**Serious Misunderstandings:** Challenging the educational and creative value of collaboration for Music Technology Undergraduates.

Undergraduate music technology composers are very often found working on their own in dark acoustically treated spaces surrounded predominantly by studio monitors. As a music technology lecture I have become very interested in their interdisciplinary work, and most recently in finding out more about how their collaborative experience is actually helpful to them. Experiences of collaboration seem diverse and, at a time when the work really matters academically, there is scope for serious misunderstanding, and real potential for conflict. Disputational conflict can be creatively suffocating whilst argumentation may lead to deeper understanding, synergy and ultimately impact positively on creative work.

My first challenge here is to difference in understandings of the word collaboration since it is open to quite variable interpretation. As Pierre Dillenbourg explains ‘When a word becomes fashionable - as it is the case with "collaboration" - it is often used abusively for more or less anything.’ (Dillenbourg, 1999, p1) Collaboration may suggest quite different kinds of activities. Only when we are clear about the type of collaboration students are engaged in though, can we begin to design clear learning objectives for collaboration. As Dillenbourg states ‘…it is nonsense to talk about the cognitive effects of 'collaborative' situations if any situation can be labeled 'collaborative'.’ (Dillenbourg, 1999, p1)

So I ask us to consider our motivation as educationalist when fostering interdisciplinary collaborations that involve music technology undergraduates. Adopting a socioculturalist position that individual learning happens in social situations, I suggest that there are pedagogical reasons to foster collaboration, and that the misunderstandings which take place within collaboration are in fact extremely educationally valuable.

Over the last two years I have been observing and documenting two very specific interdisciplinary student collaborations, which both involve music technogists.
This does enable me to draw on some of the data today, but please note that I have not started formal analysis and can not present any actual research findings yet. I hope instead to stimulate some discussion, and welcome feedback informed by your experiences and thoughts on the issues and questions raised.

Undergraduate music technology students often collaborate in studio setting (King, 2008) and performance groups (as reflected through Andrew King’s research in the paper we have just heard). Through this they may be developing interpersonal skills that are useful to them as professionals. The QAA Music benchmark statement ‘Skills of Communication and Interaction’ enables collaboration to be embraced within course design, and staff may be understandably keen for students to work collaboratively when this experience is likely to prepare students professionally.

There is also a financial incentive since a number of funding schemes have been set up specifically to promote creative and also international collaboration (British Council, Visiting Arts and Artnius referenced in Hayden and Windsor, 2007) motivating practitioners to engage much more with collaborative projects.

In some disciplines, such as theatre, the value of collaboration, is clearly vocational. Because of a shared cultural understanding about specific roles and the way that these roles mesh within a theatre framework, the students involved already have a common understanding of how the group will work together. Indeed, in certain situations this common ground has been found to inform some very specific ways of interacting. For instance, Keith Sawyer shows how successful collaborative work in theatre improvisation relies on a shared understanding of improvisation rules, as much as the performers’ shared histories. A social and cultural knowledge has emerged through theatre history, and also more immediately within the life of the specific collaboration. Various scholars, including Sawyer and also Fred Savage, have examined the affordance of shared understanding and grounding on performance synergy in Jazz improvisation and group performance.
‘When students improvise music together, it is the entire improvising group that learns, and the knowledge acquired is group level knowledge.’ (Sawyer, 2008, p51). Community is at the heart of creative collaboration. The community provides the enabling foundation from which collaborative efforts emerge (John-Steiner, 2000): growth in relationship leads to the evolution of thoughts, ideas, and projects. (StJohn, 2006, p238) Joint development in collaboration is clearly creatively valuable.

So there are implications here for music technologists working with creative practitioners from different backgrounds who are less familiar to them in various ways. Different individuals bring different sets of knowledge and subjective understandings into collaboration, and through intersubjective exchange they can form a more grounded and shared understanding (Edwards & Mercer, 1987). But because of this there is certainly scope for misunderstanding.

As Eugine Masutov explains,’... any joint activity has multiple agendas, goals, contexts, tasks, and actors with different intentions. It involves dynamics of agreement, disagreement, and coordination of participants’ contributions.’ (Masutov, 1996, pp31-32).

In all of the interviews in my work I asked the students to talk about what has in the past frustrated them the most when collaborating. Figure 1 contains a transcription of one of one student’s response; included here because it raises a number interesting key points:

1. problems of misunderstanding,
2. a matter of being able to express thoughts freely,
3. misunderstanding instructions, and finding out after developing work,

Collaborators may know that they have not understood, and not know that they have not understood, as Edwards and Mercer explain: ‘The establishment of mutual understanding is an everyday matter; but so too is the creation of misunderstanding.’ (Edwards & Mercer, 1987, p5).
“I think the most problem frustrations in a collaboration, in the collaboration or whatever, erm will be, yeh misunderstanding I guess, or you say something but you don’t really know if they’re interpreting it in the right way, or, I guess that again that comes down to that personal issue where if you know someone enough, you can talk through things or whatever, erm but…like for example if, you know if you’ve tried to explain or someone else, someone else has explained something and then you’ve gone and done it wrong or you’ve not done what they’ve said originally. I think because other people have different ideas, that’s not always a bad thing, so I wouldn’t see it as a, a negative part of collaboration, erm, I see that, that’s the whole point really isn’t it, you’ve, not working with yourself the whole time, you’re working for other people and four other completely different ideas…”

This student also appears to value difference within collaboration. Where the participants’ knowledge overlaps a common knowledge helps to reduce scope for misunderstanding ‘…the more relevant common knowledge that these two people have, the less probable it is that they will misunderstand one another…’ (ibid).

However as Eugene Masutov states: traditionally, definitions in academic research‘…of intersubjectivity as a state of overlap of individual understandings overemphasizes agreement and de-emphasizes disagreement…’ (Masutov, 1996, p25) The so-called ‘negative’ aspects of collaboration are just as relevant as similarities, agreement and understandings (Smolka, Degoes & Pino 1995; Wertsch, del Rio & Alvarez 1995).

In fact, Dorothy Miell and Karen Littleton’s work examining informal band rehearsal collaborations noted that the ‘…conflicts were the very sites or moments in which creative breakthroughs seemed to happen, or which fuelled subsequent useful rounds of re-working and re-playing…’ (Miell & Littleton, 2008, p47)

I would like to emphasise at this point that collaboration involves a degree of
creative exposure and personal risk. The students’ personal investment in producing good work is understandably high and it is not necessarily easy for these students to share creative work that is still in progress. To use John-Steiner’s words: ‘Risk taking is a particularly urgent concern for young artists who are faced with the challenge of gaining recognition whilst also testing their own sense of worth and promise.’ (John-Steiner, 2000, p79).

So do we know enough about the way that the students are actually collaborating to say if it is indeed educationally or creatively valuable? Certainly considering the risks involved.

Social situations enable a ‘co-construction of knowledge’ (St John referenced in John-Steiner & Mahn 1996 p243), and working in this way has actually been found to stimulate individual development. ‘The idea that knowledge is constructed through dialogue goes back at least to the time of Socrates and has been reiterated by many others since then.’ (Wells, 2007, p264). Research in educational psychology has found group working to be developmentally valuable for children and I suggest that when fostering collaboration, our educational orientation could be quite specifically focussed on individual development.

In the early 1990s, researchers analysed 50 hours of classroom talk from children aged between 8 and 11, in 10 different schools. Neil Mercer and Karen Littleton discuss the study findings in their publication ‘Dialogue and the Development of Children’s Thinking: A Sociocultural approach’ explaining here that classroom studies reveal a ‘...seeming paradox of children working in groups but rarely as groups. Whilst they may be seated in close proximity, children frequently work alongside each other rather than with each other – their joint work, such as it is, being characterized by disagreements, disputes and turn taking. That is, they may interact, but rarely ‘interthink’.’ Littleton and Mercer (2007) later state that these findings ‘...resonated with those of other research projects, indicating that although grouping children was a common organizational strategy, talk of any educational value was rarely to be heard...’ (Littleton and Mercer, 2007, p58). In their work, Littleton and Mercer do go on to characterise types of talk that are, more and less, educationally productive.
So what might our students actually be doing? When discussing collaboration we could be talking about anything from independent parallel working, characterised most extremely by Cage and Cunningham’s work, by cooperation where each member of a group performs a distinct role independently, or a much more involved approach perhaps seen when musicians improvise and perform Jazz.

Very often collaboration most simply indicates two or more individuals working together in shared time (Sawyer, 2003) and collaboration is often considered to result in: an outcome that is greater than the sum of its parts, an unexpected solution, or a product that would not otherwise have been created at all (Forman & Cazden, 1985; Bryan & Green, 2002; Tudge & Rogoff 1989; Story & Joubert, 2004; Buber, 1970; Sawyer, 2003; John-Steiner & Mahn 2000). Sometimes collaboration is considered to be more than basic dialogue and sharing work (Teasley & Roschelle, 1993) for example explain how ‘…dialogue is important to mutually respectful joint endeavors, but, unless it is linked to the participants’ values, shared objectives, and common work, the result is not necessarily collaboration.’ (John-Steiner, Weber and Minnis, 1994, p774)

So, when we ask students to work collaboratively what do we really mean for them to do? What do they think they are being asked to do?

There are various models of collaboration we can draw on, however it is interesting to find out what the students perceive collaboration to be. When interviewing the undergraduate composers for contextual information in my own research, I tried to find out more about this. I asked them simply what the word collaboration means.

Each of the quotes that you are about to see are transcribed responses from different interviews, used merely to support my question of what the students perceive collaboration to mean. All of these students subscribed to participate in an optional final year level module that facilitates interdisciplinary collaboration and I present some of their responses here. Figure 2 is two statements from different students representing a view that the term is represented by more than one person working together.
Figure 2
‘I suppose it’s just lots of different things working together I guess.’
‘Working with other people on the same project, I’d say. Like working
together on one idea to create something’

Figure 3 indicates that there are other understandings which are not immediately
communicated; that when pushed for examples, the students could perhaps give
accounts of different types of collaboration.

Figure 3
Student: ‘I don’t know. Just doing it together I suppose.
Interviewer: ‘Can you give me an example of a collaboration that
you’ve been involved in?’
Student: ‘Just being in a band. Being with my girlfriend for so long…
its still a collaboration but we’re not making a dvd at the end of it.’

In the next example (figure 4) it is clear that the student really engaged with the
question, touching on some key themes present in research of creative
collaboration such as working towards a common goal, and also the potential
benefits that bringing with different people together can offer.

Figure 4
Student: ‘Its just working together really I’m mean working with other
people…erm… I think collaboration its taking, it just seems to be
working as a team to like a common goal for me. Erm, how you
define, how you set the goal can vary I think. The collaboration part
for me is achieving it.
Collaboration, um, working with other people to find everyone’s best
skill.’

Interviewer: ‘Working how?’

Student: ‘Er, see that’s a good point because its not, the work we do
isn’t necessarily that you couldn’t do with one person, some of it, but
just having five heads, it just seems a lot better than one, you don’t have to use anyone’s weaknesses, you can find that strength from someone else.

These quotes illustrate some understanding of what collaboration could mean, and I suggest that there is more considerable variation amongst academics and educationalists across and within a range of disciplines. Vera John-Steiner helped characterise different broad models of collaboration and each one may reflect a range of different individual experiences of collaboration (see figure 5).

Figure 5

Definitions and models such as these do enable dialogue about types of collaboration, and how these types might be more or less educationally valuable. They perhaps even offer a frameworks for teaching collaboration, but over time a group may progress through several ways of working and also over time the group negotiates conflict and misunderstanding perhaps building a group level shared understanding with shared experiences and points of references; a common knowledge which informs ways of operating in a very specific situation.

‘Both jazz and improv theatre share two key characteristics: Neither is scripted, and neither is directed by a leader. Because there is no script and no leader, these groups are self-organizing, and the performance emerges from the collective actions and interactions of the entire group.’ (Sawyer, 2008, p50).
The key difference with interdisciplinary collaboration is that whilst we are talking about a group that is self-organising they also have to build their common ground at the same time. Drawing on research of creative collaboration and sociocultural studies involving school children in particular, I suggest that we could do more in music technology to support this.

Littleton and Mercer developed a way of scaffolding children into group talk through careful tuition in school. Perhaps in University we could more clearly state our expectations for the students engaged in collaboration, and perhaps align these expectations with more educationally productive forms of collaboration. Whilst parallel, or complementary collaboration might enable students to be less dependent on each other, and whilst more integrated forms of collaboration could generate problems for the students because of misunderstanding and conflict, perhaps the most challenging experiences are also the most educationally and creatively valuable consequences of interdisciplinary collaboration, resourcing students more effectively for a variety of future partnerships.

We could understand more about how our students are actually collaborating, and with this information, perhaps we can then begin to see what is educationally and creatively valuable about interdisciplinary collaboration.

References

Dillenbourg, P ed. (1999) *Collaborative Learning; Cognitive and Computational Approaches* (pp.1-19). Pergamon


Wells,G., (2007) Semiotic mediation, Dialogue and the Construction of Knowledge Human Development 50, pp 244-274