Digital Soundscapes: Student Teachers Organising Sounds in a Technology-Enhanced Learning Environment

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Primary school teachers in Ireland are encouraged to explore environmental sounds in their classrooms in order to broaden the children's awareness of the musical qualities of the world they inhabit. Machines, weather, animals and people are suggested as sound sources for infant classes because they enable the teachers to deal with timbre (sound quality), dynamics (loudness) and silence. Musical ideas such as pitch, duration, texture and speed are gradually introduced, becoming more real for the children when they hear how objects can be manipulated aurally (e.g. bottles containing different amounts of water and pebbles falling on different surfaces). Older children even learn about sound waves, echoes, resonance and vibrations. Group composing activities provide an arena for sound exploration, tying in with the notion of music as 'organised sounds'. However, student teachers who are not music specialists can find composing tasks daunting. They have to learn how to imitate real-world sounds by using classroom percussion, body percussion and their own voices and then justify their Soundscapes in musical terms. This paper emerges from a short case study researching Digital Soundscape composing in an Irish college of education. The aim was to find out how student teachers would use a digital audio editor to transform recorded sounds, to explore the musicality of those sounds and to position them within a creative structure, in order to gain an understanding of Soundscape in general. Three first year undergraduates participated in the project during their first term in the college. Having completed some preliminary listening tasks, they were given folders of audio files that they had requested. They composed their Soundscapes at separate computers using an audio editor called *Adobe Audition 3*. This has two working spaces. In the waveform window the user can stretch and reverse wavs, create an illusion of space by panning from left to right speaker and remove the identity of a sound by applying delay effects or by filtering frequencies. In the multitrack window the 'jigsaw' is assembled. As teacher-researcher I noted each participant's preference for editing or positioning sounds, for constructing authentic or creative scenes and for organising events in a sequential or layered way. Three short pieces emerged, *Cathedralscape, Bathscape* and *Hospitalscape*. Excerpts from these will be played during the presentation to illustrate some of the findings, under different headings including 'Digital Soundscape concepts', 'Digital Soundscape as Creative Learning' and 'Visual Scaffolding in a Digital Audio Editor'. Research questions addressed include the following: How can a technology-enhanced learning environment contribute to student-teachers' learning about Soundscape composition? What are valid criteria for assessing musicality in this domain? In what way(s) can an interactive experience with Digital Soundscape help student teachers to use real-world sounds in their music lessons? These results inform my ongoing doctoral research into *musique concrète.*