

## Lessons from the Studio: New models of composition with technologies.

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There can be no doubt that music technologies are an integrated part of most of our classroom practice. Many of us are familiar with using computers for MIDI based activities, printing scores for classroom performances or the school orchestra, using keyboards in creative ways or recording pupils' work with tape or Minidisc recorders. If recent research is to be believed (Fischer 2001), Cubase VST is the most frequently used piece of music software in English classrooms (the majority of the time, it seems, for MIDI based activities). A quick survey of the recent NAME publication *Composing in the Classroom: The creative dream* reveals that the use of these types of technologies seems firmly established as tools for classroom performance and composition.

But the use of computers and other technologies in the classroom to handle digital audio is less common. One can hypothesise reasons for this. For example, the more expensive hardware and software needed to facilitate this work, the complicated ways in which some computers deal with the recording process, or a lack of knowledge about the creative potential of such technology. But all these things are changing. Suitable computers are becoming more affordable and some, particularly iMacs and iBooks, can handle digital audio (and video) in simple and transparent ways. Creative software tools that imitate all the digital audio functions of a program like Cubase VST are freely available on the internet (Savage 2001). And, as recent research has shown (Savage & Challis 2001a, b & c), with a certain amount of imagination and the selection of suitable

hardware and software, pupils can easily access the realm of digital audio (and video) with the minimum of fuss or bother. But more importantly than that, a new inclusive model for composition can be facilitated that builds on skills inherent to these technologies. All too often, composition skills have relied on a pupil's ability to play an instrument or to create and decode traditional staff notation well. But as George Odam has pointed out in a recent article:

It appears painfully obvious to me that one of the central planks of the 19<sup>th</sup> and 20<sup>th</sup> century concept of 'musicianship', that of the decoding and transmission of musical notation, has now been shown to be faulty and in urgent need of refurbishment, repair and possibly, replacement. (Odam, 2001, p.7)

This short article will describe new models for composition that were central to a collaborative project run between Debenham High School, HMP Hollesley Bay and Aldeburgh Productions. It will then place the findings of this project in the larger context of the writer's research interests within the University of East Anglia's community of electroacoustic composers.

*Reflecting Others* was an innovative digital arts project that had, at its heart, the idea of representing oneself and others through music and video. It linked pupils at Debenham High School in rural Suffolk with a small group of young offenders in the Carlford Unit at Her Majesty's Prison Hollesley Bay. Music lessons for these pupils were far from conventional during the Easter 2001 term. You would have been as likely to find pupils working with digital video cameras, iMacs, minidisc players and microphones as with traditional classroom instruments. Pupils recorded the hustle and bustle of school life, the countryside, their hobbies and interests, collected audio samples from CDs and radio programmes as well as visual images from the local skateboard park and leisure centre.

Young offenders were offered the opportunity to carry out the same exercise. They documented, through sonic and visual digital recordings, their environment, sense of identity and community as young, 21<sup>st</sup> century teenagers. The collected samples become the source material for a number of sonic and visual compositions each made by one group about the other.

[Insert Fig. 1]

After the exchange of the collected information (see Fig.1), pupils and young offenders manipulated the images and sounds collected by the other group using a variety of innovative software tools, including Metasynth, Digital Performer, Adobe Premiere and Adobe AfterEffects. These new sounds and images were arranged to make short pieces of music and film that were placed within a specially designed installation housed in the Exhibition Room at Snape Maltings Concert Hall. This installation was part of the Suffolk School's Celebration of Music, the Aldeburgh Festival and the Snape Proms.

The creative power that new technologies bring to develop new models of classroom composition was demonstrated throughout the project. It built on the ideas of a previous project, *Dunwich Revisited*, in which pupils had used sound processors as tools for the development of sound ideas. The evaluation of this project (Savage & Challis 2001a) showed the benefit of such an approach in encouraging all pupils to experiment with the creation and manipulation of sounds in expressive ways. *Reflecting Others* focussed on digital media as a means of collecting, editing and arranging sounds and images. But it

was amazing to see how easily pupils applied old skills as well as learning new ones in order to use these technologies effectively.

From these projects, ideas have been developed about how to use these new technologies effectively within the classroom environment:

- Used imaginatively, new technologies lead to new models of performance and composition. Rather than reinforcing existing models, *Reflecting Others* demonstrated that pupils value the opportunity and challenge to express their own ideas in new ways and through new media.
- Stimulating and creative tasks give a clear focus for using new technologies. Pupils were given clear aims regarding what they were expected to achieve with the new technologies. They were given time to explore and experiment with sonic and visual ideas in a free and flexible way.
- Effective use of these tools can democratise performance and composition in the classroom. All pupils, regardless of traditional instrumental skill or ‘musical’ ability, can be involved in the music-making process. But new technologies are not a universal panacea; with them come a range of new skills and abilities that pupils need to be formally taught or encouraged to explore.
- Changing models of performance and composition require changed models of assessment and evaluation. This is going to be an important feature of a future regional publication by NAME. In the writer’s current research, a naturalistic and qualitative-type evaluation model has proved particularly successful in obtaining a clearer picture of how pupils use technologies for creative ends.

As educators we should be constantly searching for ways to motivate and inspire our students. The ‘soundscape’ or ‘acoustic ecology’ approach to composition adopted by the *Dunwich Revisited* and *Reflecting Others* projects was an ideal platform onto which the creative use of these new technologies could be built (Savage & Challis, 2001c). The projects show that with a creative approach to curriculum planning one can give students the opportunity to reflect sonically on physical places, their own and others environments in powerful and authentic ways. The innovative use of technologies in the classroom truly democratises the process. As such, the project represented an attempt to implement technological and pedagogical strategies that allowed and enabled “our young people not only to have the opportunity to become soundscape researchers, but [also] soundscape designers” (McGinley 2001, p.73).

Many of the ideas for these projects have come out of a fruitful relationship with electroacoustic composers at the University of East Anglia. Working as a researcher within this community has been a fascinating experience. Electroacoustic composers adopt a variety of ways of working that have been a constant source of stimulation and inspiration. Whether it be designing innovative software and hardware interfaces that allow new ways of interacting with sonic material, or working with older technologies in imaginative ways, there are many lessons that we can learn and apply within our own and our pupils’ work.

But electroacoustic composers share many of the concerns that we, as teachers, might have about these technologies. They are looking for new ways to evaluate and assess their creative practice in the light of the new artistic practice that technologies can facilitate. They are concerned about enhancing the means of expression and the human ‘feel’ of music generated with or by computers. And many, too, are breaking out from what might be described as the rather cloistered world of high-art electroacoustic music into fluid and flexible models of post-modern, cross-disciplinary artistic practice.

So how prepared are we to change our practice in light of the increasingly availability of these digital technologies? For many of us the MIDI revolution of the 1980s is still happening! But, for others, this is yesterday’s technology. And for some, MIDI is just another barrier between a composer’s means of expression and musical material itself:

The closed nature of the typical MIDI configuration, and its ignorance of the sounds actually produced, can result in a serious dislocation between the *symbols* with which the composer interacts and the material itself. ... The more distant the aesthetic concerns from simple forms of tonal instrumental music, the greater the distance between the sonic reality and its symbolic representation. (Vaughan, 1994, pp.123-4)

In other words, using a MIDI sequencer and keyboard is fine if all you want to do is produce, or reproduce, the ‘simple forms (!) of tonal music’. But if you want to move beyond this into the new worlds of compositional practice that artists of today inhabit, then a more open, less dislocating, aural environment is where you ought to be heading. We can all appreciate the enabling power that a MIDI-based sequencing environment can have, particularly for pupils who may lack those traditional performance or instrumental skills. But how much more will the new digital technologies empower not just these but all our pupils? And what about the changing skills and practices that accompany these

developments and how we ought to assess them? Odam is quick to recognise that these will undoubtedly change, and that ‘advanced skills of memorisation, creative interpretation and improvisation will become at least as important as decoding notation’ (Odam, 2001, p.7).

There are many challenges ahead for music education in the 21<sup>st</sup> century. Things are moving on apace and music education needs to keep up. Failure to do so could spell disaster. Pupils will not be satisfied with what is on offer within the ‘formal’ music curriculum if what is available at home for them on their personal computer, playstation or on the internet is much more exciting, relevant and inspiring. And who is to say that their individual musical learning in these ‘informal’ environments may not be equally advanced and sophisticated as their ‘formal’ classroom-based learning, or more so? Lucy Green’s recent book (Green, 2001) presents us with such evidence from the field of instrumental musical learning. As her final chapter states, formal and informal learning environments may be mutually reciprocal or contradictory. And this, I suggest, depends on an individual teacher or pupil’s point of view and how they decide to act on it. As educators within the ‘formal’ context, the ball is most firmly in our court. We can stay with past models of musical practice that exploit old (and often genuine) uses of musical technologies. Or we can try our best to embrace change, examine carefully the new models of artistic practice that are happening today and facilitate the innovative uses of old and new technologies in such a way that truly inspires and motivates all our pupils. I know where I’m heading ...

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Technologies used in the *Reflecting Others* project included:

#### Hardware

Digital Video Camera (Panasonic DX110)

Two Sony Minidisc players (MZ-R35 & MZ-R70)

Two iMac G3 computers (400 MHz processors, 192 MB RAM)

Two external Firewire hard disks (30GB each)

#### Software

Adobe Premiere & AfterEffects: digital video editing software

(<http://www.adobe.com/motion/products.html>)

Digital Performer: audio editing and sequencing software (<http://www.musictrack.co.uk>)

Instant Player: freeware that allows you to play back audio files from the desktop

(<http://www.soundhack.com/>)

Metasynth: fantastic graphical-based sampling software (<http://www.uisoftware.com/>)

SoundHack: freeware audio-processing programme (<http://www.soundhack.com/>)

## Bibliography

Fischer Family Trust <http://www.fischertrust.org>

GREEN, L. (2001) *How Popular Musicians Learn: A way ahead for music education* Abingdon, Ashgate.

MCGINLEY, R. 'Stockholm Soundscape Project: New directions in music education' in UKISC (2001) *Sound Practice: the 1st UKISC conference on sound culture and environment* pp.69-73.

NATIONAL ASSOCIATION OF MUSIC EDUCATORS (2000) *Composing in the Classroom: The creative dream* High Wycombe, NAME.

ODAM, G. (2001) 'Connecting with the Street: Musicianship in a new age'. Keynote Address to the Symposium on Musicianship, Adelaide University, Australia.

SAVAGE, J. (1999) 'Approaches to Composition with Music Technology in the Key Stage 3 and 4 Curriculum' at <http://www.music-journal.com/english/index.htm>).

SAVAGE, J. (2001) 'An Introduction to Music ICT for Trainee Teachers' (Available as a pdf file from <http://www.jsavage.org.uk/lecturematerials/lecmat.html>; details of free software links can be found at the end of this article).

SAVAGE, J. & CHALLIS, M. (2001a) 'Dunwich Revisited: Collaborative composition and performance with new technologies' *British Journal of Music Education* 18:2, pp.139-149.

SAVAGE, J. & CHALLIS, M. (2001b) 'A Digital Arts Curriculum? Practical ways forward' (to be published shortly in *Music Education Research*).

SAVAGE, J. & CHALLIS, M. (2001c) 'Sound Reflections: The influence of acoustic ecology on classroom composition' (to be published shortly in *Soundscape*).

VAUGHAN, M. (1994) 'The Human-Machine Interface in Electroacoustic Music Composition' *Contemporary Music Review* 10:2, pp.111-127.

A number of papers by Jonathan Savage and Mike Challis are available at the following website: <http://www.jsavage.org.uk>

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