Addressing the challenges of teaching music by generalist[1] Primary school teachers

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Introduction

One of the ongoing challenges for music education internationally is how to ensure that Primary school-aged children (in England, children aged five to eleven years) experience high quality music education each week. In those locations where children attend Primary school[2], they are usually taught by 'generalist' Primary teachers who are expected to teach all curricular subjects, including music. Although generalist Primary teachers will have previously acquired some specialist subject knowledge in their own schooling and higher education, such as in language and mathematics, it is usually only a minority who have had significant formal experience in the study of music during the period from adolescence into early adulthood. Consequently, research studies consistently report that many Primary teachers 'lack confidence' in the teaching of music (*cf* Hallam *et al*, 2009; Hennessy, 2000: McCullough, 2006; Mills, 1989; Seddon & Biasutti, 2008; Stakelum 2008; Stunell, 2010). This issue of teacher confidence is often related to a self-perception of inadequate music subject knowledge, because that which counts as 'music' knowledge is likely to be framed by Primary teachers' formal experiences of Western classical music (particularly from learning to play a musical instrument), rather than formal (or more likely, informal) experiences of other musical

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[1] The term 'generalist' is used to signal someone who is expected to teach all subjects within the Primary school curriculum to their class, including music, but who does not have usually any specialist background in music.

[2] For example, UNESCO reports that 72 million children were out of school in 2007 (UNESCO, 2010), with 54% of these female. Furthermore, literacy levels continue to present an international challenge, with about 759 million adults lacking literacy skills, two-thirds of whom are women.

genres, such as jazz, rock or traditional musics. One important outcome of this bias in Primary teachers' musical biographies is that musical creativity continues to be insufficiently represented in music curricula in school, as well as in higher education, because it is poorly represented in Western classical music studies (Welch, 2012). In addition, research evidence suggests that this reported 'lack of confidence' in the teaching of music is also not addressed sufficiently in Primary teachers' initial teacher education (pre-service) courses (e.g., Ballantyne & Packer, 2004; Ballantyne, 2006).

In 2011, as part of over a decade of significant national policy development and practice in music, the new UK coalition government published its first (and so far only) national plan for an education subject in England. *The Importance of Music – A National Plan for Music Education* (DfE, 2011) was designed to be a comprehensive '*central vision for schools, arts and education organisations'* in England (p.4). The national plan was the outcome of a Government-commissioned review of music provision that was conducted towards the end of 2010 (Henley, 2011). Although the review recognised that many of the government initiatives that had been instigated in the previous decade had widened access to music education – and that music provision was excellent in many parts of the country – it also highlighted a finding that quality of provision was often dependent on geographical area. Moreover, *'some children in England do not currently receive an adequate, let alone good'* music education (p.5).

The national context for the review recognised that much of the state funding for major recent initiatives in music had ended, or was near its end, primarily because the recent change of Government provided an opportunity to review all previous official expenditure commitments in the context of the ongoing global economic recession. The recent national initiatives in music included *Sing Up* (a programme designed to ensure that every Primary school-aged child had a positive singing experience each week, funded 2007-2012; see Welch, Saunders *et al*, 2012) and *Wider Opportunities* (a programme, forshadowed in 2000, that allowed every young child to have 'authentic instrumental experience' through large group or whole-class tuition, funded 2007-2011; see Bamford & Glinkowski, 2010). A national plan was deemed necessary by the Government, to be overseen by Arts Council England (a quango with little previous history of involvement in school music), in order to bring a greater sense of coherence at a time of financial constraint and policy transition to the diverse quality and quantity of music practices in schools and within the wider community.

In terms of Primary school class music, the Henley plan suggested that there was a need for improved teacher education of generalist Primary teachers. At present, Initial Teacher Education (ITE) courses for intending Primary teachers in England contain relatively limited opportunities for

music education in comparison with the hours allocated for so-called 'core' subjects, such as English, science and mathematics. An additional time constraint that is faced by university-based providers of Primary ITE is the Government regulation of ITE course design. This requires the majority of time on the pre-service course to be spent in schools. Consequently, university-located preparation for the learning and teaching of Primary music is even more constrained. For example, the Institute of Education, University of London usually provides one three-hour workshop for all generalist pre-service students undertaking the one-year, full-time Post Graduate Certificate in Education (PGCE) course. The equivalent PGCE course at the University of Sussex has six hours and Birmingham City University provides ten hours in total for its PGCE students. However, in addition, a minority of ITE institutions offer a longer, music specialist option course within their PGCE, such as the Institute of Education's 60 hours Primary music education programme. These specialist music education option courses attract students with a diversity of backgrounds, embracing those with significant prior musical experience to those who self-categorise themselves as having no formal training in music, but who profess an interest in developing their music education skills, knowledge and understanding. Nevertheless, such specialist music courses are only taken by a minority of students within those institutions where they are available.

Consequently, many Newly Qualified Teachers (NQTs) begin their Primary school teaching career with little knowledge and understanding of music pedagogy. The situation is often no better for those who are already established as Primary teachers because they have similar professional biographies as the incoming NQTs that they are expected to mentor. It is not surprising, therefore, that both groups (experienced and new) report that they find teaching class music difficult (*cf* Holden & Button, 2006; Stunell, 2010). Furthermore, some generalist Primary teachers have demonstrated negative attitudes towards music as a curriculum subject (Spruce *et al*, 2012) and they may not have an understanding of the different ways that music education can be approached within the Primary school (Fautley & Henley, 2010).

Previously, in order to address the issues of confidence, experience, time and possible negativity concerning Primary school music education, there had been some focused initiatives concerning teacher development. For example, in 2009, Trinity Guildhall and The Open University offered a Continuing Professional Development (CPD) course in music within the *Wider Opportunities* (WO) programme. As mentioned earlier, the WO programme was an outcome of a Government White Paper (policy) that stated, *"over time, all pupils in primary schools who want to will be able to learn a musical instrument"* (DfES, 2001, para 2.15). The concept of the programme was that all Primary children in the middle to upper years of Primary schooling (approximately aged

seven to ten) would learn a musical instrument, preferably for a whole year, and that (ideally) they would be team-taught by a specialist instrumental teacher and their general class teacher. However, it was recognised that (a) specialist instrumental teachers needed professional development in terms of teaching whole classes, and (b) that generalist Primary teachers needed professional development in terms of teaching music (Fautley *et al,* 2011). Therefore, the Trinity Guildhall/Open University CPD course was designed for both Primary class teachers and instrumental teachers working in whole-class instrumental tuition projects in the upper Primary school (7 to 11 year olds).

The CPD course was funded by the government, offered free of charge and was evaluated separately to examine its impact on participating teachers. The research found that the course's core modules of '*what is musical learning'* and *'developing vocal work'* had the highest take-up and completion rates for both instrumental and class teachers. After this, the next highest take-up and completion rates were for '*structuring the lesson'* for instrumental teachers and *'composing and improvising'* for class teachers (Fautley et al, 2010; 2). Moreover, 75.6% of class teachers agreed that the course had made them think deeply about the nature of musical learning and 79% said that the course had helped them professionally.

The research into the impact of the *Sing Up* Workforce Development revealed similar positive results. The National Singing Programme (*Sing Up*) was initiated in 2007 in response to the UK government's *Music Manifesto*. The initiative was designed to put '*group singing at the heart of all primary school music activity* '(Music Manifesto, 2006: 8). *Sing Up* aimed to *'support school singing, both in and out of schools'* (Welch et al, 2008: 11; see also Welch, Himonides et al, 2012). Part of this was the development of Primary class teachers' knowledge, understanding and skills in leading group singing. The Workforce Development strand of the *Sing Up* programme was contextually specific in that it was organised by local area 'Singing Leaders' and offered to teachers either as external courses or as part of their school's in-service training sessions, depending on the particular setting. The research investigating the Workforce Development strand of *Sing Up* found that teachers reported two main changes, both in their confidence as vocal leaders and also in the provision of ideas and materials to support teaching in schools (Himonides et al., 2011).

It can be seen from this introduction that there is both a need and desire to ensure that all children experience high quality music education each week. A pre-requisite for this in Primary schools is to ensure that teachers have the confidence, knowledge, understanding and skills to promote musical development in their pupils. The National Plan for Music Education recognised this national need and stated that '*a new primary Initial Teacher Training add-on module to boost new teachers' skills and confidence in teaching music'* would be introduced (DfE, 2011; 8). Subsequently,

in 2011, the Training and Development Agency for Schools[3] (the official UK Government quango in England at that time that was charged with the national supply and quality of teachers) offered a research grant for successful applicants to design, teach and evaluate a pilot music module as part of a Primary ITE courses.

> 'As part of the TDA's work with the sector, we have been asked to develop a two-week module that can be offered by ITT [ITE] providers as additional training in music for primary trainee teachers, during or immediately following their training year.
>
> The modules will be aimed at two distinct groups: - those who would like to be able to teach music to their own class but believe they lack the skills and knowledge for teaching and are unconfident in their musical abilities - and those with established music abilities (through formal or self-study; and/or qualifications) who are likely to be interested in a music coordinator or leadership role in their school early in their careers. Such trainees would benefit from an understanding of the best way to use resources and opportunities beyond the school (including in music education hubs), and how to use their own music education expertise more widely.
>
> The new modules will help to build the knowledge, skills and confidence of new teachers entering the profession, as well as giving a mark of recognition and adding value their professional profile. This is a response to the National Plan for Music Education…' (TDA, 2011, p1)

The Institute of Education, University of London was awarded one of these TDA grants and this chapter presents an overview of the design, implementation and research evaluation of the pilot Primary music education module.

Course Design

The pilot music module at the IoE for its one-year Primary Post Graduate Certificate in Education (PGCE) was built around two-weekly units over a ten-week period. Participation was voluntary (see below). The module content included expert lecturer-led workshops at the IoE in the first week of each unit, followed by opportunities to try out suggested music activities in their placement school during the following week. Drawing on the first author's fourteen year experience as a Primary

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[3] This was renamed the Teaching Agency and then, most recently, was merged with the National College for School Leadership to become the National College for Teaching and Leadership (1 April 2013), part of the Department for Education (DfE) in England.

school teacher in London in the '70s and early '80s and his subsequent design of music education courses for Primary ITE students in Bristol and London in the late '80s and '90s, as well as the latest music education and neuropsychobiological research, the pilot module sought to build students' knowledge, understanding and skills by focusing on connections between music and the other key subjects that they were expected to teach, as prescribed by the National Curriculum for Primary schools in England. Six different subject areas were covered, i.e., music combined with five others. These other subject areas were chosen to embrace the three core curriculum areas – English, mathematics and science – plus ICT and Geography, as each of these had been demonstrated previously as offering rich opportunities for cross-curricular teaching (see Durrant & Welch, 1994).

It was important in the design of the module that cross-curricular learning should be both modelled and celebrated; the emphasis of the module being on learning *in* and learning *through* music. Therefore, each two-week unit was planned and led by two subject specialists working together, with the exception of the opening unit that was entirely music focused to provide an initial grounding in key features of Primary music education and led by the two authors. Subsequent units brought together one of the music team (Henley) with another colleague from the focus subject area.

The IoE-based sessions combined practical activities with theoretical underpinning. Students were also given the opportunity to analyse their own participation in the practical activities and to consider how these might be adapted to suit their current school-practice setting. In some sessions, lesson-planning time was given. Other sessions gave students the opportunity to discuss issues that arose from the practical activities in small groups and as a large group, with each IoE-based day having opportunities for debriefing of their experiences with music in school.

The sessions were designed to encourage reflective practice and critical thinking. Each IoE-based session opened with a reflective diary entry of the school-based activities. Students were then given the opportunity to share their thoughts with others on the course. At the end of each IoE-based session, students were asked to set themselves a music-related target to work towards during the follow week when they were in school. This target ran alongside any other course-directed activities that the students were asked to do in school, and was entirely self-generated. This target was then reflected upon at the start of the following Institute-based session.

This process created a reflective cycle that ran throughout the ten module sessions and across elements:

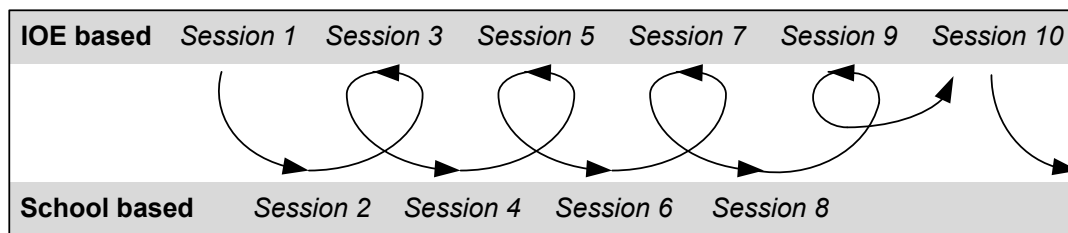| IOE based	Session 1	Session 3	Session 5	Session 7	Session 9	Session 10
School based	Session 2	Session 4	Session 6	Session 8		

Figure 1: A model of the reflective process across the music module, with six sessions that were IoE-based and led by tutors, plus four linked sessions that were in school; session ten was a summative session and fed into the remainder of the student's final school practice towards the end of their one year course

The school-based sessions allowed students an opportunity to develop their practice related to music and to undertake specific tasks that related to the previous week's Institute-based session. As mentioned earlier, the aim of having alternate sessions at the IoE and in school within each two-week unit was to allow students to build their confidence and to try out the focus activities in an IoE workshop setting before going into school. The intention was that students then would be in a strong position to plan appropriate activities with their pupils, drawing on their own experiences of, and critical reflections on, these activities. They were encouraged also to use their own personal experience to predict how their particular pupils might respond to the activities.

Activities

A module handbook was prepared that stated the intended learning outcomes for each session and the directed activities that the students would undertake in school the following week. The IoE-based activities were planned so as to give the students choice and flexibility in the directed activities that they were asked to do in school. The practical activities were interspersed with tutor presentations that provided a theoretical underpinning, including discussions of relevant research literature, as well as discussions of the students' own experience and practice. The activities are outlined below.

Session 1 – Institute-based (Music)

Activities:

- 'Exploratory music-making 1' – find a sound that you like in the room, create a pattern, repeat the pattern. Put it together through a conductor.
- 'Overview of music education' – why this module.
- 'Making sense of children's musical development' – presentation
- 'My musical profile' – self review and discussion of presentation

- 'Exploratory music-making 2' – listen to the opening of 'Money' by Pink Floyd. How many different patterns can you hear? Using untuned classroom percussion, work in small groups to create your own composition based on patterns.
- 'Exploratory music-making 3' – add appropriate musical sounds to a story.
- Target-setting and evaluation.

Session 2 – School-based (Music)

Directed tasks:

- Music in my school – identify where and when music takes place within the school, who the key members of staff are, whether there are visiting teachers and what role they play in the life of the school.
- Observing a musical lesson – observe a lesson where music takes place.
- A musical profile of children in my class – create a musical map of a small group or a whole class to identify what musical experience the children bring to the class.
- Music in the local community – identify what musical expertise is available within the local community

Session 3 – Institute-based (Music, Oracy and Literacy)

Activities:

- Reflection on school experience
- 'Literacy mind-map and links to music'
- 'Understanding structure in stories and music' - compose a sound story based on a reading book (read the story, compose a sound story, perform, evaluate, perform a new improved version)
- 'The Role of Talk - dialogue and questioning in scaffolding learning' – presentation. Plan a composition activity based on a storybook, develop a series of questions that would use as a teacher to help children progress.
- 'Extending the story' – add another scene to your story, both in words and in music.
- 'New London Orchestra Music Through Literacy Project' – presentation
- 'Song and Story Structure – singing activity.
- 'Improvising in storytelling and musicing' – activity based on The Enormous Turnip
- Target-setting and evaluation

Session 4 – School-based (Music, Oracy and Literacy)

Directed tasks:

- To undertake a music and storytelling/poetry activity with a group of students.
- To teach a song, moving from oral/aural to oral/aural and visual
- To identify opportunities for music in the school's oracy and literacy curricula and resources

Session 5 – Institute-based (Music, Science and Mathematics)

Activities:

- Reflection on school experience
- 'Considering the links' – in small groups, discuss quotes from literature on issues surrounding music, maths and science.
- 'Instrument making' – using recycled material, make some musical instruments.
- 'Conducting an experiment' – Explore the different properties of an instrument through an experiment. For example, what happens when a different material is put inside another material? Record your results.
- 'Clapping Music' – watch a video of a performance of Clapping Music by Steve Reich. What can you hear? Watch a video diagram of Clapping Music. Whole-group performance of Clapping Music.
- 'Composing Shifting Patterns' – using the instruments that you have made, compose your own piece based on the shifting patterns of Clapping Music. Find a way to notate your piece.
- 'Planning time' – plan a maths or science activity for your class.
- Target setting and evaluation

Session 6 – School-based (Music, Science and Mathematics)

Directed Tasks:

- To undertake a musical activity linked to science or mathematics with a group of children, leading to a performance
- To explore rhythm and percussion, and it's notation, with a group or a class
- To identify opportunities for music in the school's science and mathematics curricula and resources.

Session 7 – Institute-based (Music and Geography)

Activities:

- Reflection on school experience
- 'Music and Identities' – presentation

- 'World Weather Map' – what is the weather like in different parts of the world today? Can you represent this in music? On the world map, choose a country each and mark it on the map, look online at what the weather is like today. Compose a short phrase to reflect this. Join up with two others and compare you weather. Put your phrases together. Join up with the class, plot a route on the map and join the musical phrases together to create a world weather map.
- 'Sound Walk' – Investigate the map of the local area. Identify places that might have interesting sounds. Plot a route on the map. Take a recording devise and go on your sound walk, recording what you hear at the places that you have plotted. Using Audacity software, import your sounds and create a soundscape for the route that you took.
- 'Exploring the links – local and global' – discussion of links between music, musical identities, the local environment and the global outlook. How can you meet the needs of individuals in your class and draw on their musical identities? How are you assessing their musical progression?
- Target-setting and evaluation.

Session 8 – School-based (Music and Geography)

Directed tasks:

- To take a sound walk around the school with a group and a recording device, to map the walk and then to perform the walk (either live or electronically).
- To build a map of the musics and musical identities represented by the children in the class (building on the music mapping directed tasks of session 2)
- To assess the musical development of a diverse group of children

Session 9 – Institute-based (Music and ICT)

Activities:

- Reflection on school experience
- 'Mobile phone debate' – group debate on the use of mobile phones in the classroom.
- 'linking music and ICT' – presentation exploring music in ICT, and ICT in music
- 'Using Soundation' – explore soundation.com. Create a free account. Explore the samples, create a piece using at least three different samples.
- 'Film-making project' – in groups, design either an animation or film project that utilizes the different specialisms that you bring to the group. Compose music either using percussion instruments and play to the visual and record, or use Soundation.com to create a soundtrack.
- 'Issues and challenges' – discussion of issues and challenges that this kind of work brings to the school.

- Reflection and evaluation.

Session 10 – Institute-based

Activities:

- 'Review of the course' – reminder of the activities undertaken and playback of all the recordings made during each IOE session. Sharing of school-based work.
- 'Your own development' – in small groups, discuss your own development in terms of subject knowledge and pedagogical approaches.
- Final reflection
- Focus group feedback

The activities were designed to develop from requiring resources entirely found in a standard Primary school classroom to then using un-tuned percussion, then using tuned percussion, then using voices and finally using technology. The content also moved from improvised activities to formalized compositions. As the module progressed, the students were required to apply their musical understanding at a deeper level.

The opening activity used anything that the students could find in the room to make music. The focus was on developing the ability to keep a steady pulse. This was built upon in subsequent activities where un-tuned percussion was introduced and the notion of rhythmic variance with a steady pulse was developed. In the story-based activities, the students then explored changing tempi and the relationship between rhythm and tempo, and dynamic variance was introduced. Time and metre was explored in the science and mathematics session and musical notation was considered. This led to the introduction of using ICT in the Geography session, both in order to gather information and also to manipulate recorded sounds. Notation was explored further by relating a route map to a structural map of a piece of music, using the route map to aid and notate the performance of the piece. The penultimate IoE-based session was technology focused and included an exploration of the need to notate music in some way in order for it to be precise and to have the option of being matched to video. The final session was essentially focused on a review of the whole module, including discussion of how their experience could feed into the future work in school.

Research Design

The module had a dual function, (a) to provide initial teacher education in music for those with limited or no background in music education and also (b) to generate research data on the impact and effectiveness of the module's approach and content. Consequently, there was a strong action research focus, with the Primary ITE students acting as partners in the research process. At the outset, the students were told that they were part of a TDA-funded research project. This meant that, in addition to their own learning about Primary music education, we were inviting the students to be co-researchers and to provide the authors with regular feedback on the usefulness (practical and theoretical) of their experiences.

Timeline

The module was planned so as to investigate how it could fit within the normal Primary PGCE timetable at the IoE. The students started their final eight-week block of school experience in April 2012. Within this, students also had a specialist option module that linked with their work in school. Consequently, the pilot music course sessions were scheduled so as to fit into this school placement and specialist module option. Running the module in conjunction with the school experience allowed the students to try out suggested activities and to ground their developing music education knowledge in a practical classroom context.

Participants

The participants for the module were volunteers within that year's full-time Primary PGCE course. The Institute of Education Primary PGCE is organized by groups; with 8 groups in total. These groups contain approximately 40 students each, with students being grouped by Primary School 'Key Stage' (an official Government classification of age phase). Each group tutor was asked to identify four students in total: two students for whom the module could act as an extension activity to their PGCE studies, i.e. so as to provide them with further challenge; and a further two students whom they felt would particularly benefit from the content of pilot module. For the purposes of the research, it was not made known to the research team which students were regarded as working beyond the level expected at that point in time in their PGC and for whom this was an extension activity, nor those who had been selected to participate on the basis of it being appropriate to their interests. The main reasoning for this was that the course was a pilot module that potentially would be offered to all

PGCE students in succeeding years, and the research aimed to investigate how a cross-range of students engaged with the module.

An initial list of n=36 students was drawn up. These students were contacted and told that they had been nominated to participate in the pilot music module and were invited to a meeting to explain the module's rationale. At this meeting, the students were given a brief overview of the module and were told that it formed a research project, with the research process being explained to them. Students were then given details of the first session.

As a result of this meeting, n=18 students self-selected to participate in the module and attended the first session. These students were from a range of Primary school Key Stages in their age range focus (Table 1, vertical columns). Additionally, only one student had already chosen to have a subject specialism in music at the beginning of their one-year course. Note: All Primary PGCE students have a 'generalist' teacher preparation that includes the whole statutory Primary curriculum (science, physical education, music, ICT, history, geography, English, design and technology, mathematics, art and design; with non-statutory guidance available for Primary-focused religious education, personal, social and health education (PHSE), modern foreign languages (MFL) and citizenship)[4]. In addition to learning about all Primary curriculum subject areas, the PGCE course design permits each student to have an optional 'specialism' in a Primary curriculum subject area (Table 1, horizontal rows).

Table 1: Primary school Key Stages and subject specialisms of student participants (n=18)

Specialism	Total	EYFS	KS1	KS2
Art and Design	2		1	1
Children's Literature	3	1	2	
English	1			1
French	1			1
Geography	2			2
History	1			1
LLPC*	1		1	
Maths	2	2		
Music	1		1	
New Media	2		1	1
Science	2		2	
Total	**18**	**3**	**8**	**7**

* LLPC = Language and Literacy in Plurilingual Classrooms

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[4] From September 2014, a revised national curriculum for Primary schools in England will be in place. The curriculum subjects from September 2014 are: English, mathematics, science, art and design, computing, design and technology, geography, history, languages (Key Stage 2 only), music, plus physical education. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/244223/PRIMARY_national_curriculum3.pdf

EYFS = Early Years Foundation Stage, children aged 2-5years.

KS1 = Key Stage 1, children aged 4-7years. **KS2** = Key Stage 2,

children aged 7-11years.

At least one student from each specialist Primary curriculum subject area – as found within the Primary PGCE – was represented in the participant group and the balance between students working in the Early Years Foundation Stage, Key Stage 1 and Key Stage 2 was generally representative of the balance overall of the Primary PGCE cohort.

Data Collection

We collected three strands of data: evaluation data of the taught sessions, action research data on the students' development throughout the module; and data on the impact that the project had on the students and the schools. These data were collected in a number of different ways. Firstly, students filled out on online survey after each IoE-based session. These surveys collected data regarding the perceived usefulness of these sessions, the usefulness of the directed tasks and how applicable they were subsequently to the students' work in schools. The survey used closed questions with seven-point rating scales and open-ended questions to allow for fuller, qualitative answers.

Secondly, the online surveys also embraced a portfolio comprising a reflective diary, self-initiated target information and self-evaluation information. This contributed to the reflective cycle embedded within the module, as described earlier. The students were given a copy of their portfolio at the end of the course showing their progress, their self-reflections, their targets and their self-evaluations of how far that they were able to meet their targets. This data gives us an insight into how the students experienced the module, as well as providing them evidence of their progression, both in music subject knowledge and also music pedagogical approaches that could be applied to their compulsory summative profile in meeting the Secretary of State for Education's published Qualified Teacher Status standards.

Thirdly, focus groups were held at the end of the module in order to gather more qualitative data about the course and the students' experiences. The focus groups were conducted in a semi-structured manner, with key questions in six main areas: workload, learning, children's feedback, teacher feedback, module content, recommendations and further comments.

Finally, students were contacted halfway through the following Autumn term after qualifying. They were asked to reflect and make comments in four areas: the music activities that they had used or intended to use in their teaching so far as a Newly Qualified Teacher (NQT); the responsiveness of their new school to music activities; the responsiveness of their new pupils to music activities; and how the ex-student felt about teaching music as an NQT. Unfortunately, only one ex-student replied to this Autumn term email, so the findings are primarily based on the data collected during and at the end of the module.

The lecturers at the IoE who were involved in the planning and delivery of the pilot module were also contacted by email and asked to comment on three areas: successfulness of the module in delivering cross-curricular learning; practicalities of delivering the module within the current Primary PGCE course; and their own development as a result of participating in the module.

In order to collect information from schools, as part of their experience during the module, the students were asked to find out from teachers what they felt the highlights of the module had been and what they felt the challenges had been. This information was picked up in the end of module focus group discussions.

Experiencing the module

The data collection methods produced a very rich dataset on both the perceived effectiveness of the module and the student experience. Although space precludes the reporting of fine detail regarding the music subject specific foci of the module, it is possible to present here an overview of the main findings and to draw some conclusions. It is important to note that this is not meant to be an exhaustive discussion and that this represents a small part of the deeper analysis of the research findings.

Evaluation of the module

Overall, the students reported that the module was effective. They felt that it was relevant and that others would gain from taking the module (student comments in italics).

The whole module was really good, we learnt a lot from it.

We have all gained something from it, so I think other people definitely would.

The students understood the cross-curricular underpinning of the course and felt that it was beneficial in undertaking the activities at Institute-based sessions, in order to discover the links between the focus topics and then having opportunities to implement them in the classroom.

> *In terms of giving us a framework for cross-curricular planning, to have the activities, to be taught where the links are and how we can make the links, was really useful. To actually have that hands-on experience and to actually have to implement it in a classroom, I thought was incredibly useful.*

They perceived that the strengths of the module were having practical examples, as well as having a theoretical context and underpinning. The students also felt that having the opportunity to try out different activities and also to reflect on them in light of theory helped them to understand how they might adapt their particular experience for their own specific school practice setting.

> *It doesn't seem really abstract because we have actually done [the activities]. Having conversations about how they can be adapted to different key stages, that's a strength.*

> *The theoretical underpinning [is a strength]. The fact that it's got evidence to back it up, that's coming from a particular place with a particular viewpoint and it's got a particular aim.*

This was linked to the organization of the module in terms of alternate sessions between the Institute and school.

> *I do like … that you come in [to the Institute] to practise it, learn how you can apply it and then apply it [in school].*

> *It was nice to come in and do something different. It was refreshing within the placement.*

> *We've had a chance to have a go with things here before we take them into school, so we start off from knowing what the issues might be and we are already trouble shooting before we go into school. It saves a lot of time and energy of things going wrong in the xlesson. We had sorted out those problems before, so we go in [to school] knowing what's going to happen.*

The module was considered to have a clear aim, and the students were aware of this throughout the module.

> *It's got a very strong aim and an outcome I think as a module, and that really helps.*

The students also felt that having time in the Institute-based sessions to reflect on their school experience added to their overall experience of the module. This time was felt important as it allowed the students space for reflection that they would not be able to find when in school.

> *Giving us time to fill [in the reflections in their e-journal], when you're at school you wouldn't have time to do that in school.*

> *Having that time [to fill in the reflections], it was nice and fresh as well. You were in that mode of thinking about the module.*

Overall, the students reported that the module was beneficial and enhanced their experience of the Primary PGCE overall, in particular because the music-focused experience helped the development of their thinking in terms of the nature of creative teaching.

> *It helps you to become more creative in your teaching and to think outside of the box. Like you were saying, 'weather; we are doing weather in India, I'll get some [musical] instruments', I would never have thought of that before. It helps you to be more creative.*

Moreover, they felt that it had developed their confidence in teaching music, as well as developing their subject knowledge in other areas, and given them a holistic approach to cross-curricular teaching.

Experience of the module

Data was collected on the experience of the module, both in terms of the usefulness of the module activities and in terms of how easy it was to carry out the suggested directed activities in school.

Overall, the data from the electronic surveys and reflective diaries suggest that the students developed their subject knowledge, theoretical understanding and practical skills throughout the module. The activities were deemed useful and students were able to suggest how they might use these activities in their teaching (Figure 2).
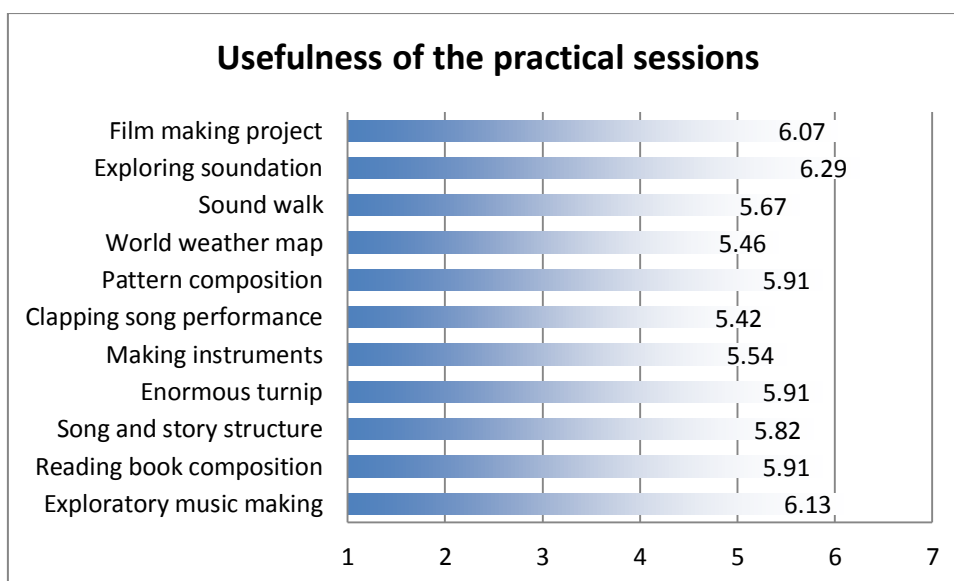
Usefulness of the practical sessions

Activity	Rating
Film making project	6.07
Exploring soundation	6.29
Sound walk	5.67
World weather map	5.46
Pattern composition	5.91
Clapping song performance	5.42
Making instruments	5.54
Enormous turnip	5.91
Song and story structure	5.82
Reading book composition	5.91
Exploratory music making	6.13

Figure 2: Mean student ratings of the 'usefulness' of the practical music-focused activities that they explored in the module (based on a scale of 1 'not useful' to 7 'extremely useful')

The lowest average rating of the module's practical activities was 5.42 out of 7. Overall, the data suggest that the students felt that all of the practical activities were useful. Moreover, the usefulness of practical activities was distributed amongst the different curriculum subject areas that were explored. The top six rated 'most useful' activities are listed in Table 2.

Table 2: The six most highly rated module activities (based on a Likert-type scale of 1-7)

Average rating (out of 7)	Module activity	Focus curriculum subject areas
6.29	*Exploring soundation*	Music and ICT
6.13	*Exploratory music-making*	Music
6.07	*Film-making/animation project*	Music, ICT and students' own subject specialisms
5.91	*Reading book composition*	Music and literacy (comprehension)
5.91	*Enormous turnip*	Music and literacy (oracy)
5.91	*Pattern composition*	Music and mathematics

Due to one of the geography activities taking longer than expected in the IoE-based session, unfortunately there was no time remaining for the scheduled geography planning student preparation. This appears to be the reason for the low score (see Figure 3). However, paradoxically, some students commented that this was not a 'problem', as they would prefer to do their planning in school. So, with the exception of rating for the geography planning time, the theoretical activities (i.e., sessions led by tutors that provided research-based theory concerning the focus area) each

achieved an average rating by student of at least 4.22 in terms of 'usefulness'. This indicates a general student perception that they were more useful than not.
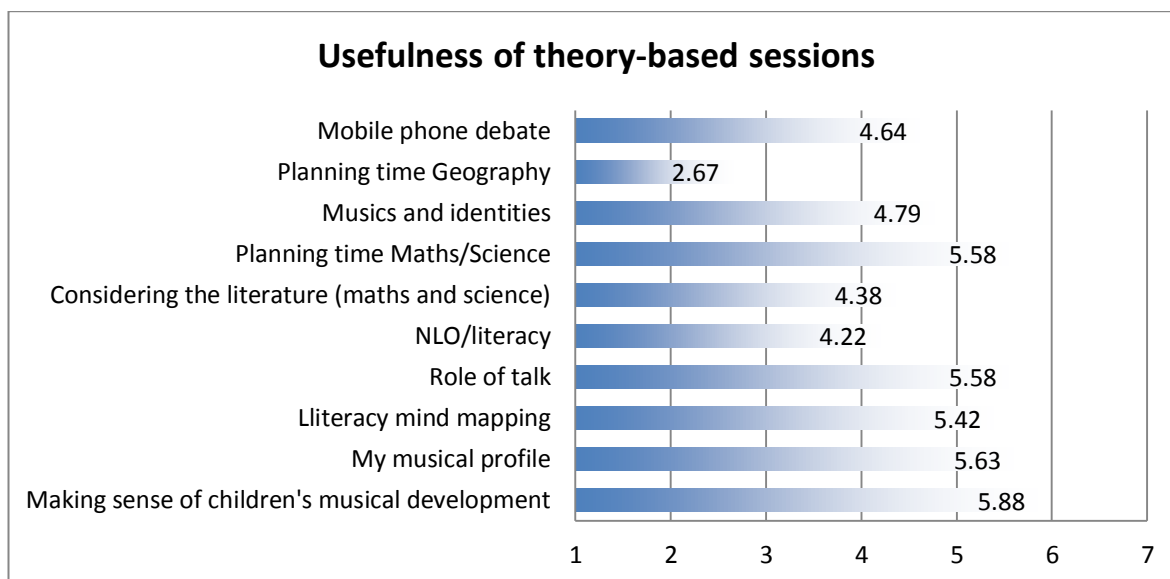

Figure 3: Mean student ratings of the 'usefulness' of the IoE-based sessions that introduced research evidence and theoretical underpinning for the suggested practical activities in school (based on a scale of 1 'not useful' to 7 'extremely useful')

Again, there was a distribution of top average scores across the different curriculum subject areas, with the top six activities illustrated in Table 3.

Table 3: Highest top six mean student ratings for IoE-based sessions that were focused on theoretical underpinning of practical activities

Average rating (out of 7)	Theory-based session	Curriculum foci
5.88	*Making sense of children's musical development*	Music
5.62	*My musical profile*	Music
5.58	*Role of talk*	Music, literacy and oracy
5.58	*Planning time*	Music, maths and science
5.42	*Literacy mind mapping*	Music and literacy
4.79	*Mobile phone debate*	Music and ICT

This evidence suggests that the perceived 'usefulness' of the theoretical activities was distributed fairly equally across the selected curriculum focus areas of the module content.

The curriculum subject specific data demonstrates that, within each subject area, students reported an enriched understanding of the learning processes within that subject because of the exploration through music. This combined curricular focus had enabled them to understand what the shared learning processes with music were, which, in turn, had also developed their understanding of musical learning processes. It was a symbiotic process that was supportive across and within curriculum subject areas.

The data also show that the students perceived themselves as becoming progressively more creative with their teaching and more able to tailor the initial IoE-based activities to their own school teaching situation as the module progressed. This growth suggests that there was an overall development in students' pedagogical understanding, including an ability to apply their developed subject knowledge. This professional growth was deemed to be from a combination of the practical activities, applied theory, formative assessment, reflection on school experience and a course design that alternated between Institute- and school-based sessions.

However, one of the main challenges experienced by participant students was related to their relative ability to make time for music within their school practice days. They reported that they found it progressively more difficult to carry out music-based activities in school. When asked to rate how easy or difficult it was to carry out the school-based directed activities, the average rating scores fell as the module progressed (Figure 4).

Relative ease in being able to undertake the four school-based sets of activities

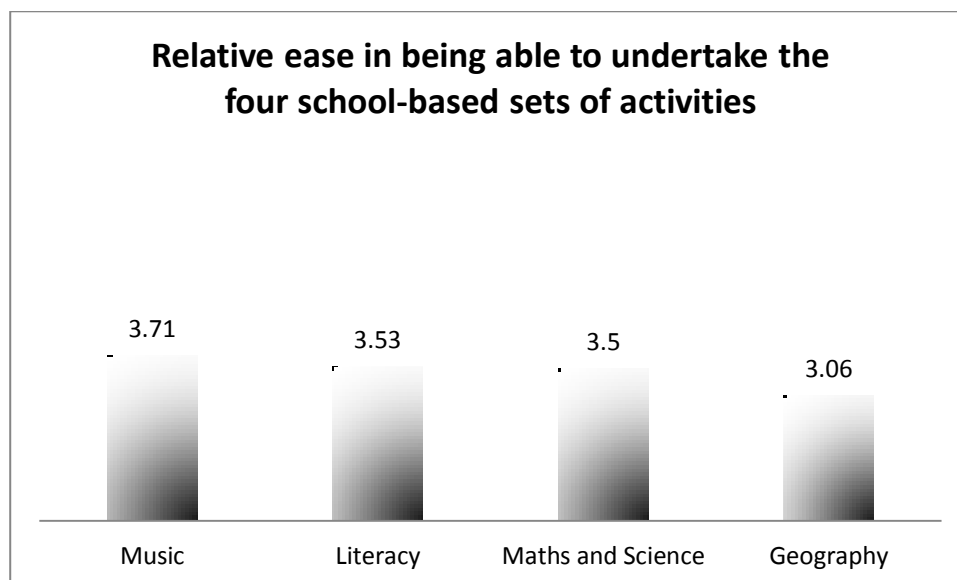| Music	Literacy	Maths and Science	Geography
3.71	3.53	3.5	3.06

Figure 4: Mean student ratings concerning their perceptions of how easy it was to undertake the four sets of school-based activities as the music module progressed, with 'music' being the focus for the first session in school and 'geography' being the focus for the last session (ratings based on a scale of 1 'not easy' to 7 'extremely easy')

When asked to explain this difficulty, students reported that they had experienced timetable restrictions in school, such as being required to carry out assessments for their class teacher and not being able to divert from the school's strict assessment regime, or that (as students) they had little or no power over timetabling and local planning input, or that they were required to assist in various school outings, or had other activities to prioritise.

In addition to these personal (professional) timetable constraints in their practice schools, participant students also reported that often they had found it difficult to find a place for music in the class curriculum because either it was not taught at all (the children had no music curriculum), or that it was taught in an isolated environment away from the class by a specialist music teacher.

> *My class teacher did not like me using music in any way, as her outlook on music is extremely negative.*

> *I was not able to carry out the task as planned. This was due to it being a very busy week because of Jubilee and the school's ICT week. There were therefore a lot of demands coming from different directions.*

Students also reported that other curriculum subjects were not being taught on a regular weekly basis either, particularly science and geography:

> *The issue was more to do with the fact that I wasn't teaching formal lessons, but undertaking assessments with the children. We also had a trip, which meant we didn't have a science lesson.*

> *It was just the geography [that I couldn't do] because in that school, they had already done [geography].*

One student pointed out that they found their status as a student teacher challenging and they were not able to question how the curriculum was realised in their school:

> *It is very difficult as a student to teacher to challenge the way things are conducted in a particular school; we are treading a fine diplomatic line in which we must fit in.*

Nevertheless, the students showed commitment to their music module by still carrying out activities to the best of their ability, even when it was very difficult to do so. According to their comments, this

could be attributed to the positive feedback received from the children when they did undertake their music-focused activities, which – in turn – motivated them to find ways to overcome difficulties within school and to continue with the module's directed tasks.

Impact of the module on professional development

As part of the module's first session, students were asked to provide an account of their previous levels of music education and experience. There were a variety of different skill levels and musical biographies reported.

Firstly, the previous formal music education of the students was as follows:

- One student reported having a degree in music and having worked as a peripatetic teacher.
- One student reported having studied dance to professional level and working professionally within dance.
- One student reported studying music up to A-level.
- One student reported studying music up to GCSE.
- Eleven students reported learning one or more instruments at school. Seven students learnt one instrument, one student learnt two instruments, and three students learnt three instruments.
- Only one of these students reported that they still played the instrument that they had learnt at school.
- Instruments learnt at school were – piano/keyboard (6), flute (4), violin (3), recorder (2), clarinet (1), drums (1), trumpet (1).
- Six students reported that they sang in school choirs, two of which also sang in church choirs as a child.
- One student reported that they sang in a choir out of school, but not at church.
- One student reported that they did not have positive memories of school music.

The students were also asked about current musical activities.

- Two students reported that they played the guitar.
- One student reported that she currently sang with her boyfriend, who is a guitarist.
- One student reported that she enjoyed singing Karaoke.
- One student reported that her music making was singing along with the radio.
- Five students reported that they listened to music.
- Five students reported that they went to gigs/concerts.
- Two of the eighteen students reported that they had already used music in their teaching as student teachers.

Overall, a minority (three out of 18) reported regular musical activity other than music listening.

The students were also asked about their attitudes to their current musicianship.

- Despite their biographies, only three students (16%) described themselves as 'musical'. Only three (16%) said that they had a love of music.
- Four students reported that they would like to learn an instrument, or participate in music making in the future.
- One student reported that she felt confident teaching music.
- One student reported that she was not good at music.
- One student reported that she was not confident in teaching music.
- One student reported that he could not read music.

At the end of the module, students were asked how their knowledge and understanding of music had developed during the module. All students felt that they had benefited musically from the module, at least to a degree. Some reported an increased understanding of what music in the Primary school is and how they, as generalist teachers, can teach music:

> *I now understand that although I have no specialist music knowledge outside of this module, I am still equipped to deliver a rich music curriculum to the children in my class.*

> *I understand that music within the music classroom is about the process and the journey children go through in developing a musical composition rather than the end point. I have a broader understanding of what 'being musical' is about and the range of activities that fit under this umbrella.*

> *I can now see more opportunities to bring music into teaching and learning. My induction year, which will take place in Nursery, will provide lots of opportunities to incorporate music into teaching and learning and I am looking forward to using the resources and ideas that I have been introduced to in this module.*

Two students reported that they felt the module had refreshed their musical knowledge and understanding, whereas two other students reported that the module demonstrated to them that they had more musical skills than they thought they had.

An important aspect of the module was the use of an audio recorder to record the students' practical work during each Institute-based session. The purpose of this recording was two-fold. Firstly, it enabled 'assessment for learning' (AfL) to take place within the practical activities and to model how this type of assessment can be done using audio recording in school. Secondly, it enabled a record of progress to be built up over the module, as well as modelling how audio recording can be used for this function in school. This being the case, at the end of the module, the students were given a composite CD of their practical work. The recordings provided evidence of how the students' musical skills had developed throughout the module. As a result of the practical activities, students reported that they were able to:

- Improvise securely;
- Structure compositions;
- Communicate with each other during performance;
- Compose more complex music;
- Perform expressively;
- Maintain a collective pulse;
- Perform from different forms of notation accurately;
- Use music software to compose;
- Discriminate between different sections of musical structure; and
- Create visual images that reflect music and fit in time with the music.

The development of musical skills and understanding within the Institute-based sessions, allied to the growth of pedagogical skills and understanding during the school-based directed tasks, appeared to have contributed to an overall increase in confidence in teaching music, as illustrated in the following comments:

> *I feel I have developed far more confidence in delivering music within the curriculum. I have developed a repertoire of activities that I would be confident to implement in my classroom.*

> *I have always considered myself as a musical person, but after partaking in this module I feel much more confident in teaching music and bringing it into my teaching across the curriculum. I feel more confident that I can manage behavior of pupils in lessons where they all have a musical instrument - this is something that I was reluctant of before.*

> *My confidence has increased in using music across the curriculum, and I have been making links across the curriculum, finding where curriculum areas can overlap and developing a cross curricular framework for my teaching.*

All students reported this rise in professional confidence concerning music teaching. This was attributed by them to a number of factors:

- Alternating between linked Institute-based and school-based sessions;
- Carrying out practical activities themselves during the Institute-based sessions, so that they had 'trouble shot' them before going into school;
- Having time outside from school subsequently to reflect critically on the teaching and learning in school with peers and academic tutors;
- Applying the theoretical aspects to their own practical work in Institute-based sessions as a basis for linked work in school;
- By making music as part of the module rather than talking about it;
- By audio recording their practical work and realising that their own music making was not as bad as they had imagined previously.

Moreover, not only did the module have an impact on their understanding and knowledge of music and music pedagogy, they were also able to reflect upon the practical activities of the module and suggest ways in which they could use these in their teaching.

(a) Literacy:

Activity	Uses in generalist teaching
Reading Book Composition	• To engage EAL learners • Use in work on narratives and sequencing • Help children understand the journey through a story • Help children understand moods and emotions created by an author
Role of Talk	• To engage children in evaluative talk • For assessment for learning • Use in planning to identify key questions • Use in different subject areas, not just in music and literacy
New London Orchestra 'Literacy through music' activity	• As an example of how music can develop literacy • Use songs to develop vocabulary
Song and Story Structure	• To develop good practice in teaching singing • For story structure and text comprehension
Enormous Turnip	• To engage children in stories • As an incentive to write a good story (adding music) • As a multi-sensory way of engaging children in literacy

(b) Mathematics:

Activity	Uses in teaching
Pattern composition	• As an assessment for learning strategy – assess understanding of pattern through the children's recording and notating of the pattern • To add more challenge to older children – introducing a shifting pattern • To help with 1 to 1 correspondence • To make mathematics patterns more visual • To help understand money, composing

	patterns using different coins
Clapping Song performance	• To introduce the concept of pattern in a multi-sensory way • To use as an inspiration element of a lesson • To link in with times tables • As a basis for a simpler composition

(c) Science:

Activity	Uses in teaching
Making instruments	• To help understand different materials • To help with forces – push/pull • To develop design skills
Musical experiment	• To demonstrate how accuracy is needed in recording results and findings (get others to play the piece from the results) • To develop compositional skills

(d) Geography:

Activity	Uses in teaching
Musics and Identities	• Play a range of different music to see which children respond to which music • Linking music from home with school music • In planning, thinking about the distinction between music within identities and identities within music • Use in PSED (Personal, Social and Emotional Development) for the target 'Having respect for one's own culture and the different cultures of people around you' • To inform child-led planning
Sound Walk	• In a mapping unit, to bring mapping to life • Use within the school environment and to think about surroundings with children in Early Years Foundation Stage (EFYS) • To introduce young children to ICT • As a music lesson, to explore the school playground and record

	songs/rhymes/games • To gain an understanding of man-made and natural elements in an environment
World Weather Map	• As an introduction, to get children to think first thing in the morning • For linking with ICT • To get the children thinking about the wider world • Linking with individual backgrounds • To work towards a performance • For work on climates and climate change

(e) ICT:

Activity	Uses in teaching
Using soundation	• To create a soundscape for a literacy or film project • Use with Early Years to produce instant music • Use with children who do not consider themselves musical as a different method of music making • To use (with headphones) when noise is an issue with other classes
Mobile phone debate	• In planning when considering mobile resources • As a debate for older children to consider the pros and cons of mobile phones • To bring awareness of schools' specific mobile technology policies and how children can be engaged in the learning process • In considering how to use school iPads and similar technologies
Film-making project	• To bring together other subjects • As a way of helping children to understand narratives and story telling • As a way of helping children to understand timelines, personal histories and identities • To bring children's writing to life • To debate an issue through film-making

	• To develop children's creativity

These examples illustrate the impact of the module on the students' awareness and understanding of cross-curricular and creative teaching.

The beneficial impact of this module on the knowledge, skills, understanding and confidence of the students appears to be significant. The impact encompasses many different examples that are related to the students' biographies at the start of the module.

> *I think for me, it's given me the confidence to use the musical knowledge that I already have.*
>
> *It helps you to become more creative in your teaching and to think outside of the box.*
>
> *It's enough to have a go. I'm not going to feel super confident, but I do feel confident to do some kind of project with them next year involving music in a cross-curricular way. But I know it will be a lot of planning needed and I won't feel that confident, but I'm willing to give it a go.*

What is also noteworthy about the research findings is that, as the module progressed (and despite the difficulties with school timetabling), the inclusion of music in their generalis teaching became more 'normal'.

> *At this point, I have noticed that I automatically use music in my teaching. I also find the instruments and singing a fantastic behaviour management strategy. The children respond immediately.*

Perhaps equally importantly, the research demonstrated that the students felt that, not only did the module provide them with the opportunity to teach music in school when they may not have done so, but also that the sustained and connected experience in the module design provided greater opportunity for deeper professional development.

> *If I hadn't have done the [module], my class would have gone off with the music specialist and I would have had PPA time [time out of the classroom for preparation], I wouldn't have done any [music teaching]. Yes, I think there will be teachers qualified to teach all of the subjects [covered on the module], it just feels*

like more of the right amount in the [PGCE] course rather than one isolated [workshop].

Taking the module forward

We are waiting for an official Government publication of the results from the evaluations of the different pilot primary music modules across the initial teacher education sector. However, in the meantime, we are preparing the music module for validation as a Masters' level short course, either stand alone, or attached to our MA in Music Education. With Government changes to Primary PGCE courses for the 2013/14 academic year (in terms of number of days in school and the length of the course), it is difficult to see how this module would fit into the PGCE programme so that it can be offered to all Primary students. Therefore, it is important that it is available as a professional development option for all Primary teachers, whether in initial teacher education or already practising in school. We recognise that there are Newly Qualified Teachers who may wish to take this module as part of their Induction Year programme, as well as teachers who would welcome the opportunity to study a practical Primary music module that can contribute towards a Masters degree.

Furthermore, as a result of the tutors working together on this module, the Primary PGCE team have gained an increased understanding of how we can 'team teach' and combine subjects within the current Specialism module offered as part of the Primary PGCE. For example, for the first time at the Institute of Education, we have planned and taught a joint session within the Music and Maths Specialism. This session was based on the Music and Maths session of the music module and was well received by both groups of students. Following on from this session, two students have undertaken a practitioner research project on Music and Maths for their Specialism assignment. Therefore, the module itself has had a knock-on effect on both teaching and learning at the Institute of Education and also generating further research into teaching and learning in and through music.

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