

# **Reaching out and beyond: Creating a legacy for sound-based creativity in primary schools**

David Holland

Music, Technology and Innovation  
Institute for Sonic Creativity (MTI<sup>2</sup>)  
De Montfort University, Leicester UK

[dholland@dmu.ac.uk](mailto:dholland@dmu.ac.uk)

## **Abstract**

This paper will outline research at De Montfort University (DMU), in partnership with the Leicester-Shire Schools Music Service (LSMS) and funded by the Midlands4Cities Creative Economy Engagement Fellowship (CEEF) programme, concerned with increasing creative engagement with sound-based music (sbm) in primary schools. The project builds on the EU Interfaces project (a Creative Europe project concerned with bringing new music to new audiences) and other research conducted at concerned with increasing access to sbm in pedagogical contexts. In partnership with LSMS, a whole unit of lessons on sound-based creativity was developed for Key Stage 2 children (7-11 year olds). The central question then posed by this postdoctoral research was: how effectively can non-specialist teachers deliver such lessons without requiring the presence of experts from the field?

Resources were created to support teachers in guiding pupils through the unit and a case study approach was used to collect largely qualitative data. Responses from the participating teachers and pupils have been very positive. As a result of this, LSMS are continuing to offer the unit to schools in Leicestershire with the possibility that this could be offered nationally to other music education hubs in the future.

## **1. Introduction and context**

This paper presents research conducted at De Montfort University (DMU) in partnership with the Leicester-Shire Schools Music Service (LSMS) and funded by the Midlands4Cities Creative Economy Engagement Fellowship (CEEF) programme, concerned with enabling primary school teachers to deliver a unit of lessons on sound-based creativity. There have been a number of pedagogical initiatives in recent years concerned with widening creative participation in sound-based music (sbm) conducted at the Music, Technology and Innovation – Institute of Sonic Creativity (MTI<sup>2</sup>) at DMU (Holland 2016; Wolf 2013; Therapontos 2013). In particular, the HL2 project (Holland 2016) and the EU Interfaces project (see Landy 2019; Holland and Chapman 2019) provided workshop templates for the unit of lessons that were developed for this project. Additionally, data from these projects demonstrated that pupils can find such workshops to be highly engaging and that the opportunity to be creative with sound is a key driver of this.

As has previously been argued in relation to experimental forms of music (Paynter 2008), as well as in direct connection to sbm (Holland and Chapman 2019; Wolf and Younie 2019), one of the key pedagogical benefits of this music is that it facilitates creative engagement with sound for pupils of all levels of ability, as learning does not depend on previous musical experience. However, one issue for the legacy of such projects is how these initiatives can be sustained without the continued involvement of specialists, in other words, how can schools be supported to continue to deliver lessons involving sound-based creativity without inviting an expert from the field to deliver them? At Key Stage 3 level (11-14 year olds in the UK) resources are already available to support teachers and pupils with this through the EARS 2 initiative (Landy et al, 2013). However, there is a lack of resources for this at Key Stage 2 (7-11 year olds). Additionally, primary school teachers often lack confidence in teaching music (Seddon and Biasutti 2008) and, while sbm might have the potential to offer an approach to music education that is inclusive or democratic (for generalist teachers as well as pupils) there could be other barriers that cause anxiety for teachers, such as a lack of knowledge of sbm or the technology used for making it (Wolf and Younie 2018). Therefore, the key goal of the project introduced in this paper, was to investigate how the early development of creative digital skills through engagement with sbm can be fostered by non-specialist primary teachers without previous knowledge of sbm or the technology involved.

### **1.1. Developing knowledge for teaching sbm**

Wolf and Younie (2018) have argued, in relation to the teacher packs designed for EARS 2, that teachers need to develop sufficient ‘subject content knowledge’ (in reference to Shulman’s (1986) theory of knowledge types required for teaching) in order to teach sbm confidently and effectively. Shulman described seven types of knowledge that teachers need to teach effectively. Wolf and Younie identify “subject content knowledge”, “pedagogic content knowledge” and “general pedagogic knowledge”, as well as “technology pedagogic content knowledge” (Wolf and Younie 2019) as being important for teaching sbm. “Subject content knowledge” refers to what a teacher needs to know about a subject to teach it, while “pedagogic content knowledge” is concerned with how to teach something (see Wolf and Younie, 2019 for a more detailed explanation of these domains in relation to sbm).

Building on this work, this projects aims to enable teachers to develop these different types of knowledge but also give them confidence to deliver the lessons effectively through the support of training and resources. In order to do this, a model used by LSMS for delivering other music technology units in schools has been adopted for this project. The next section will provide a more detailed overview of this model and the resources that have been created.

## **2. Lesson design and resources**

As discussed in the previous section, the activities devised for the lessons built on previous successful projects (for example, see Holland and Chapman 2019) and are divided into the themes of listening, recording and composing. For this project, the templates from previous projects were extended and adapted for the model used by LSMS. In this model, the teacher is provided with training, lesson plans, PowerPoint slides, instructional videos and sound examples along with equipment including digital recorders, headphones and portable speakers. Additionally, the project uses free software (Soundplant and Audacity) in the lessons.

LESSON 3 LO: I CAN USE A DIGITAL RECORDER AND FIND A DIVERSE SELECTION OF INTERESTING SOUNDS TO RECORD

## HOW TO USE THE ZOOM RECORDER

- ▶ When recording sounds, there are a few tips you can use to help make the sound recording be of a good quality.
- ▶ Watch this following video for guidance on how to use the Zoom recorders and some tips for getting good quality recordings.
- ▶ Click here to watch [the video](#).

Figure 1. Example from a slide in lesson 3

To deliver the lessons, teachers follow through the slides provided, which also include links to instructional videos and other resources (see Figure 1). As this unit is offered to schools to help them improve and expand their music curriculum, it is important for the content to enable pupils to achieve some of the key aims of the primary music curriculum. For example, the lessons aim to develop understanding of different musical dimensions such as pitch, dynamics, duration, tempo and timbre through listening to, performing and creating music. Ten lessons (each lasting one hour) have been designed and include the following:

- Listening training - soundwalk
- Soundmapping
- Recording
- Conducted live performance using Soundplant
- Learning compositional strategies
- Development of scores
- Creation of individual sound-based compositions using Audacity.

The listening training is the foundation of all the subsequent work and begins a process whereby the pupils can begin to learn to listen like composers. Therefore, in the opening lesson, following some collaborative listening exercises in the classroom, a soundwalk (see Figure 2) is conducted around the school where pupils are encouraged to listen to the different musical dimensions of the sounds around them as well as thinking qualitatively about the sounds.



Figure 2. Listening on a Soundwalk

In lesson 3, the pupils learn to use a simple digital recorder provided as part of the resources for the unit. It is intended that in this lesson the pupils develop their listening skills and use them to make choices about which sounds to record. This is followed by lessons where the pupils begin to work creatively with the sounds using the software Soundplant (<http://soundplant.org>) culminating in a collaborative performance where pupils conduct each other in small groups

In the remainder of the unit pupils work towards devising individual fixed media pieces using the software Audacity. Compositional strategies and models are provided to help the pupils develop their pieces. The pupils also develop graphic scores to help guide (rather than fix) the structure of their compositions. The final lesson involves the pupils finishing their compositions before sharing these with the rest of the class.

### 3. Methodology

The key aim of the research was to investigate how the early development of creative digital skills through engagement with sbm can be fostered by non-specialist teachers. In order to fulfil this key aim, a mixed methods multi-site case study approach was used to collect qualitative and some quantitative data through questionnaires, classroom observations, interviews, lesson recordings and pupils' work as well as feedback from LSMS.

The unit was run in two schools during the summer and autumn terms of 2019 with data collected from 92 pupils and 3 different teachers. Two of these teachers are generalist class teachers, whereas teacher 3, who taught the unit during the autumn term of 2019 is a music teacher but with little experience of using music technology. Running the unit over these 2 terms, provided an opportunity to test the resources and gather feedback from teachers and pupils. Based on this, the resources were then refined and enhanced for use in the future. The

research ran until December 2019, but the unit is still being offered by LSMS (following a break due to the Covid 19 pandemic) with a number of schools running it during the spring, summer, and autumn terms of 2021. Questionnaire data was also collected from two teachers who delivered the unit in the 2021 summer term and some of their responses have been included as part of the qualitative data.

## 4. Analysis of the Data

Responses from the participating teachers were very positive, indicating that the materials, training and resources provide effective support and that the teachers would recommend the unit to other schools. All the participating teachers said they felt confident delivering the unit and would be happy to teach it again. Additionally, there was recognition among the teachers that creativity is '*hugely important*' (teacher 2) but that there are not many opportunities for this in the current UK curriculum. Teacher 2 remarked that a key benefit of the unit is that it allows regular slots for creative activity over a period of time.

The quote below from teacher 3, underlines her faith in the project but also identifies the type of knowledge that teachers will gain by delivering this unit. The implication of this is that teachers will learn pedagogic content knowledge and technological pedagogical knowledge from participating in the project. Additionally, a teacher will also receive the resources and lessons, meaning that the stress of designing the lessons and activities themselves is taken away:

I would certainly recommend this project to every primary school teacher; both specialist and non-specialist. Either you will learn lots about teaching digital music or if you are already technically capable, you will receive a purposeful, well thought out scheme of work in which musical skills are taught in a progressive way.

Teacher 1 acknowledged that it is not necessary to be a specialist in music technology to deliver the lessons as the required knowledge is provided in the training and through the support of the resources:

....they're learning that skill (music tech) without me needing to be a music specialist.

Teacher 2 underlined the democratic nature of learning sbm as argued in previous research (Holland 2016; Holland and Chapman 2019; Wolf and Youine 2019):

It's usually just the musical ones who excel in instrument lessons, but this is more for everyone really.

### 4.1. Pupil Responses to Questionnaire

The data from the pupil questionnaire collected at the end of unit, indicates high levels of engagement from participating pupils. Nearly 77% (n=70) of the 92 pupils surveyed indicated that they enjoyed or enjoyed very much these lessons.

#### Q8) WOULD YOU LIKE TO MAKE YOUR OWN SOUND-BASED COMPOSITION AGAIN?

YES – 60%

Table 1 – Pupil responses to Q8

**Q9) WOULD YOU LIKE LISTEN TO A SOUND-BASED COMPOSITION AGAIN?**

**YES – 83%**

Table 2 – Pupil responses to Q2

Table 1 and Table 2 show pupil responses to Q8 and Q9. Positive responses to Q8, were slightly lower than to a similar question posed in the Interfaces and HL2 projects although responses to Q9 were higher. The reason for many of the negative responses to Q8 seem to relate to a feeling that making a composition was too hard or complicated. Some of the feedback from both teachers and pupils suggested that the later lessons involving Audacity included too much content and became a bit difficult for some pupils to follow or they lost concentration. This was also noted in the lesson observations. The result of this was that there was less time in these lessons for the pupils to engage in free play and experimentation with the sounds and effects. Therefore, feelings of autonomy would have been reduced and the activities might have been interpreted as less creative. As has been shown in previous studies (Holland 2016; Holland and Chapman 2019; Savage and Challis 2002), these are important factors in engagement. Since then, in order to improve engagement further, these lessons have been simplified.

The importance of autonomy and creativity are further supported by the example pupil comments shown in Table 3. These were the common themes in the positive responses as the pupils could create their own sbm pieces using sounds they had recorded, which many found highly engaging.

<b>Example pupil comments:</b>
I liked how we could be creative and express ourselves
I liked how we got to use our own sounds
You get the freedom to make your own music

Table 3 – Examples of pupil comments related to positive responses to Q8

## 5. Conclusion

As a result of the success of the unit, LSMS are continuing to offer it to schools in Leicestershire with the possibility that this could be offered nationally to other UK music education hubs in the future. The data suggests that both music teachers and generalist teachers feel that the resources and training provided for this unit gives them confidence that they can deliver it effectively and fulfil the requirements of the national curriculum. Additionally, the democratic potential of sbm, recognised in previous projects (Holland and Chapman, 2019; Wolf and Younie, 2018), has been underlined by both teacher and pupil responses. The results also support previous research (such as Holland and Chapman, 2019; Holland 2016; Wolf 2013; Therapontos 2013;) that found that non-specialist groups can engage with sbm. The findings also support data from previous studies (Holland, 2016; Holland and Chapman, 2019) that



creative participation with sbm seems to increase engagement with it, and that autonomy and some degree of ownership over this process (such as using their own sounds) plays a significant role in this.

It is now the aim for project to be a key demonstrator project in the UK, especially as the LSMS has links with other hubs nationally and have already successfully shared other music technology units with other hubs. The commitment of LSMS ensures that this short research project will have some legacy and links with the EARS 2 project mean that there is the possibility for learning about sbm to continue for pupils into Key Stage 3. In order for sbm to become established within national curriculums it is vital that lessons can be delivered by non-specialists, which this research suggests is possible, despite perceptions that sbm and its associated technology are difficult to appreciate or understand. If, based on this evidence, more hubs are prepared to offer the unit to schools, this will also contribute greatly to the dissemination of the repertoire, practices and resources needed for sbm beyond their current relatively narrow reach.

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