; and the way they have expressed themselves through their compositions;
- exegesis explaining the context of the work; and
- summative performance of compositions (live or recorded).

Thus, we agree with Wiggins' (2007 pp. 465-466) conclusions that when designing composition activities teachers should: allow students freedom to develop musical ideas; value students' existing knowledge; consider the richness collaborative experiences afford; and create an environment that 'fosters ownership and agency'. We propose that curricula designed to target Developing voice / *Art* would achieve these aims.

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