Assessing complexity. Group composing for a secondary school qualification

V i c k i   T h o r p e

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This article examines a unique music curriculum and assessment environment through the findings of a practical action research project carried out in secondary schools. I address two current international educational issues: the relationship between formal and informal learning in music, and how individuals' contributions in collaborative groups might be summatively assessed. Following this I present a model of group composing and explain how it was used as a pedagogical tool in secondary music classrooms. The purpose of this was to help students and their teacher to conceptualise collaborative composing, thereby leading to a clearer understanding and more valid assessment of the processes in which they were engaged.

Introduction

The New Zealand mainstream school curriculum (Ministry of Education, 2007) allows teachers very broad discretion, resulting in a wide diversity of curriculum content choices and pedagogical responses (Abbiss, 2011; McPhail, 2012a, 2013). Individual student achievement in music at senior secondary level is summatively assessed through a national qualification, the National Certificates of Educational Achievement (NCEA). The NCEA is a modular, standards-based series of three certificates, generally corresponding to the last three years of secondary schooling. NCEA Music achievement standards assess performing, composing and arranging, aural perception, research and analysis, and music technology. The NCEA achievement standards for composing, performance, and music technology (among others) are internally assessed by the classroom teacher. Samples of each teacher's internal assessment judgements and procedures are moderated annually by a national moderator.

When curriculum content incorporates the learning of students making music together in contemporary popular styles, then teachers often need to recontextualise informal music processes and ways of knowing into formal curriculum content (Jaffurs, 2006; Green, 2008; Allsup, 2011; McPhail, 2012b). NCEA Music assessments for composing exemplify this situation because students may gain credit towards their high school qualification by opting to compose music in small, collaborative groups, often rock or pop bands. However, the NCEA requires teachers to award grades of *Not Achieved, Achieved, Merit* or *Excellence* to individual students, not groups. This means that the teacher must individually grade the contributions of each student, as well grading the collaboratively composed music itself.

If individuals' achievements are to be assessed, then a teacher requires deep professional knowledge of the group's processes (James, 2012). However many New

Zealand music teachers are not composers, and may not have studied composing (McPhail, 2014). Furthermore, there is some evidence to suggest that teachers who do not have compositional experience and knowledge as *musicians*, rather than as *teachers,* may be less skilled in articulating compositional processes to their students than those who do (Odena & Welch, 2007).

Furthermore, as Burnard (2012a) contends, 'the unique challenge of musical creativity as it relates to music educational systems is to comprehend the multiplicity of forms, fluid roles and meanings defined in contemporary popular musics' (p. 8). Therefore, teachers may not have the necessary style-specific knowledge to correctly interpret what group composers are doing, and what each has contributed to the collaborative creative process.

In this article I will examine the theoretical basis for assessing group and artistic processes and then present an analysis of the ways in which composition has been conceptualised in music education. Following this, I will explain how a model of group composing, shared with two teachers and their group composing students, supported a shared conceptualisation of composing between them, supporting both the pedagogy and summative assessment of group composing.

Assessment and group composing

When compared with literature about collaborative and cooperative learning, there is relatively little about the assessment of group learning, particularly of individuals engaged in collaborative creative activities (Van Aalst, 2013). What there is reveals a number of assessment problems.

Firstly, what musicians achieve together may be a result of the interactions between them, rather than what each person did as an individual (Fautley, 2010). This is sometimes called distributed learning or distributed creativity where interactions, ideas and achievements are distributed across and between individuals (Salomon, 1993; Cole & Engeström, 1993; Cole, 1996; Sawyer & DeZutter, 2009; Glăveanu, 2011). Cognition is a complex phenomenon and within creative groups it is 'distributed – stretched over, not divided among – mind, body, activity and culturally organised settings' (Lave, 1988, p. 1). Therefore, it is very difficult, maybe even impossible to really understand what each person contributed to the creative process (Van Aalst, 2013). They may not even know it themselves.

Secondly, it is very difficult for an outsider, such as the classroom teacher, to gain a deep understanding of group processes without multiple, on-going interactions with the group members as they work (Johnson & Johnson, 2004). In order to do so, the assessor must possess considerable professional skill and knowledge of the processes in which the group is engaged, and have developed open, collegial relationships with them (Allsup, 2003; Tobias, 2012, 2013).

Thirdly, a group composing band often functions as an intense community of practice engaged in the 'relentless pursuit of musical passion' (Davis, 2005, p. 1). Learning in a community of practice (Wenger, 1998) involves expansive learning cycles where as individuals internalise the group's collective knowledge, and then externalise new learning to be subsequently shared and appropriated by others, who in turn internalise it (Engeström, 2001). Such communities are very appropriate places for beginners to learn alongside their more the experienced and knowledgeable peers (Vygotsky, 1986). Novices may be

peripheral to the creative process but are nevertheless legitimate participants (Rogoff, 1990). Novices are therefore entitled to claim shared authorship of the group's creative outputs (Fautley, 2010). Emotional safety is an essential element to a productive creative environment (Kratus, 2012), where the teacher may play significant role in its construction and maintenance, acting as guide, facilitator and cultural manager (Dillon, 2007; Wiggins, 2007; Welch, 2012; Cabedo–Mas & Diaz–Gomez, 2013; Carlisle, 2013). This means that there is potential for serious damage to the self-esteem and confidence of less experienced, or less creative group members if the teacher then awards lower, or even fail grades to some, and higher grades to others (Thorpe, 2009, 2012).

Fourthly, the aim of most artistic creativity is to express 'productive idiosyncrasy and individualized distinctiveness' (Eisner, 2007, p. 423). Composing is a subjective act, as is a person's response to it (Asmus, 1999; Hickey, 1999, 2002; Burnard, 2007; Murphy & Espeland, 2007; Wiggins, 2007). In contrast, assessment involves generalising valid and reliable indicators of academic performance. To do so requires a high level of objectivity on the part of the assessor. The objective assessment of artistic endeavours can also be quite controversial (Boyce–Tillman, 2003).

Finally, research suggests that when we work collaboratively, with no external assessment, then we are likely to be more productive than when we know that we will be assessed (Johnson & Johnson, 2004). This is particularly the case for novices or less confident workers whose performance may be negatively affected by external assessment (Wenger, 1998). Therefore, when considering group composing as a learning activity that must ultimately be summatively assessed and graded for a qualification, it is important to consider a theoretical frame that might support the generation of a learning culture where summative assessment is both valid and safe.

Theoretical frames

Social constructivist or cognitivist views of learning and achievement are well established modes of pedagogical thinking in music education and may be helpful when considering the pedagogies associated with effective learning in groups (Fautley, 2010). Certainly, the notion of distribution across group members supports teachers to consider how individuals interact with one another in a creative group, and to act accordingly. However, when it comes to navigate, interpret and ultimately assess group learning between and among group composers, collaborative interactions are not necessarily those of 'school students', but that of peers working together within artistic conventions prescribed by popular music, not the culture of the school and the classroom (Green, 2002, 2008). Therefore, the predominately cognitive view of social constructivism may not particularly helpful in this context because learning may be more than 'individual sense-making' (James, 2012, p. 191).

Socio-cultural pedagogical and assessment views are based on the assumption that learning is something that happens between people within their social environments and that 'learning is building knowledge through doing things with others' (James, 2012, p. 192). Learning is viewed as a mediated activity, where artefacts such as physical resources, but more importantly language, play a crucial role. Language is considered central to our capacity to think and arises out of relationships between people (Rogoff, 1990; Lave & Wenger, 1991). This implies that social relationships precede learning and

learning cannot happen without social interaction (Vygotsky, 1978). Therefore, intellect cannot be separated from 'the fullness of life, from the personal need and interests, the inclinations and impulses of the thinker' (Vygotsky, 1986, p. 10). When the assessment of group composing is considered as a situated activity then group composers are no longer at the centre of the learning and assessment picture, nor is the teacher, but rather both are placed within a complex web of social interaction, mediated by culture and its artefacts.

The purpose for which assessment evidence is used defines its function (Sadler, 1989; Harlen, 2005; Newton, 2007; Black & Wiliam, 2009). Assessment validity is inextricably linked to the purpose and function of assessment, that is, whether or not it actually measures what it is intended to measure (Newton, 2012). When young people get together informally in their own time and in their own spaces to jam and compose, then the criteria they use to decide if musical ideas are 'good' or 'bad' are likely to be derived from the musical and stylistic contexts of the music they play (Campbell, 1995; Burnard, 2012b). What is musically valid in one socio-musical context may not be valid in another. In the present case, the internal assessment of collaborative song writing in, say, a heavy metal band, seems a far cry from recent debates about assessment validity constructs and the reliability of 'test scores' (for example see, Braun 2012; Newton, 2012). However, while assessment validity is probably not going to be a unitary construct for the students and the teacher in this context, the national qualification requires that the students' work be reliably graded by the teacher using the criteria of a national standard, for a national qualification.

As Young (2010) observes, 'students do not come to school to learn what they already know' (p. 25). When informal musical practices are integrated into school curriculum and a formal secondary school qualification such as the NCEA, then notions of informal and formal musical practices become less meaningful. Considerable professional skill and knowledge is needed if the teacher is to support the students to navigate informal and formal learning discourses, supporting students to go beyond what they can learn on their own (Folkestad, 2006; Green, 2008; Young, 2010; Cain, 2013). Moreover, in the context of this discussion, the NCEA generally reflects the social cognitivist view that knowledge exists within the individual student, and thus grades are awarded to individuals, according to their measured achievement.

In order to give useful feedback, support the students' creative musical processes, and ultimately arrive at valid summative grades for each member of the group, the teacher requires an understanding and knowledge of the group's processes, stylistic ways of knowing and the multiple forms of authorship associated with contemporary music cultures (Burnard, 2012b; McPhail, 2014). To do this effectively, validly and safely, a shared understanding between teacher and students of relevant conceptual and stylistic knowledge related to their composing is a crucial aspect of pedagogy and assessment (Thorpe, 2015). Therefore, how both the teacher and the students perceive the creative processes in which they are engaged and the purposes for which they will be used, are crucial.

In essence, the issues discussed above reveal the importance of clear, frequent, knowledgeable and cordial communication between group composers and their teacher, based upon shared understandings of the nature of the creative processes in which the students are engaged, and the culture of the music they play.

The nature of creativity and how it is represented

People are creative in complex and diverse ways. There are multiple creativities, and multiple forms of musical authorship, particularly when people work together (Burnard, 2012b). The way we conceive of creativity also affects our response to it (Kaufman & Baghetto, 2009). Some believe that creativity is something that only geniuses possess, whereas others regard it as part of everyday life (Boden, 1990; Kaufman & Beghetto, 2009; Fautley, 2010). Immersion in a creative project often leads to flow where we become lost in what we are doing, leading to feelings of happiness and fulfilment (Csikszentmihalyi, 1988).

Creativity in educational settings is usually represented as a form of individual thinking and problem solving that is the result of cognitive processing (Odena, 2012) involving convergent and divergent thinking, often derived from the works of Guildford (1950) and Torrance (1988). There is a general acceptance that when we start to create, we engage in divergent thinking, looking for ideas and connections through a fairly unstructured and messy process (Barratt, 2005; Webster, 2002). Once we have come up with ideas for our creation, then we usually focus on refining and shaping them into a final product through convergent thinking (Webster, 1990, 2002). However, when groups of people work together in a community of practice to create something, creative thinking is also distributed across the group (Bell & Winn, 2000; Sawyer & DeZutter, 2009; Glăveanu, 2011).

Growing bodies of research into composing and informal music learning provide us with some insight into how young people compose music together in styles they admire and wish to emulate (for example Allsup, 2003; Biasutti, 2012; Campbell, 1995; Davis, 2005; Fautley, 2005, 2010; Jaffurs, 2004, 2006; Green, 2008; Tobias, 2012, 2013). Many of these show considerable alignment with empirical research into creative processes in both formal and informal musical settings. Some refer to a theory by Wallas (1926) who suggested that when we create something, we move through four stages: preparation (exploring and generating initial ideas), incubation (ideas are 'put on the back burner' to develop), illumination (ideas are worked on and shaped), and verification (ideas are reviewed and shaped into a final product). Some authors have represented the musical creativity of young people using diagrams (Webster, 1990, 2002; Burnard & Younker, 2002, 2004; Fautley, 2005, 2010; Thorpe, 2008; Tobias, 2012).

In the next section, I explain how I developed a conceptual model of group composing (See Figure 1.) I will explain how I used the model as a pedagogical and assessment tool to support group composers' learning, and assess their contributions to the collaborative compositional process.

The conceptual model

In earlier research into the collaborative composing of three rock bands (Thorpe, 2008), I developed a model based on those of Webster (1990, 2002) and Fautley (2005) to investigate how young people composed music together in three heavy metal and rock bands. Consistent with Webster and Fautley's models and other research into informal music practices (for example, Green, 2002; Allsup, 2003; Jaffurs, 2004; McGillen & McMillan, 2005), I found that group composers moved back and forth within and between

The "messy" phase

Exploration:
mucking around,
jamming,
looking for lyrics,
making mistakes,
taking risks

"Show me (how
to play) that
idea"

Critique
"Do we like it?
Change it?
Trash it?"

"Hey that's a
good idea!"

"Yes I/we
like that"
👍

**Some people might
already be moving on
to** ......

The "focused" phase

Revision: "How
does that go
again?"

Work in progress:
play it through

Transforming &
modifying ideas
(yours & others')

Critique
"Do we like it?
Change it?
Trash it?"

Organising:
working out
structure, who
plays what and
when etc....

Polishing,
refining, fine-
tuning, fixing

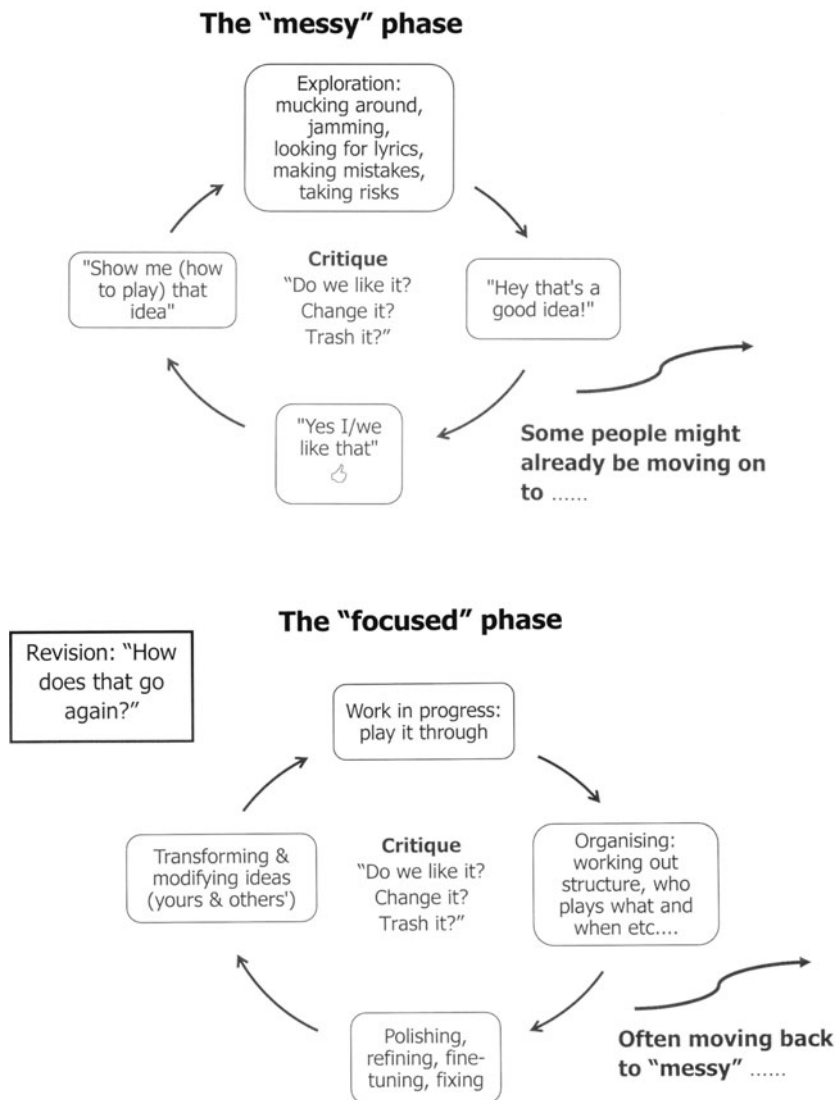**Often moving back
to "messy"** ......

Figure 1. A conceptual model of group composing

divergent and convergent stages, taking on various roles and tasks as they did so. These are represented in Table 1.

The study

As soon as group composing was incorporated into NCEA Music, I worked with two New Zealand secondary school music teachers and their Year 11 classes[1] over two school years,

Table 1. *Compositional behaviours (derived from Thorpe, 2008, p. 69)*

Phases		Compositional behaviours
Divergent	Exploration	Experimenting, trying things out, looking for ideas, general musical doodling, 'mucking around', jamming.
	Generation	'Coming up with' an idea that has potential or seems to work.
	Confirmation	Idea recognised as valuable by the rest of the band and confirmed as having potential for a group composition. This may be the catalyst for beginning a new song or material for inclusion in an existing song.
	Transmission	The composer of the new idea teaches it to one or more of the others, sometimes supported by someone who has picked it up more quickly.
	Work in progress	Playing through the song as it exists so far. A process of review and short rehearsals of sections.
Convergent	Revision and reconfirmation	Playing through material from an earlier session. A process of familiarisation, revision and critique. "How does it go again? Is it as good as we thought it was?"
	Transformation & modification	An intensely creative process: transforming an existing idea, often in order to make it playable or singable. Sometimes occurs during jamming. Often carried out by a leader or the prime generator of ideas.
	Organisation	Structural discussion, usually verbal. 'Who does what and when.'
	Refinement	Polishing ideas, clarifying small details.
	Rehearsal	Rehearsal.

investigating how group composing might be taught and assessed. I collaborated with each teacher in a series of practical action research cycles, team-teaching the class with each teacher.

A wide range of qualitative data was gathered during the collaboration, including teacher and student interviews, recorded discussions, classroom materials and assessment documents. During data analysis, cultural historical activity theory was used to analyse and interpret the complexities and contradictions associated with group composing and its assessment.

Findings indicated that the students often struggled to articulate their compositional processes with each other, and with their teachers. Informed by Fautley's (2010) subsequent development of his 2005 model, I re-developed the compositional behaviours observed in my earlier research to create a student-friendly white board or PowerPoint version, and shared it with each class of 20 students. At the same time I was wary of oversimplifying

Table 2. *'Assessment criteria' and 'Explanatory Note 2' (New Zealand Qualifications Authority, 2010, p. 1)*

This achievement standard involves the individual and/or collaborative composition of two original pieces of music.

Achievement	Achievement with Merit	Achievement with Excellence
Compose two original pieces of music.	Compose two *effective* original pieces of music.	Compose two *convincing* original pieces of music.

Explanatory note 2:
• *Compose* involves the individual and/or collaborative generation, development, structuring, and representation of original musical ideas to create music. A student may compose either two compositions as an individual, or two compositions as a member of a group(s), or one of each.
• *Compose effective* pieces of music means that the musical ideas are developed, structured and represented coherently, and the music demonstrates stylistic control.
• *Compose convincing* pieces of music means that the musical ideas are developed, structured and represented skilfully, and the music is stylistically assured.

the complexities of their interactions, bearing in mind Sadler's (2007) assertion that the 'meticulous specification of assessment criteria', aimed at 'getting students through' assessments, can lead to no learning at all (p. 387) (See Figure 1).

When I presented the model, I explained its elements and engaged the students in discussion. I also explained that this was only one way to compose and that there were many others. Both classes of twenty students seemed very interested. Restless or noisy classroom environments became quiet and intent, remaining so throughout the session for both groups. Those students who had composed before were the ones who engaged in class discussion, often commenting that they recognised their own processes in the diagram. Many seemed fascinated to see these represented. Students who had never composed did not generally contribute much to discussion, but data analysis later revealed that these students found de-mystifying the creative process both reassuring and encouraging.

The students were given tasks that required them to compose music in specific styles. I developed a rubric using the assessment criteria and explanatory notes of the NCEA achievement standard for Level 1 composing. See Table 2 for a summary of these.

Following a series of lessons focusing upon group composing in specific styles, the students went on to compose music in a style of their choice. About half the students (mainly more experienced composers) chose to solo-compose, and half to group-compose (mainly novice composers, led by more experienced students). Diagnostic and formative assessment began immediately, mainly taking the form of verbal feedback and field notes as the teacher and I moved between the groups.

Gathering data about students' contributions to the creative process

Initially, I developed a written data-gathering tool based on the elements of the model that required students and teacher to regularly sign off compositional behaviour as it was

reported or observed. This practice tended to atomise the data and did not generally present a useful picture of what was happening in the groups (Sadler, 2007). It also led to stilted, teacher-centred conversations that seemed to marginalise novice or less confident group members, slowing the creative process.

In both schools, informal conversations between group composers and their teachers generated the most valid and reliable assessment data. These took the form of running records and audio/video recordings collected during discussions with the students about how the group composed together, and how each student contributed to the compositional process. Generally these discussions began with a request to 'tell us the story of how you composed the music'.

The conceptual model of group composing, presented earlier to the students, became the framework within which the students and teachers could engage in meaningful, shared discourse about the compositional processes within the group.

For example:

Fraser: We were struggling to figure something out. So he started playing that riff again and it was, 'hang on, we could use that' and that clicked it into the end of the messy phase.

Oliver: I refined Alex's riff.

Alex: Yep, he critiques it.

Some students also used the model to reflect on the different ways in which they worked when composing.

Alex: When we were jamming we were really quite messy but in the other room we were focused – writing it out and stuff. Yeah, we generated all our ideas probably in the practice room, not the classroom.

One teacher reported that the students used the model to discuss their progress with him.

Teacher: Some of them would say, 'we're almost out of messy, we're almost at the point of getting focused now'. Or two of them would be getting into focused but one part would still be in messy because they are still trying to work it out. So that gave me a very clear idea of where they were at and them too, which meant that my feedback could be a lot clearer and a lot quicker and a lot more tailored to exactly what they each needed to do to achieve.

The students reported that the model gave them with a way to navigate the open-ended nature of creative processes. All said they liked the model because it gave them permission to 'muck around', be 'messy', unfocused and seemingly without direction, whilst reassuring them that they were still on the path to achievement. Some reported that it helped them to identify where they were in the compositional process so that they were able to know where to go next. The assessment literature emphasises the importance of knowing where to go next as part of formative assessment (for example, Black & Wiliam, 1998, 2009; Hattie & Timperley, 2007). There is strong evidence of this because the model provided

group composers with a way of working together and a shared understanding of structure within which they all do so.

> Angus: Because it kind of put less stress on you because you knew that what you were doing was actually working towards something. Because usually you sit there and you start jamming and you think, 'I'm not coming up with anything, I've got a composition due in a month, it's for my NCEA mark, if we fail it we lose these credits and it's a big amount of credits'. With that [model] you can say, 'Well we're in the messy phase, we're getting ideas, we are getting somewhere' and you can build on that. Also you kind of know where to go from there, so you can follow a cycle and you know what steps you're actually in and what to do next and build on.

Angus suggests that the model reassured him that he was engaged in a process leading to composition completion. The notion of divergent and convergent processes seems to have been particularly useful once the initial ideas had been generated and the piece started to sound good.

> Callum: It showed us what we were doing. And how close we were from getting it right.
> Oliver: You know, how to get there, on the right path.

Although solo composers were not included in the study, some group composers went on to compose a second piece by themselves. I interviewed some students about this. Most reported that group composing with their friends gave them the confidence to then compose by themselves, and that the model also helped them to navigate their individual creative processes.

> VT: Was the model helpful for your [solo] composing?
> Richard: Yeah. Like, I know where I am now. I can work out where I am with my songs.
> VT: How does that help you?
> Richard: I know what I need to do to make it to the next step.

Some students associated the 'focus phase' with a path to NCEA achievement in composing.

> Angus: The focus phase is kind of when you think, 'Oh, we've got something here'. Then you can go on because that's when you know that this is something you actually want to build on and you actually want to focus on and do it more for fun than just getting an Excellence, and that's when you hit the focus phase.

Angus also implies here that once group members knew that they were on the right path to completing a piece, they could relax and enjoy group composing for its own sake.

Grading the compositions

The teachers found gathering data about each group-composing student time consuming and complex. In both classes, approximately half of the students chose to solo-compose

with the others forming three or four groups composing heavy rock, reggae or indie rock music. It was challenging to manage logistically, particularly in one music department with few places for students to work in small, very noisy groups.

Visiting every student, and gathering on-going achievement data during a 50-minute class, was extremely demanding for the teachers. However both found that once their students had developed a shared understanding of the creative processes in which they were engaged, they were able communicate more clearly to one another and their teacher through commonly understood terms and concepts. Over time it also became clear that if the students had their instruments in their hands during these discussions, then inarticulate teenaged boys were able to communicate effectively through playing rather than talking about their ideas. The model became a helpful framework for the teachers to make on-going notes and give feedback about what each student had contributed to the compositional process.

Assessing the creative contributions of bass players and drummers

When it came to assessing the contributions of rhythm section players (drums and bass guitar) a number of issues came to light related to musical roles in the compositional process. Burnard (2012b) asserts that when we examine group music making in contemporary artistic contexts, there are multiple ways in which we can consider authorship. As discussed earlier, a member of a community of practice can justifiably claim joint authorship of the group's outputs.

While rhythm section players had important roles to play in shaping the music and getting the right overall feel, when it came to assessing their contributions to the creative process it was sometimes difficult for group composers and their teacher to know what that was. However, when working within a shared discourse about the processes in which they were engaged, group composers and their teacher were able to communicate productively and collegially to investigate the roles each student had taken within the music.

For example, in one group (singer, guitar, drums) the students initially explained to their teacher that the singer and guitarist had come up with all the ideas, casting doubt on the validity of the drummer's contribution (Callum). Using the model, the teacher discussed this with the group on a number of occasions, gradually revealing that Callum had established the overall feel of the piece at its inception, and had then critiqued the other boys' ideas, particularly when refining the nearly-completed composition.

> Teacher: The model was very useful because if we hadn't had it, if I had just said to them, 'OK, what was the process of your composing? How did you start off?' it would have begun and ended with that initial conversation and Callum would have ended up looking and feeling like he didn't do anything, like he hadn't achieved. But when I talked about the model, and we went past the jamming phase into the polishing stage, then that's when Callum realised that was when he was doing the work and the focus changed within the group. That's really helped because we would have missed that.

There is strong evidence to indicate that novice group members (usually bass players, drummers or rhythm guitarists) gained confidence, skills and knowledge from their peers.

The community of practice that is a group-composing band often provided a zone of proximal development for novices to learn to compose music alongside their more capable, skilled and knowledgeable peers (Vygotsky, 1986). More experienced students also reported that they gained a lot of satisfaction from sharing their expertise with their less experienced friends. Nevertheless, a high degree of professional skill was needed on the part of the music teacher to identify the achievement of each student in a way that supported the novices, but also awarded credit where credit was due.

For example, one group composer, Jay, could barely play his instrument, the bass guitar. He usually played rhythm guitar but chose the bass to support his friends Jimmi (virtuoso electric guitar) and Rāwiri (accomplished rock drummer) to compose heavy rock music. When composing their first piece, Jay simply played the root of each chord in progressions dictated to him by Jimmi, and supported the feel established and maintained by Rāwiri. During the teacher's discussions with the group, it became clear that Jay's contribution to the creative process had been minimal, although the fact remains that the music might not have been composed without a bass line. While Jimmi and Rāwiri seemed likely to achieve the NCEA standard, there was some doubt about Jay.

Discussions with the boys about their compositional processes alerted them to the fact that Jay needed to take a more active role if he was to achieve the composing standard and be awarded the NCEA credits. Jay later commented 'I need to make something up, for me.' Following this discussion, Jimmi and Rāwiri asked Jay to write the second verse and helped him to work on developing his own part. Ultimately all members of the group achieved the composing standard with Jimmi and Rāwiri being awarded *Merit* grades, and Jay a low *Achieved*.

Solo composers are required to complete all aspects of the compositional process, including the creation of recordings and written scores or charts. However, Jimmi wrote out the charts for the group's songs by himself. Data analysis revealed that is unlikely that either Jay or Rāwiri would have been able to compose on his own, or create a written score or chart, yet both were awarded the same number of NCEA credits as their solo-composing classmates. Musically and socially this may be completely valid (Green, 2002, 2008), but these inconsistencies challenge the validity and reliability of the achievement standard itself as part of a national secondary school qualification.

Conclusion

The assessment of individuals' achievement in collaborative groups is a complex business, as is the assessment of composing and composition. When these two complexities are brought together in the context of a secondary school qualification, then teachers require a high level of professional knowledge and skill. Composing music in a group may entail multiple forms of authorship, but in the present study this was found to be problematic for a standards-based, internally assessed, externally moderated qualification. This suggests that it may not be valid to apply the same assessment criteria to both group and solo composing. Nevertheless, there is strong evidence to suggest that group composing provides less confident, less experienced and less well-equipped students with rich opportunities for music learning both from and with their peers.

While there is a substantial and growing body of research into the nature of creativity and learning, there is very little that investigates what might happen when the nature of creativity and collaborative music processes is shared with students. McPhail (2012b) calls for a re-examination of the nature of music curriculum, emphasising the importance of conceptual understanding in music teaching and learning. This study suggests that sharing a conceptual model of creative processes led to the development of shared conceptual understanding between teacher and students, supporting clearer communication between them and ultimately leading to more valid assessment judgements of their collaborative creative processes. It also suggests that when young musicians are reassured that a dynamic cycle of 'mess' and 'focus' is a natural part of the creative process, they may be motivated to move past exploratory social jamming to complete coherent and effective compositions.

Note

1   Year 11 is the first year of senior secondary schooling in New Zealand. Students are typically 15 or 16 years old.

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