

Exploring the Neglected Musical Dimensions of Timbre and Space: A Window into the Creative Thinking of Producers and Engineers

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Abstract

The musical roles of the audio engineer and producer, and their related manipulations of the musical dimensions of timbre and space, are often neglected in contemporary K-12 music education curricula and in courses preparing music teacher educators. The musical dimensions most often the subject of creative manipulation by engineers and producers involve timbre and space. Not dissimilar from the related traditional role of “conductor,” engineers and producers work actively at both live and studio controls facilitating and making creative sonic decisions, adjusting balance, choosing and shaping timbres, and spatializing sounds for creative effect. In many cases, engineers and producers are not the creators, composers, or performers of the musical sounds being recorded and manipulated. However, they do play an essential role in the shaping of the music and overall sonic effect, bringing the music to life (Moylan, 2008; Williams, 2007; Zak, 2001). The presenters of this workshop will share and lead participants in aspects of exemplar projects developed during a two-year applied research study with pre-service music educators working with K-12 pupils in exploring the creative musical processes of engineers and producers.

Keywords

Timbre, Spatialization, Audio Engineer, Producer, Pedagogy, Creative Thinking

Recent research on informal music making and learning focuses on the musical processes of composers, improvisers and performers in rock and hip-hop genres (Davis, 2005; Green, 2007; Söderman & Folkestad, 2004). These same researchers have developed associated pedagogies to introduce informal methods of teaching and music making into school-based music learning contexts (Davis, 2008; Green, 2008 & 2011). Each of these studies, and their derivative pedagogical extensions, focus primarily on the performer and performer/composer roles of the pupil-musician in the context of covering and creating rock songs and hip-hop tunes. While it may seem natural to focus on the processes of the performers and advocate performance-centered pedagogies within these genres, there are other and perhaps equally important musical roles - such as those of the sound engineer and producer – actively involved in the creation, shaping and production of the contemporary music enjoyed by pupils in both live and recorded music contexts.

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2007; Zak, 2001).

The roles of the audio engineer and producer, and their related manipulations of the musical dimensions of timbre and space, are often neglected in contemporary K-12 music education curricula and in courses preparing music teacher educators. In the United States, timbre is often addressed in primary curricula through aural identification tasks such as “What instrument do you hear?” or “Peter and the Wolf”-type experiences, or enactively through choosing classroom instruments with which to perform and create. In secondary performance-based music classes, students are directed to achieve a “good tone” and work with timbrally-related performance techniques such as pizzicato vs. arco bowing or adding a mute to a brass instrument. In tertiary music teacher preparation curricula, timbre may be briefly addressed at the beginning of the music theory sequence by the introduction of the harmonic series and a quick mention of its relationship to timbre, but is seldom addressed beyond that.

The creative manipulation of space – spatialization – is rarely mentioned as a musical dimension in K-12 curricula in the United States. The historical influence and predominance of fixed physical position large and small ensembles may contribute to Wiggins’ (2009) hesitance to consider spatialization as a musical dimension of Western music (cf. p. 47). Aside from the occasional reference to historical antiphonal performance practice, space is rarely addressed as a creative musical dimension, except as a by-product of stereo audio recording or when introducing the “panning” feature in digital audio workstations. Rarely are timbre and space introduced in the context of the professional musical roles of engineer or producer. It is encouraging, however, that

research by Tobias (2010; 2012) is illustrating that high school pupils do adopt and choose to explore both performative and non-performative roles (such as that of the engineer and producer) when provided the means and the context to create original popular music.

The presenters of this workshop (a music teacher educator/researcher with a background in audio recording and a masters student enrolled in dual studies in music education and sound recording technology) will share exemplar projects developed during a two-year applied research study with pre-service music educators working with K-12 pupils in exploring the creative musical processes of engineers and producers. This workshop will lead participants in aspects of the projects developed during the study:

1. A critical listening and auditory scene graph task listening for timbral qualities and spatial placement of sounds.
2. A convergent audio mixing project where participants adjust volume and spatial parameters to match a recorded mix, experiencing a subset of the creative musical decision-making processes of an audio engineer.
3. A divergent audio remix project where participants negotiate timbre and space, experiencing a subset of the creative musical decision making processes of a producer.

Workshop Timeline

0:00 – 5:00 Overview of musical thinking processes of engineers and producers with examples

from professional practice.

5:00 – 20:00 Hands-on critical listening and auditory scene graph project, and comparison to pre-service music educator responses.

20:00 – 35:00 Hands-on mixing project to be completed on participants' laptops with headphones exploring the role of audio engineer.

35:00 – 40:00 Sharing of participants' audio mixes with the group.

40:00 – 45:00 Discussion of participants' experiences and discussion questions.

Suggested Discussion Questions

How are the roles of audio engineer and producer similar or different to traditional musical roles as commonly taught in the schools in which you prepare teachers to teach?

Are the musical dimensions of timbre and space co-equal in importance to dimensions such as melody, harmony, or form?

How do you prepare pre-service music educators to experience, explore, and teach timbre and space to K-12 pupils?

What kinds of experiences would assist pre-service music educators without a lived background in audio engineering or production facilitate these kinds of experiences in their K-12 classrooms?

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