



University of HUDDERSFIELD

University of Huddersfield Repository

Dobson, Elizabeth

Permission to Play: Fostering Enterprise Creativities in Music Technology through Extracurricular Interdisciplinary Collaboration

Original Citation

Dobson, Elizabeth (2015) Permission to Play: Fostering Enterprise Creativities in Music Technology through Extracurricular Interdisciplinary Collaboration. In: *Activating Diverse Musical Creativities: Teaching and Learning in Higher Music Education*. Bloomsbury, London, UK, pp. 75-96. ISBN 9781472589132

This version is available at <http://eprints.hud.ac.uk/id/eprint/24113/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

<http://eprints.hud.ac.uk/>

PART 2 :EXPERIMENTS IN LEARNING

Chapter 5: ‘Permission to play: Fostering enterprise creativity in music technology through extra-curricular interdisciplinary collaboration’ by Dr Elizabeth Dobson

Introduction

Various kinds of interdisciplinary collaborative creativities have become well established within higher education performing arts courses, notably within theatre and dance based production (Alix, Dobson and Wilsmore, 2010). Modules include digital crafts such as VJing, which involves animated projection mapping, and computer based music and sound that uses fixed as well as live interactive materials. This chapter explores how extra-curricular work in music technology constitutes considerable range of creativities, notably through interdisciplinary collaboration. Multiple kinds of music based creativities include innovative work around multimedia, performance creativities, and empathetic creativity in improvised performance (Seddon, 2005; Burnard, 2012), and musicians are not only creative because of their musicality, but because of their inventiveness; ‘...the discovery of *newness*, and enabling and enacting new reflective practices with imagination and originality.’ (Burnard, 2014: 80). Music performance also displays *collaborative emergence* and *distributed creativity*; where the situation for music making is formed moment-by-moment over time (Sawyer & DeZutter, 2009). Emerging ecologies of creativities are formed collectively over time, through inter-relationships: within a group, and with wider cultural, physical and conceptual awareness, and from a sociocultural perspective (Vygotsky, 1978) these are constituted through the use of tools: such as language and knowledge about musical concepts, technological resources, and also knowledge about the history of a particular social group or community. Collaborative creativities in Music performance, popular music creating, studio production, and other areas of composition display these emergent and distributed qualities, also offering opportunities for students to learn through participation in multiple and

networked communities. For example, in popular music settings, musicians who learn through apprenticeship by rehearsing with more experienced band members (Green, 2002), as well as through their taught courses. In scrutinising these music-making communities we can see how students develop ‘funds of knowledge’ (Moll et. al, 1992) about music performance (Green, 2002, King, 2006, Seddon, 2005), but our institutes also offer opportunities for learning through creative enterprise, especially in through participation in extra-curricular interdisciplinary collaborations. By this I mean collaborative work that is undertaken outside the curriculum, in multi-discipline groups involving students on different degree courses. The students are intrinsically motivated to work together as a team, producing a film or exploring ideas in a way that may draw on their domain-specific skills and knowledge, but is not dependent on them. Similarly the output may have no connection with their formal and assessed work.

Examples of extra-curricular interdisciplinary collaborations:

- A short stop-motion based animation: animators with a composer, sound engineer, actor and a writer.
- Producing radio jingles: business, music technology and various student societies.
- Music Festival: Students from a range of degree courses (music, music technology, business, animation) coming together to build a larger team, commission student marketing films and branding, and to promote and organise a major new festival for the area.

These activities activate a significant range of creativities: distributed creativity, resourced by individual imaginative and entrepreneurial engagements that draw on degree course knowledge, contributing to pockets of collaborative emergence across a growing community. As Hakkarainen explains: ‘Currently, creative activity takes place more and more often in specific kinds of social communities and increasingly complex expanded networks to support

knowledge-creation efforts. It is therefore appropriate to look further at the context of knowledge creation in institutions and communities' (Hakkarainen, 2013, p19).

This chapter presents a specific community designed to foster extra-curricular interdisciplinary collaboration in a University. It explains how this community has been harnessing the kinds of creativities and entrepreneurial modalities that are necessary for the successful 21st century musician. Extra-curricular interdisciplinary collaboration encompasses all collaborative creative modes including: distributed, complementary, family, integrative modes (John-Steiner, 2000), joint devising through thinking together verbally (Littleton & Mercer, 2013), improvised co-creating (Sawyer & DeZutter, 2009; Seddon, 2005), distributed creativity (Sawyer & DeZutter, 2009), and collaborations that include phases of independent parallel and sequential working. Extra-curricular and interdisciplinary collaborative creativity offers incredible diversity of experience; and this is what this chapter argues to be beneficial for the development creative enterprise amongst Higher Education music students.

Undergraduates do not necessarily feel especially confident in their own abilities, and extra-curricular explorations offer a relatively safe setting for them to play and explore ideas. Risk taking is a particularly urgent concern for young creative practitioners however (John-Steiner, 2000) and collaboration entails all kinds of challenges to the individual, as Matusov explains: '...joint activity has multiple agendas, goals, contexts, tasks, and actors with different intentions. It involves dynamics of agreement, disagreement, and coordination of participants' contributions' (Matusov, 1996: 31-32). In education this challenge is compounded by formal assessment of products and processes, and undergraduates negotiating the dynamics of collaborative creativity must learn to navigate compromise and tensions around what they want to accomplish individually and collectively. Trust is particularly important when collaborative work is to be assessed formally as students need to have developed trust with their collaborative partners, and also the assessment mechanism that is being used (Orr, 2010: 311). Collaborative practice offers particular kinds of training

and preparation for certain professional settings, but by removing assessment it is possible to alleviate anxiety related to compromise, enabling musicians to experience a greater variety of collaborative partners and situations in their time at university. Musicians inhabit a community of practice¹ which offers potential for them to experience this kind of range of rehearsal, composition and performance structures. As Hakkarainen states: ‘By engaging higher education students in expert communities and networks of the field from an early stage of their studies, they can deliberately be socialized to collaborative practices that collective creativity calls for’ (Hakkarainen, 2013: 26).

Extracurricular Interdisciplinary collaboration can broaden the range of experience and opportunity for learning much further. Particularly for musicians who are interested in composing and producing music with other media. It offers a kind of incubator away from the constraints and complications of formal studies; fostering creativity and enterprise through a range of collaborative and co-creative experiences. Providing an alternative to course based group work, extracurricular interdisciplinary co-creating can also offer a complementary setting for students to reflect more deeply on their own abilities, while developing a breadth of experience in collaborative practices.

This chapter presents the case of an interdisciplinary collaboration ‘hub’ that was developed to foster interdisciplinary collaboration at The University of Huddersfield in 2012. This hub, or CollabHub, was set up to build a community for generate learning through joint creative effort and the kind of apprenticeship that can be seen in popular music (Green, 2002). Despite the self-selecting, spontaneous and messy qualities of this extra-curricular group, this chapter explores how individual members have become engaged in collaborative learning and enterprise beyond the curriculum.

Creating a creativity incubator

¹ Lave and Wenger’s (1991) concept is a fitting description of what the CollabHub aspires to accomplish, but in an interdisciplinary setting where collaborative creativity constitutes the collective interest of the community.

Mindful of socioculturally framed literature on creativity and collaboration in music performance and composition (Spalding Newcomb, 1998; MacDonald and Miell, 2000, Sawyer, 2003; Barrett, 2006; St John, 2006; Burnard and Younker, 2008; Miell and Littleton, 2008), and computer based composition (notably Dillon, 2004; Seddon, 2005; Burnard, 2007, Mellor, 2008)² I launched the extra-curricular platform for students from across the university to work on their own projects collaboratively. Beginning as an invitation to devise new work, the CollabHub gathered momentum and it has begun to show some characteristics of a sort of community of practice, where learning emerges through interactions with peers, tutors and also external creatives.

Theoretically, without concerns about assessment criteria extra-curricular interdisciplinary collaboration could offer a kind of permission to play, so the CollabHub was set up to encourage students to experiment, on modest or ambitious ideas, while building knowledge about collaborative experiences in a range of social, physical and disciplinary settings. It adopts a cultural-historical perspective of creativity as something that emerges through inter-relationships between people, their cultures, communities and physical environments (Sawyer, 2006; Hakkarainen, 2013, Littleton & Mercer, 2013; Burnard, 2014). Students bring their respective expertise to interdisciplinary groups influencing other's knowledge through joint practice. The idea of collaborative learning, guided most fundamentally by Vygotsky's ZPD³ (Vygotsky, 1978; Mercer and Littleton, 2007; Littleton and Mercer, 2013) is at the heart of CollabHub; in summarising what guides the theoretical principles of an interdisciplinary and extra-curricular collaboration hub, we can say that it is:

- grounded by a cultural-historical view of creativity;

² more contemporary work has also been undertaken since: see Gaunt & Westerlund, 2013

³ Zone of Proximal Development

- free of assignments, staff led initiatives and professional or external clients; offering permission to play with ideas and take risks, learning through apprenticeships within and across disciplines;
- built on a community of practice where students can also choose, test and build relationships with students from other disciplines;
- supportive of students needs and facilitative of connecting collaborators;
- enabled by relationship building and developing longer-term collaborations.
- fostering of the ‘gift⁴ of confidence’ (John-Steiner and Mahn, 2002)

To summarise, collaborative music making resents a diverse range of creativities, which reflect increasingly rich opportunities for learning through longer-term collaborative creativity. So far, I have argued that where music and music technology students are provided with a community for exploring interdisciplinary collaboration outside of the formal degree context students can experience ‘expanded networks’ in support of knowledge-creation, as described by Hakkarainen. By offering extra-curricular interdisciplinary communities we can foster an ecology of practice that activates ‘enterprise creativities’: where innovation is fostered by deadline independent collaborative processes, that simultaneously reflects the multiplicity of creativities as they are outlined here and elsewhere (Sawyer, 2006; Burnard, 2014). In support of this synthesis of ideas, the remainder of this chapter introduces a specific extra-curricular interdisciplinary community, CollabHub. Considering interviews with members of this community it presents more specific examples of how CollabHub has been activating enterprise creativities in music technology.

⁴ Jean-Paul Satre refers to *the gift of confidence* that can be afforded through collaboration. A concept that John-Steiner and Mahn cite and adopt to describe confidence brought about by belonging to a group, but also confidence in the group to navigate critical incidents (John-Steiner and Mahn, 2002).

The Collaboration Hub

The first CollabHub meeting was held in a large atrium at The University of Huddersfield. Using social networking sites, and our blog,⁵ regular meetings are set up in different locations. Students are invited to pitch an idea, which can be modest or ambitious.⁶ They are also encouraged to network and to begin exploring ideas which can be developed and presented as work-in-progress at subsequent meetings. Around fifteen months after the first meeting there were almost 600 members of the University of Huddersfield CollabHub Facebook Group: a community that consists of digital artists, writers, photographers, graphic designers, illustrators, historians, film makers and conceptual artists as well as a large number of musicians. Roughly a fifth of the members classify themselves as either composers, performers, sound engineers, sound designers or electronic musicians. The first projects that were set up started to illustrate how undergraduate musicians were ready to be enterprising in a variety of ways. Music and Music Technology students pitched and developed: The CollabHub News team, CollabHub Motion Comic Book group, and an idea for interactive generative music app. A local artist also started working with two music technology students on a sound installation and an interactive sound and colour text generation project.

An incubator for interdisciplinary enterprise creativity?

The QAA guidelines for Enterprise and Entrepreneurship Education describes enterprise as ‘a generic concept that can be applied across all areas of education...’ which combines ‘creativity, ideas development and problem solving with expression, communication and practical action’ (The Enterprise and Entrepreneurship Education QAA guidelines, 2012⁷). It is easy to locate enterprise both within and beyond the music curriculum, especially where students start and run bands or ensembles, set up and run record labels, or organise events

⁵ Full details here: <<http://collabhub.org/news/>>

⁶ <<http://collabhub.org/test/events/>>

⁷ <<http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/enterprise-guidance.pdf>>

and festivals. CollabHub presented a complementary opportunity for fostering enterprise within a more explicitly interdisciplinary setting. To understand the students' perspective on enterprise, creativity and interdisciplinary collaboration I interviewed six CollabHub participants: this chapter will now focus on their insights and wider implications for enterprise creativities in higher education.

Interviews with CollabHub members

In talking to a range of CollabHub members it has been possible to develop a richer sense of how they experience interdisciplinary collaboration, within and around CollabHub. The members include a psychology and social sciences PhD student Diane, two undergraduate composers Matt and David; recent graduate Neil (now director of his own media company) and local artist Dex Hannon,⁸ who has been working with David and another composer on an interdisciplinary project. An academic was not interviewed, however, as the co-ordinator of CollabHub, a music technology tutor and author of this chapter I navigate the emerging themes to help link key issues with the broader academic discussion of enterprise, assessment and creativity within higher education.

A thematic analysis of these thirty to sixty minute interviews presents a set of topics that are discussed in the remainder of the chapter: collaborative relationships, freedom from assignments, an emergent metacognition through collaboration, fostering enterprise.

Collaborative relationships

Course based group work often requires students to work with peers that they know very little about,⁹ and familiarity can provide friendship and enough common knowledge to offer a foundation for negotiating difficulties, however, collaborative creating can offer the *gift of*

⁸ To see example's of Dex Hannon's work under his 4 names see: <<http://brokentoycompany.co.uk/>>

⁹ See Collaborative Art Practices in HE: Mapping and Developing Pedagogical Models (Alix, Dobson & Wilsmore, 2009) a more in-depth discussion on fostering interdisciplinary group work strategies in HE: <<http://www.heacademy.ac.uk/resources/detail/subjects/palatine/Collaborative-Art-Practices-in-HE>>

confidence from Jean-Paul Sartre as presented by John-Steiner and Mahn (2002) to reflect ‘reciprocal emotional support offered by partners in collaboration’ which affords confidence in the group, and through belonging to the group. Research on co-creating and interdisciplinary practices have commented on the affordance of familiarity, trust and shared understanding in collaboration (John-Steiner, 2000; Vass, 2002; Green, 2002; MacDonald and Miell, 2000; Storey and Joubert, 2004). and in an extra-curricular setting students are free to make their own choices about who they prefer to collaborate with. Neil, a student who has started his own media company with two other students, cites his past band rehearsals, and friendships as evidence that he knew they would work well together.

...being in a band and that kind of working together to do something that you don’t have to do. That did help with the filming collaborations, that you’ll realise that you’re working towards something. It was also making the friends that helped with the video as well, obviously I was in a band with Stu, that kind of thing, and we knew that we worked well together. [Neil: response to interview question on choosing collaborative partners]

Informal creative settings, like music rehearsals enable, students to find and develop these relationships, where there is trust, not simply to be responsible (attend and deliver), but trust in the collaboration, which affords confidence to criticise, explore, play and engage in imaginative work together, as Neil explains:

Trust is key, I think before you can really say know anything about, when you know someone and you’ve got good relationships, you’re more open to experiment and play. I think, once you’ve got that level of friendship, you’ve got that level of contact, it’s a lot easier to kind

of initiate something like that... [Neil: response to interview question on choosing collaborative partners.]

The implication, here could be that by fostering longer-term relationships we could be activating long-term enterprise creativities, and simultaneously a context in which enterprise creativity can actually help students to develop this kind of collaborative confidence.

Groups like CollabHub provide opportunities to seed new creative possibilities, and collaborative practices, where students meet and work with like-minded individuals who bring different skills, and to develop a collaborative practice that is not dependent on their existing relationship. This has powerful implications for networking, but broadening the range of enterprise creativities that students can foster and experience in their time at University. For Matt explains his journey, building work with a student he met from a different course.

He [the digital media student] wanted some music for an animation so he posted that in the CollabHub Facebook page and I responded to it because it just seemed interesting, and eventually he came up to me and said 'I'm doing this game would you be interested in working with me on that' so it sort of spawned into something bigger than it was originally. Now he's been offered a long-term contract to develop a game for a company he's done some other work with, and because he knows me through CollabHub and everything, he's got me to do the soundtrack for it. So, from the small initial collaboration it's sort of become a long term paid project. [Matt: responding to interview question asking him to describe the collaborations that he is involved in.]

These students did not build collaboration from friendship, but friendship and collaboration through low risk enterprise; imagining what they could accomplish by exploring creative practices together. Matt's natural curiosity to get involved drew him in to a fruitful longer-term partnership. Arguably, the students' early invitations reflect their interest in looking for opportunities to play and seek collaborative experiences which have come to activate a long-term collaborative enterprise. The implications for students to make connections with course content, or across a resource of knowledge developed through collaborating are not explored in this chapter, but the interviews raised implications for how engagement in multiple groups can activate deeper level of reflection and understanding about collaborative creating; building a resource of knowledge afforded by comparisons of collaborations (curricular and extra-curricular). Reflecting on how he 'acts', Neil explained how his interactional style differs when he is working with friends, or undertaking professional work with external partners:

[you] act in a more professional manner with them. You're more formal and that can kind of, it just gets you thinking in a different way, thinking instead of as a friend, you're more, maybe, honest ...just a more professional manner really, like, instead of muckin' about you get down to it and you're direct. [Neil: responding to interview question on choosing collaborative partners.]

His awareness about these shifts in approach and talk is especially interesting, implying a kind of metacognition for collaborative process. David, a second-year composer, has been involved in a particularly wide range of projects that include organising sound for an internationally resourced animation project, and other local projects with much smaller teams where he is composing music, rather than managing others. Reflecting on his range of experiences he explains how he tends to find himself taking on a particular role as a kind of

team leader. He feels that it may be because of his ability to communicate with different members of a team:

I sort of spot details and try and sort of pull people together on things because I tend to be able to talk each of the languages they need to be able to communicate. [David: responding to interview question asking him to describe the collaborations that he is involved in.]

His multiple collaborations can be seen as a kind of mirror; through collaborating David has a useful self-awareness about his contributions and interactions in group work. The importance that he places on communication is particularly interesting; as a significant body of research has highlighted the significance of communication in transforming collaborative processes. Research has begun to show the affect of friendship on collaborative creating amongst school children, and how this is displayed according to their dialogue (MacDonald and Miell, 2000; MacDonald, Miell and Morgan, 2000; Vass, 2002). Similarly, research on how children think together in group work focuses on explore relationships between particular characteristics of talk and what is accomplished jointly (Littleton and Mercer, 2013), a socioculturally framed approach, grounded in Vygotsky's theory of how language (a cultural tool) stimulates higher mental functioning (Vygotsky, 1978). In higher education a range of collaborative experiences could therefore seem to stimulate cognitive development as students learn: to communicate their own ideas and concepts, to students within and across disciplines; to create ideas jointly through talk and practice; and to reflect on their choice and use of language in doing so. Vygotsky's concept of ZPD articulates how mental functioning can develop through a child's interactions with more experienced people like parents and teachers. An extension of this concept IDZ¹⁰ (Mercer, 2002) characterises situations where

¹⁰ Intermental Development Zone (Mercer, 2002)

the teacher and student are engaged in thinking together. In each respect the quality and character of talk is considered to be influential. Following each of these is another extension: the Intermental Creativity Zone, or ICZ¹¹ (Littleton and Mercer, 2013) in which: ‘...collaborators negotiate their way through the joint activity in which they are involved using appropriate linguistic tools – such as specialised discourses. The ICZ is thus a continuing event of contextualised, co-regulated joint activity – the product of a process of interthinking that involves a reflective and metacognitive orientation to collective work’ (Littleton and Mercer, 2013: 111).

So to summarise, it is possible to offer a platform that activates new and developing enterprise creativities where students can build confidence and trust through their shared experiences, and while also learning to create work together, their collaborations might simultaneously enable them to:

- discover new personal insights about their own abilities, roles and skills through multiple experiences;
- develop higher mental abilities through interaction, interthinking and collaborative creating; and
- deepen their meta-cognition for collaborative exploration and enterprise.

These brief insights implicate a need for further research into the affordances of enterprise creativities and the kinds of learning and development that can emerge. They are at least compelling reasons to foster extra-curricular interdisciplinary collaboration as a complementary approach to activating enterprise creativities, showing how students are engaged in learning that is not assessed, or even witnessed by an academic tutor. In fact, formal assessment seems to prohibit enterprise creativities, such as playful exploration and

¹¹ Intermental Creativity Zone (Littleton and Mercer, 2013)

distributed creating, as students can seek to demonstrate what *they perceive* their tutors' definition of creativity to be, as the next part of this chapter illustrates.

'... opportunity to experiment, play and discover'

While undergraduate courses set up groups and assess work in different ways we find that students are concerned with how the effort of peers affects their work (Orr, 2010). For example, as we know:

...you're sort of forced to be in a group it's not quite as effective because if some people in the group don't put as much effort in then it can be difficult to create a good product, but with the CollabHub stuff everyone involved is there cuz they want to be involved... [Matt: responding to interview question on choosing collaborative partners.]

As extra-curricular work is self-selecting, enabling students to find like-minded peers, the students know that their peers are motivated to collaborate, and but importantly, that these collaborations are not impacting on their individual marks. This is not news, however, my interviews showed the composers appreciating an opportunity to experiment with their own ideas well away from their assignments:

To a certain extent I get to be more creative outside the course. Slightly because I'm worried about doing things within the course that just would not work, and they'll affect my grades, so that say, I know that they put things against that but that still keeps me back and keeps me thinking that I need to stick with something I'm fairly comfortable with, that I might get a good mark with. So, a lot of what I feel comes from my development is stuff that I take from the course and sort of do in my own time, that I'm not going to be submitting to

be assessed. [David: responding to an interview question that asks him to draw comparisons between creating work that will be assessed, and work that is not part of the degree.]

... being assessed means that you maybe don't have as much freedom because you're focusing on making it the best thing, rather than exploring and experimenting things ... [In CollabHub] no one is putting pressure on you. You can do whatever you want, and being able to experiment in a free environment is beneficial. [Matt: responding to an interview question that asks him to draw comparisons between creating work that will be assessed, and work that is not part of the degree.]

There is less pressure, when it's not part of your degree, to try new things, because when you've got you're degree it's being marked on. I know you have formative assignments as well, when you're working on extra-curricular [work] you have more opportunity to experiment, play and discover other things that you didn't know you were good at, and part of it being collaborative means you can learn with people as well. [Neil: responding to an interview question that asks him to draw comparisons between creating work that will be assessed, and work that is not part of the degree.]

This seems to imply the ways in which some students might perceive creativity differently when it is course based or extra-curricular. There is a a particular sense of pressure, perhaps to deliver the right, or best thing, and formal (summative) work appears to be perceived very differently to extra-curricular creativities; which involve exploring, experimenting, play,

discovering new skills and learning with other people. Extra-curricular collaboration activates enterprise creativities, offering learning opportunities that simultaneously tug the students out of the kinds of compartmentalised thinking that can be encouraged by modularised course structures. One of the interviewees, a local artist, who has been collaborating with two music technology students, articulates how interdisciplinary collaborative creativity affords learning:

You [the creator] can sort of become very modular and very sort of like trapped in what you're working on ... and never think of how an artist would come at this ... all of a sudden you can think a little bit differently and just see a brief with separate eyes. I think it's kind of important that because I think when you've come straight from school, or you've done a bit of say college or 6th form and then you go in to university, you've still got that very singular way of seeing things because you've [been] taught, taught, taught, taught. When you get to university you're supposed to expand that and change. [Dex: responding to a question on the value of extra-curricular collaboration in Higher Education.]

Perhaps enterprise creativity complements the formal curriculum, in that students are starting to identify themselves as professionals who seek knowledge and skills, while also seeking opportunities to explore and innovate. When external partners participate in a community like CollabHub they contribute significantly to the student experience of learning and practice, but this introduces other kinds of risks that have consequence as they have their own investments and concerns. Students might be perceived to be incomplete, or inexperienced practitioners who are only 'half-full'. But there are also compelling benefits for external

partners who choose to do interdisciplinary work with undergraduates, such as the range of contemporary knowledge and skill on offer, as Dex explains:

...most creatives are you know, they're just a hot bed of ideas, and you can take your idea so far but then you have to sort of realise you can either do a poor job of it, and you know it's still your idea and you can have this precious thing for yourself, or you can take a step back and realise that there's possibly someone else out there that has the skills to take it, sometimes beyond what you originally thought the idea could be... [Dex: responding to a question on the merits of collaborating with undergraduate practitioners.]

In seeking to develop his own visual work, to incorporate an interactive sound dimension, Dex has found this 'someone else' within the university. External partners can find fresh fuel and inspiration with the students' energy and motivation, and students often have access to the most contemporary technologies. Interdisciplinary collaboration also offers opportunities for the local expert to learn through being a mentor as well as collaborator in a kind of creative apprenticeship:

...being softly softly is I think the best way to do it, and also, always give them the creative freedom, you know I think that's kind of important because there's a lot of things that I don't understand that someone else will, what is possible, so by me stomping my foot down saying 'oh no don't do that do this' I could be missing out on something great that could happen with it. [Dex: responding to a question of on the challenge of collaborating with undergraduate practitioners.]

While students learn through joint creating with each other, perhaps engaged in an intermental creative zone, this relationship with a professional suggests another form of apprenticeship; perhaps a zone of proximal development is formed in this kind of apprenticeship, where the more experienced person is providing a scaffolding for students to learn and develop in collaborative creating. Dex flexible in his approach; ready to adopt an even responsibility while ensuring that the group's efforts are focused and coordinated, but the natural hierarchy in this type of interdisciplinary collaboration does present a kind of challenge, as Dex is both an established professional, and older partner in the group:

... because of my age I'm always going to be seen as you know 'oh right well we have to wait for your decision'... even if we try and fight it, it's still there mentally in us. He's an older guy so we have to respect what he sort of says even though I think he's wrong and we should be... [Dex: elaborating on the challenge of collaborating with undergraduates]

Partners can learn as much as the students, not only about new possibilities for of their work through distributed creativity,¹² but also about how to build collaborative confidence, or the *gift of confidence* and mentor emerging practitioners.

So to summarised, extra-curricular interdisciplinary collaboration activates enterprise creativities that students value, that stimulate knowledge transference and exploratory work that can lead to the development of longer-term partnerships. The CollabHub presents this messy informal setting, where any kinds of work and goals can be developed by anyone. David explains how this this presents him with a 'grey area' that bridges his formal and social environments:

¹² To borrow a term from Keith Sawyer and Stay DeZutter (2009)

'[CollabHub's] a sort of a bridge between a formal and a social environment, and I'm still struggling between those two, erm, but it's a good place to sit, in the grey area and be allowed to be relaxed because you haven't got goals or targets really, you've come together and you wanna try this thing' [David: response to interview question why he takes part in projects outside the course.]

For David, formal is the course, and social is around the course, but perhaps something more incremental and fluid, as Folkestad explains: 'Formal – informal should not be regarded as a dichotomy, but rather as the two poles of a continuum' (Folkestad, 2006:135). The students probably are responding in various ways to formal and 'informal' settings, but this grey area presents a community that offers a really wide range of collaborative contexts and experiences. It also helps students to navigate their practice identity (present to imagined future), where there are other goals, and risks to consider; most fundamentally this grey area offers a space for students to grow; to be enterprising and creative on their terms.

...they're adults and equal within this environment... rather than a student, students having to do a task for a particular purpose. This is something that their agency has a voice in. [Donna: in response to a question about why students take part in CollabHub]

In short, these music technology students:

- welcome freedom from assessment, to take risks and explore their own initiatives;
- welcome the chance to explore a 'grey area' between different contexts for creating new work;

- experience different modes of communication which test their abilities to create work with others;
- generate and explore their own vocational opportunities by testing partnerships and working with local artists;
- want to build a broader portfolio of work;
- welcome opportunities to see problems from other perspectives through interdisciplinary practices;
- develop a natural metacognition for creative and co-creative practice through their extracurricular collaborations.

In respect of our own agendas for collaborative learning, and activating creativity through extra-curricular interdisciplinary collaboration, the interviews provided evidence of how students can:

- be motivated by the idea of collaborative creating outside of the degree course;
- become insightful about their own collaborative experiences;
- build a resource of knowledge about enterprise creativities through multi-collaboration experiences over time.

Fostering enterprise creativity

Some students generate new initiatives and demonstrate natural leadership in bringing others on board with their projects. Mindful of the potentially profound benefits to this messy opportunity for learning through co-creating, we probably need to think about how more undergraduates might be encouraged to engage with extra-curricular projects.

Considering approaches to fostering enterprise creativity we might refer our students to key texts, such as Dyers 'The Innovators DNA: Mastering Five Skills of Disrupting Innovators', and Keith Sawyers 'ZigZag: The surprising path to greater creativity'. Each provide theoretically resourced steps that may activate skills in innovation and creativity respectively.

Considering the conditions that appear to activate enterprise creativity I offer five ingredients:

- Platforms
- Community
- Confidence
- Authorship
- Risk

Platform

In CollabHub, there are several kinds of platform: a framework that includes regular meetings where students can propose projects and share work, the online social networks that draw others into the community, a few staff led initiatives designed to bring specific cohorts together, and finally exposure and celebration of collaborative achievements.

Community

The platforms activates a community for learning: ICZ, distributed creativity, longer-term trajectories of development that traverse courses and foster new collaborative relationships.

Confidence

Building the platform and community offers students a chance to develop personal and collaborative confidence through belonging, collaborative creating, and sharing their work in a low risk environment.

Risk

Within this extra-curricular community students can begin to be truly exploratory; moving out of their comfort-zones and explore new terrain across their range of collaborations.

There are so many compelling reasons to encourage interdisciplinary collaboration, however, some students may never feel comfortable working with others. Coursework commitments

could be compromised by extra-curricular work, and as David suggests below, there is little that we can do to convince some students to do more than their coursework:

I tend to find that people who do things do other things as well. Erm, it's not often that you'll find someone who sort of just turns up to this thing, just does that. I think you have a very small chance in getting people who aren't enthused to do anything but the bare minimum to do something. [David: responding to an interview question on reasons for participating in extra-curricular projects]

Perhaps there is a need then for new research to examine pedagogical and vocational benefits of enterprise creativity. It may be necessary to provide more compelling arguments for the extra-curricular work, especially as students could be taught enterprise formally within their degree if it is considered to be academically or vocationally important. Within the creative and digital creative arts, however, there are flaws in this approach, though as Neil suggests:

People choose the course because they want to study and if you put a module in that people don't necessarily want to do then I don't know if that's the solution... I think if you give the opportunity for people to do it you can't really do anything else. [Neil: responding to an interview question on reasons for participating in extra-curricular projects]

The CollabHub appears to provides opportunities but this kind of platform might only attracts students who are *already* seeking or creating their own opportunities.

So what is the message for Higher Music Education in activating diverse musical creativities? Some of our students have been starting new ensembles, media production teams, record label, the development of music software and even a music festival. In doing so they are engaged in distributed creativity (Sawyer and DeZutter, 2009), possibility thinking (Craft,2000) and various kinds of business enterprise, teaching us a great deal about their immense capacity enterprise through a synthesis of knowledge and interdisciplinary collaborative creativity. Enterprise creativity may be considered as a valid and valuable setting for learning, but I describe it as messy because engagement is variable and outputs can emerge over years rather than weeks (if at all); it cannot be measured or assessed within the curriculum. So I summarise three key messages for HEIs interested in providing music technology students with an interdisciplinary platform for enterprise creativity:

1. Build a community that thrives according on voluntary engagement

Learning and enterprise is already prolific in extra-curricular music-making and many students choose not to participate; the opportunity is all that is necessary. For musicians, *interdisciplinary* extra-curricular collaboration is a natural extension of this, especially for studio-based music composers who need to develop their media networks for the future. The projects emerging out of CollabHub have demonstrated that students are not only motivated to engage in work that does not contribute to their degree result, but that some music technology students thrive on opportunities to explore new ideas and collaborate without the constraints of assessment. Furthermore, students who may appear to be disengaged with their course can take on a different identity and drive when engaged in their own initiatives, while the most accomplished students seek to exercise projects that exceed expectations of their course.

2. Extra-curricular interdisciplinary collaboration is grounded in theories of learning through collaboration and within a community

The collaborative learning and creativity literature strongly implies that this extra-curricular setting should be supported as a valid setting for learning and development, and my observations and interviews start to provide compelling evidence of the ways in which music technology students grow through extra-curricular collaboration; applying course knowledge, developing personal insights, building a range of experiences, enjoying freedom to experiment and be enterprising with support fostered by a community.

3. Be prepared to support messy education if you choose foster enterprise creativity

There is a kind of paradox for educators as we are tasked with identifying learning outcomes and measuring standards in a formal setting which is validated to meet particular standards. If students learn through interdisciplinary collaboration within a community of practitioners (other students in various years and cohorts as well as external partners) their experiences may be valid, but simultaneously difficult to measure. But it is precisely this open, messy situation which fosters student led enterprise; a parallel learning experience where knowledge can be transported from formal training and explored in ways that are inherently unpredictable.

There are broader social implications for higher education which Diane, a postgraduate social psychology PhD student, outlined in her interview: By helping to foster a culture where we recognise learning outside the curriculum, communities like CollabHub have the capacity to ‘strongly influence the culture of university and academic life’ (Diane). Diane welcomes CollabHub specifically because it is not a clear cut, marketed, branded or consistent situation for learning, but something that is diverse in its uniqueness, and celebrates individuality. Diane also feels that the idea CollabHub is simultaneously difficult to understand and digest, until you’ve participated. This means that some students might need a compelling reason to undertake extra-curricular work on top of their assessed coursework. The range of impacts on learning and development, and how this can complement and extend formal study, needs to be documented and made explicit to undergraduates. This also needs careful reflection within

higher education due to the staffing implications around supporting unassessed activities. In music technology, extra-curricular co-creating is not only a valid pedagogy, providing relevant learning experience and openings for enterprise, but it helps us to provide students a bridge into a professional life through an understanding of how it feels to be creative and enterprising.

Concluding thoughts

Despite the challenges, there are also certain benefits for the staff who feel compelled to foster extra-curricular work. The music technology students have taught me such a lot about their capacity to be enterprising, their natural drive to create work, and how this impacts on their individual journeys as well as their peers and external partners. Some students do this anyway, but something like the CollabHub makes it easier, it offers permission to play and be enterprising together with other students. Some students really are not only assessment motivated, sometimes working longer hours, researching and developing new skills and synthesising them into new products because of an intrinsic motivation to make. CollabHub has an identity that provides community for the students, and they keep coming back.

REFERENCES

- Alix, C., Dobson, E., and Wilsmore, R. (2010), 'Collaborative art practices in HE: Mapping and developing pedagogical models, (Higher Education Academy), <http://heacademy.ac.uk/resources/detail/subjects/palatine/Collaborative-Art-Practices-in-HE> [accessed 21 January 2014].
- Barrett, M. (2006), 'Creative Collaboration an eminence study of teaching and learning in music composition', *Psychology of Music*, 34(2), 195-218.
- Burnard, P. (2007), 'Reframing creativity and technology: Promoting pedagogic change in music education', *Journal of Music, Technology & Education*, 1(1), 37-55.

- Burnard, P. (2012), *Musical Creativities in Practice* Oxford: Oxford University Press
- Burnard, P. (2014), 'A spectrum of musical creativities and particularities of practice' in P. Burnard (ed), *Developing Creativities in Higher Music Education*, Oxon and New York: Routledge, 77-98
- Burnard, P. and Younker, B. A. (2008). 'Investigating children's musical interactions within the activities systems of group composing and arranging: An application of Engeström's Activity Theory', *International Journal of Educational Research*, 47 (1), 60-74.
- Craft, A. (2000), *Creativity Across the Primary Curriculum: Framing and Developing Practice*, London: Routledge
- Dillon, T. (2004), "'It's in the mix baby": Exploring how meaning is created within music technology collaborations', in D. Miell and K. Littleton (eds), *Collaborative Creativity: Contemporary Perspectives*, London: Free Association Books, 144-157.
- Folkestad, G. (2006), 'Formal and informal learning situations or practices vs formal and informal ways of learning', *British Journal of Music Education* 23 (2), 135-145.
- Gaunt, H. and Westerlund H. (2013), *Collaborative Learning in Higher Music Education*, Farnham: Ashgate
- Green, L. (2002), *How Popular Musicians Learn: A Way Ahead for Music Education*, Aldershot: Ashgate.
- Hakkarainen, K. (2013), 'Mapping the Research Ground: Expertise, Collective Creativity and Shared Knowledge Practices', in H. Gaunt and H Westerlund (eds), *Collaborative Learning in Higher Music Education*, Farnham: Ashgate, 13-26

- John-Steiner, V. (2000), *Creative Collaboration*, Oxford and New York: Oxford University Press.
- John-Steiner, V. and Mahn, H. (2002), 'The gift of confidence: A Vygotskian view of emotions', in G. Wells and G. Claxton (eds), *Learning for life in the 21st Century: Sociocultural Perspectives on the future of Education*, Oxford: Blackwell, 46-58.
- King, E. (2006), 'The Roles of Student Musicians in Quartet Rehearsals', *Psychology of Music*, 34, 262-282.
- Lave, J. and Wenger, E. (1991), *Situated learning: Legitimate Peripheral Participation*, New York: Cambridge University Press.
- Littleton, K. and Mercer, N. (2013), *Interthinking: Putting Talk to Work*, Abingdon: Routledge
- MacDonald, R. and Miell, D. (2000), 'Creativity and music education: The impact of social variables', *International Journal of Music Education*, 36, 58-68.
- MacDonald, R., Miell, D. and Morgan, L. (2000), 'Social processes and creative collaboration in children', *European Journal of the Psychology of Education*, 15(4), 405-16.
- Matusov, E. (1996), 'Intersubjectivity without agreement', *Mind, Culture and Activity*, 3(1), 25-45.
- Mellor, L. (2008), 'Creativity, originality, identity: Investigating computer-based composition in the secondary school', *Music Education Research*, 10(4), 451-472.
- Mercer, N. (2002), 'Developing dialogues', in G. Claxton and G. Wells (eds), *Learning for Life in the 21st Century: Sociocultural Perspectives on the future? of Education*, Oxford: Blackwell, 141-153.

- Mercer, N. and Littleton, K. (2007), *Dialogue and the Development of Children's Thinking: A Sociocultural Approach*, Oxon and New York: Routledge.
- Miell, D. and Littleton, K. (2008), 'Musical collaboration outside school: Processes of negotiation in band rehearsals', *International Journal of Educational Research*, 47(1), 41-49.
- Moll, L., Amanti, C., Neff, D. and González, N. (1992), 'Funds of Knowledge for Teaching: Using a Qualitative Approach to Connect Homes and Classrooms', *Theory Into Practice*. XXXI(2), 132-141.
- Orr, S. (2010), 'Collaborating or fighting for the marks? Students' experiences of group work assessment in the creative arts', *Assessment & Evaluation in Higher Education*, 35(3), 301-313.
- Sawyer, K.R. (2003), *Group Creativity: Music, Theatre, Collaboration*, London: Lawrence Erlbaum Associates
- Sawyer, K. R., (2006). *Explaining Creativity: The Science of Human Innovation*, New York: Open University Press
- Sawyer, K. R., & DeZutter, S. (2009), 'Distributed Creativity: How Collective Creations Emerge From Collaboration', *Psychology of Aesthetics, Creativity and the Arts*, 3(2), 81-92.
- Seddon, F. A. (2005), Modes of Communication During Jazz Improvisation, *British Journal of Music Education*, 22(1), 47-61.
- Spalding Newcomb, R. (1998), 'Music In the Air: A Theoretical Model and Music 331 System for Music Analysis and Composition', *Organized Sound*, 3(1), 3-16.

- St John, P. (2006), 'Finding and Making Meaning: Young Children as Musical Collaborators', *Psychology of Music*, 34(2), 238-261.
- Storey, H. & Joubert, M. (2004), 'The Emotional Dance of Creative Collaboration' In D.Miell & K. Littleton (Eds.), *Collaborative Creativity: Contemporary Perspectives*, (pp. 40-51) London: Free Association Books, 40-51
- Vass, E. (2002), 'Friendship and collaborative creative writing in the primary classroom', *Journal of Computer Assisted Learning*, 18, 102-110.
- Vygotsky, L. S. (1978), 'Mind in Society: Interaction Between Learning and Development', London: Harvard University Press