Research Report

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With contributions from LIC researchers:
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Introduction

Listen, Imagine, Compose (LIC) is a project designed to investigate pedagogies of composing in secondary schools. It was funded by the Esmée Fairbairn foundation, and organised by Sound and Music (SAM), Birmingham Contemporary Music Group (BCMG), with Birmingham City University (BCU) as the lead academic partner. It involved composers, an apprentice composer, musicians, schoolteachers, researchers, music education partners, and critical friends.

Significant agents in LIC were Judith Robinson from SAM, Nancy Evans from BCMG, and Robert Bunting, independent consultant.

Background and Context

The 2009 Ofsted report *Making More of Music* (Ofsted, 2009) highlighted weaknesses in current secondary school music provision, including:

- lack of attention to internalising sound as a basis for creative thinking;
- lack of quality and depth in pupil responses;
- insufficient understanding of what musical progress involves;
- composing activities are rarely related to the work of established composers.

LIC addressed these issues through interaction between pupils and their teachers with professional composers and performers.

In schools, we know that many of the schemes of work that teachers use are modular in nature. This is in order to address the breadth of historical and cultural genres pupils are expected to experience[1]. This modularity hinders knowledge transfer and the development of creative strategies between topics, which ultimately restricts the musical resources pupils are able to draw on. For example, pupils in year 7 may learn about Samba and then move on to a project concerned with Bhangra. A skilled classroom teacher will enable pupils to make connections between the disparate elements, but many pupils will be left with knowledge in discrete silos that do not inform or cross-fertilise.

We know that composing is the area of the music curriculum that is often least accessible for teachers, and many also come from a generation that did not benefit from the current National Curriculum and active composing throughout the key stages. Group work may limit the scope of individual pupils' creative thinking, and teachers can find it difficult to gather evidence of that thinking, or find time to listen to, and reflect on any such evidence they do gather. It is also a challenge to set aside time within the lesson for detailed feedback to individual pupils, yet this is vital in building a culture of creative thinking (Fautley, 2004). Helping teachers to learn how to listen to young people's creative processes is one of the core aims of this project, as will be developing strategies to help overcome these types of challenges.

Changes to the Key Stage 3 Curriculum in the 2007 revision placed increased stress on genuinely creative thinking, which is the project's main focus. We know that "…understanding the role of creativity in composing in schools remains a fragmented and difficult issue" (Burnard & Younker,

[1] Important to note that unless otherwise stated, all references to curricular requirements refer to the National Curriculum in force at the time of operationalisation of this project, the 2007 version (QCA, 2007). Towards the end of this project a new National Curriculum was proposed, at the time of writing is being consulted upon, and at the time of publication has been enacted.

2002), and this remains the case over ten years after this observation was made. Creativity is an area that young people value highly – in surveys regarding gaps in the curriculum, the chance to be creative is always top of their list – yet many teachers feel unsure about teaching creativity. Similar challenges are highlighted in several publications, including *Creativity in Secondary Education* (Fautley & Savage, 2007) *Creativity in Schools - Tensions and Dilemmas*, (Craft, 2005) and *Music Education in the 21st Century* (Hallam & Creech, 2010).

Alongside these issues in the secondary school curriculum, we know that within orchestral (and cognate) education sectors, there is a tendency to run atomistic projects rather than focus on working together to develop practice (Henley, 2011)

Research Questions

This research had a number of overt aims, expressed in the form of overarching research questions:

- How can composers and teachers be supported to work most effectively together?
- How do professional composers make judgements about the quality of compositions and what are the indicators of progression? What correlation is there between these criteria and those of exam boards?
- What does creative progression look like – for example the difference between a Year 7 and a Year 9 composition – and how can we ensure progression within the secondary curriculum, particularly given the genre-based approach?
- What are the challenges around assessing creativity and how can students be supported to take risks, fail and experiment in a system where assessment is central?
- What can we learn from the processes of professional composers and how does that relate to how composition is taught in schools?
- How can we engage young people with contemporary experimental music beyond a one-off project, and how can that learning be applied to composing within other styles and genres – in particular the types of music that young people are listening to?
- How can effective feedback develop young people's listening and composition skills?
- How can we increase awareness of the music of living composers within the secondary curriculum?
- What are the strategies of educators around creativity and how could they benefit composers working in learning contexts?

  And one which related to the known hard-to-reach problem of accessing teachers in secondary schools:

- How can the findings of this project be disseminated and implemented?

These are a complex set of aims, and so a distillation process took place in which, starting from these aims, six action research projects were devised, each of which dealt with one of six specific research questions:

1. What pedagogical strategies are there for creative learning in music?
2. What processes for evaluating pupil work can be adopted to give constructive feedback and encourage peer review?
3. What is the role of listening and reflection in the creative process?
4. How do you introduce music to young people that they don't already know about and make it relevant to their learning - exploring values and context of contemporary art?
5. How can performers and composers best be used as a resource in the classroom?
6. How can ICT in the classroom encourage the use of creative and experimental thinking?

Methodology

For the research component of this work a mixed methodology was employed. This took place on three interrelated levels:

- A case study approach to the individual research questions
- A meta-case study approach to the project as a whole
- An evaluative framework for considering results from the above

The principal research paradigm employed was qualitative, and data were collected accordingly. These included video, audio, field-notes, questionnaires, reflective diaries, lesson observations, pupil work trails, and interviews.

Methods

Each of the six research questions was allocated to a school-composer-researcher grouping to investigate in ways which they deemed appropriate for local circumstances, taking into account local requirements, and appropriate for the schools, teachers, and pupils involved. The six questions, and the people involved are shown in table 1.

Table 1: The six case-study project groups

Location	Researcher	Teacher	Composer	Question	KS
Cambridge	Pamela Burnard (Cambridge)	Bex Lewis	Tim Steiner	What pedagogical strategies are there for creative learning in music?	KS4
Birmingham	Martin Fautley (BCU)	Jenetta Hurst	Jackie Walduck	What processes for evaluating pupil work can be adopted to give constructive feedback and encourage peer review?	KS4
London	Pauline Adams (IOE)	Paul Jones	Kerry Andrew	What is the role of listening and reflection in the creative process?	KS4
London	John Finney (ex Cambridge)	Lizzie Hastings	Fraser Trainer	How do you introduce music to young people that they don't already know about and make it relevant to their learning - exploring values and context of contemporary art	KS3
Birmingham	Martin Fautley (BCU)	Nick Heppel	David Horne	How can performers and composers best be used as a resource in the classroom?	KS4
Manchester	Jonathan Savage (MMU)	Phil Kennedy	Duncan Chapman	How can ICT in the classroom encourage the use of creative and experimental thinking?	KS3 and 4

The thinking behind this was that the researcher would act as both a 'critical friend' and an 'agent provocateur', in that they would be helping steer conversations and activity towards the research questions, but simultaneously be asking questions of participants, both adults and pupils.

What made this project distinctive from the outset was that the main focus of interest, both in activity and in research, were the *processes* of composing and of compositional pedagogy. This meant that there was deliberately and purposefully no large-scale end-of-project performance. Instead all of the work was done in the operational stage. This does not mean that final performances did not place, they did in a number of cases, but that the aims of the activity and the research were not skewed, as it was feared they could so easily have been, by the teleological requirement of performance. For this reason, amongst others, the notion of *planning* was built into the activity process.

Planning

We know that planning is key for effective learning to take place, and that this planning needs to purposefully undertaken, designed with the specific group of learners who will be in the class in mind. We also know that planning for *learning* is more complex than planning for activity (Fautley & Savage, In Press). However, we also wanted these research projects to be generalisable, and for findings from them to be applicable in other schools and contexts. The steering committee were also aware that time for planning is all too often absent from established artists-in-schools programmes, a point emphasised by Rena Upitis, who writes of "…the need for more time to plan and communicate with teachers" (2006 p.57). Upitis goes on to describe how another issue can be that of "…fostering agreement among participants on the goals of the programme…" (Upitis, 2006 p.57), which was another area of which the steering committee were well aware.

The project was organised into four phases of activity, with a further two phases of dissemination and research taking place after the activity. Table 2 shows the timings and sequencing of these phases.

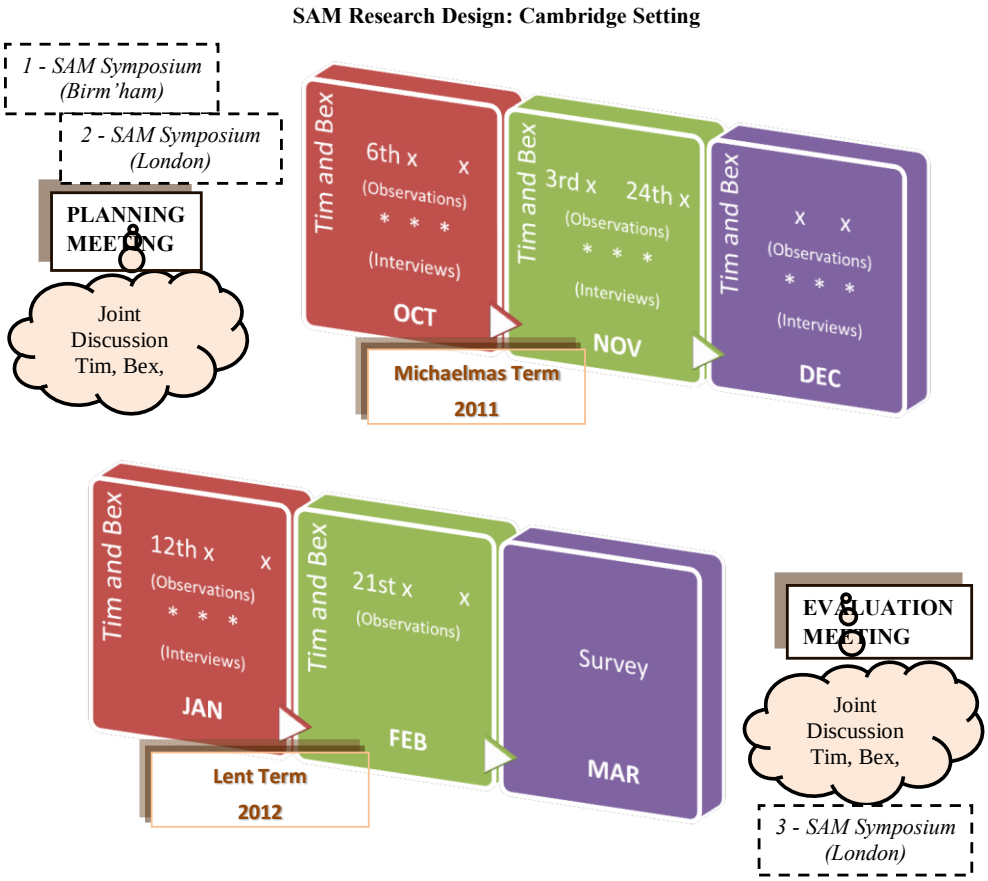
Table 2: Phases of Activity and Research

June 2011	Symposium 1
September 2011	Symposium 2
October 2011 – May 2012	6 Action Research projects
July 2012	Symposium 3
Summer/Autumn 2012	Dissemination of findings
…. Onwards ….	Research analysis and further dissemination

The initial symposiums were attended by stakeholders, participants, and advisers and critical friends. They were designed both to present the ideas behind the research, and enable some initial planning activities to take place. The final symposium pulled together findings from the research, and enabled common strands to be discussed.

Turning now to the planning process which was adopted by each of the project teams, that adopted for the project in Cambridge can be taken as representative of the ways in which the various groups approached the activity and the research. The Cambridge model is shown in figure 1.

Figure 1: Cambridge Model of research design as exemplar



10 observation	Tim + Bex (Composer + Teacher) teaching class = 4 hrs Bex (Teacher alone) teaching class = 6 hrs	*10 Hours (x)*
12 interviews	Interviews Pre + Post project (Tim, Bex) x2 Focus Group Interviews with students x10	*12 Hours (*)*
4-6 Student Cases	Collection and analysis of Student Compositions and Reflective Journals	*8 Hours*
Class Survey	Questionnaire designed, data collected, analysed	*10 Hours*
Data Analysis	Write up, report and articles written	*10 Hours*

This graphical representation of the activity and research process shows the various stages undertaken, and how these are linked together by a number of common threads.

The Individual Projects

As was described above, each of the various projects operating simultaneously was also its own self-contained action-research project. In this section the individual projects are considered, and lessons drawn from each discussed[2], before moving on to a macro analysis of the project as a whole.

Project 1: What pedagogical strategies are there for creative learning in music?

This project took place at Parkside Federation, a secondary academy school with 600 children aged 11-16, which is located on two sites in Cambridge (Parkside and Coleridge). The project team consisted of Bex Lewis (teacher), Tim Steiner (composer), and Pamela Burnard (researcher). The project also involved professional musicians, who were seasoned players, well used to performing new music, as well as more established music from a range of traditions.

The composer noted his initial plans for the group:

- Our objective is for each student is to compose a song that will be performed by the members of the group.
- We aim to inspire the students through a range of compositional exercises. (We will encourage them to practice)
- We aim to inspire the students through listening and discussing music from a wide variety of sources. (We will encourage them to listen)
  We aim to inspire the students through discussion and sharing of their work throughout the sessions. (We will encourage them to talk)
- Our approach is experimental and risks a degree of failure.

The way in which this was operationalised was by involving each student in three modes of contact. These were:

1. Whole class ensemble workshops led by Tim, the composer
2. Song writing in pairs
3. Individually personalised commissions

From analysis of data the project team identified three key themes which were characterised by three key points. These three themes are:

1. The Ensemble Workshop format
2. The emergence, and voice of young composers
3. Digitally documenting and recording composing processes which enabled composer reflection by the young people involved.

The three points which characterised these were:

1. Asking questions of composers and questioning their revisions of work-in progress

[2] Each project was written up as a separate case-study, this overview draws together the salient features from each individually.

2. The symbiotic relationship between composers and players
3. The relationships with the professional musicians

From this project a number of conclusions were drawn. These were:

Together we have learnt:

- Composing pedagogy involves recognising that creative learning and doing composing are interrelated.
- Composing is a process that needs daily practice
- Workshops work well in developing collaborative creativity which is fundamental to the compositional process.
- Visiting professionals offer distinctive and valuable contributions to the development of creative learning through collaborations with teachers

Key questions:

- How can time and resources be found for sustained collaborations?
- How can creative learning be included and assessed as part of the practices of teaching and learning composing?
- How is this student composed identity empowerment perspective in tension with the dominant perspective which views children and young people as adults-in-waiting to be composers?

Implications for practice:

- For Bex, that she continues to explore ways of developing authentic composing opportunities for herself and her students.
- For Tim, that he continues developing new practices for extending and increasing empowerment perspectives and capabilities of children and young people as open minded and practicing young composers
- For students, that they compose daily.
- For Pam, that she thinks more deeply about ways of documenting change in collaborative compositional practices and perceptions of change in compositional confidence.

Unexpected outcomes:

- For Bex, the value of iPads for documenting, developing, reflecting on and assessing composition.
- For Tim, the unpredictability of students' creative responses and changes which co-emerge with blending digital media and engagement with professionals and their approaches to composing and performing new music
- For Pam, that composers, performers, teachers and students are able to generate alternative futures which engage with learners more authentically, which offer and recognise the creative leadership which co-emerge from blending experiences and perspectives.
- For students, how distinctive and valuable engaging as composers can be.

Nuggets

- Both the collaborative roles and ideas of teacher and composer converge in a variety of cultures and forms from which to remind students of the universal principles

imbedded in all art forms with the role of design emphasised in teaching and art making.

- Allowing learners both ownership of the newly composed music and choice regarding its selection and performance is linked to developing compositional/composer identity.
- The creative teacher of composition, like the composer, is not an instructor but a co-creator, supporting learners so they develop their own voice.
- Using iPads for documenting compositional drafts encourages learners to evaluate and assess their own and each other's work.
- The collaborative partnership between teachers and composers at GCSE level of work must involve time, trust, respect and an open willingness for negotiating the development of a learning community where teacher and students co-construct diverse ways of teaching and learning to compose, where compositional creativity is a path and process of moving, as well as a quality of space for negotiating where to next.
- The participation of teacher in various roles - as composer, improviser, artist, critic, researcher, audience and sound engineer - is greatly esteemed as a core element of compositional teaching at GCSE level.

Project 2: What processes for evaluating pupil work can be adopted to give constructive feedback and encourage peer review?

This project took place in Hamstead Hall School in Birmingham, with Jenetta Hurst (Teacher), and Jackie Walduck (Composer), Martin Fautley (Researcher), and Victoria Kinsella (Research Assistant). The project group was a year 11 BTec Music class. Hamstead Hall is a comprehensive school in Handsworth Wood, Birmingham. Its student body is representative of the cultural diversity of the city.

Jackie Walduck, the composer in this project, wrote an initial statement regarding how she would undertake the work in the school:

The fundamental approach is that the class will work as a creative ensemble, creating then developing written material through improvisation. This entails a 4 stage process:

1. Hearing the given material
2. Trying out added ideas (the whole class or in small groups. If the whole class this will be more heavily directed by the composer, if in smaller groups there is more leeway for loose direction and speculative/experimental work)
3. Refining those ideas (led by the composer)
4. Rehearsing and performing. (Getting the music tight, working on solo improvisations, tuning, ensemble issues).

Each student will compose a short melody, using a 4x4 magic square to generate a note row. These will be used as “backbones” and will be fleshed out in a variety of ways - some will be very simply accompanied, some will be accompanied by improvisation, some will be worked as duets, and possibly other ideas, to be decided as we work.

The way Jackie chose to work was by the pupils coming up with responses to ‘magic squares’, the mathematical puzzle where rows and columns add up to the same number. This magic square would then be used to generate note pitches. The first set of note

pitches were to be based on a prime set generated from the pitches used in *'Blue Monk'*, by Theolonius Monk.

Jackie observed three processes of embedded evaluation which emerged during this work. These were:

1. Riff-building using untuned percussion
2. Realising a one-page score, in this case *Blue Appropriation*
3. Composing a melody from a tone-row, in this case a re-ordering of the first sixteen notes of Monk's *Blue Monk*

From this work a number of conclusions concerning evaluation were drawn:

What helps students to learn to evaluate?

- Questioning by the teacher
- Asking themselves the same questions (developing a habit of evaluating)
- Learning concepts by which to measure – e.g. consonance/dissonance, expressive value of intervals, tightness (was the beat together?) and the language to communicate their thoughts.
- Creating their own criteria and concepts for evaluation. By doing this they would begin to carve out an artistic intent, and clarity of style.

It also raised a number of questions concerning evaluation, including:

- What is evaluation?
- Does it take place only using words?
- Can it take place in a way which is separate from words?
- What is musical evaluation?
- What is musical evaluation undertaken in a musical fashion?

Evaluation can be conceptualised as a type of assessment. Evaluation places a value on something, as does assessment. Assessment is often characterised as being undertaken with reference to criteria, in music education either written by the teacher for the project, or by an external agency, such as National Curriculum levels, or an examination board. This project dealt with the *musical* nature of evaluation, especially the ways in which pupils in schools can do this. To this extent it could be considered to involve peer-assessment, although self-assessment also plays a part in this. But what has *not* happened is external referencing of the valuing which has been done by the pupils with, say National Curriculum levels, or Exam board requirements. Here evaluation was undertaken for its own sake, and pupils were concerned with making *musical* judgments about their music in a *musical* fashion.

Nuggets

- Discussion between teacher and composer as project develops helps to nuance feedback given to pupils and its style of delivery.
- When planning for doing, think about learning.
- Questioning is important.
- Language matters – evaluation can also be seen in music, though, as well as words.
- Perhaps those funding and managing music projects in schools could engage more with learning outcomes as part of evaluation reports (which often focus on engagement and experience).

Project 3: What is the role of listening and reflection in the creative process?

This project took place at St. Marylebone School, a Church of England Foundation School, which is a multi-faith 11-18 comprehensive for girls based in central London. Here the project team were Paul Jones (Teacher), Kerry Andrew (Composer), and Pauline Adams (researcher)

This project's intentions were to focus specifically on the relationship between music making and listening. This was done by providing musical experiences that promoted intelligent responses, including the active appraisal of recordings of recognised composers and their works. Compositional insights gained through aesthetic and cognitive understanding, in the form of listening and reflective learning, were viewed as crucial to the project, and to the understanding of music as an art form. The pupils worked through a series of sessions, starting with vocal exploration and improvised extended vocal techniques which linked vocal sound to a visual stimulus, in this instance Van Gogh's 'Starry Night'. The teacher, composer, and pupils appraised musical ideas through discussion. Facilitation of this was via encouragement to use descriptive and musical vocabulary to convey thoughts about mood, form and artistic intentions. The composer modelled this as a way of extending possibilities.

As the project developed, increasingly complex work was undertaken, and towards the end of the project it was noted that over the period of the project the pupils had become much more comfortable and unthreatened when giving and receiving constructive criticism. The aim of creating a democratic forum for listening and musical discourse was clearly in evidence throughout later sessions. Teacher and composer feedback blended with student comments and there was more confidence in the use of musical vocabulary.

At St Marylebone School a final performance was built into the structure of the project, which led to some interesting reflections from Pauline Adams, the researcher:

"Students, with the exception of one group, 'played safe' in the final performances of their compositions retreating from improvisatory sections to giving more conventionally fixed performances. The question to be asked is whether students thought that they would be given a summative grade, a common form of assessment at the end of a KS3 unit, for their compositions and so took fewer risks. In their minds was it the final performance, and not the listening and improvisational and compositional development that was important and which, in the end, dominated their thinking? Those students who played an orchestral instrument or were receiving some form of instrumental tuition performed more confidently than some of those playing, for example, glockenspiels. In the end, performance and not compositional ideas dominated the final outcomes, indicating a real need for future consideration of the role and purpose of performance at the end of a listening/composing unit." (Adams, 2013. LIC Case Study)

This refection has some profound implications for the ways in which composing in schools is both predicated and organised, and upon the ways in which artists in schools projects are conceptualised. It also reaffirmed the project committee's decision not to attempt widespread end-of-project performances in this LIC work.

Key learning from this project
Key learning included the following main points:
The observations and discussions that the teacher, composer and researcher engaged in over the time of the project led to an agreed consensus about its positive impact on aspects of student learning:

- During the time span of the project regularly written reflections and ongoing vocal discourse resulted in growing student awareness of the importance of listening when improvising and creating new compositions;
- Activities that demanded careful listening and the sharing of responses verbally endorsed the more frequent use of sophisticated musical vocabulary;
- Improvisation proved to be an excellent learning tool for composition work, and promoted better interlocking of practical and listening.
- The students opted not to use notation, relying on listening memory when working from week to week on their pieces. The conclusion by the Director of Music was that less reliance on notation had encouraged enhanced listening skills;
- Within the whole class and within groups, the confidence of students to both discard and select musical material and ideas increased;
- Guided learning experience, in the form of a master class scenario, allowed for building blocks of compositional techniques to be explored in stages, and encouraged focussed listening and discussion;
- It is envisaged that the experimental nature of the project, which resulted in broadened musical experience and the opening up of new compositional avenues for students, will be influential in the creation of future GCSE practical coursework.

Key areas that emerged for consideration included:

- How can we allocate more time for students to play, experiment, listen and decide within the current constraints of the curriculum? Improvisation is an excellent tool for composing but it takes time. It needs to be embedded within the curriculum early.
- It became clear early on that students found it difficult to respond openly to each other's compositions. This highlighted the importance of integrating listening as a balanced activity across the different strands of the music curriculum. Is there a case for rethinking the timing of activities to ensure listening is not sidelined as an 'add on' for example, undertaken in the last part of a practical lesson, but is viewed instead as an important developmental tool?
- In addition to teacher observations undertaken during practical work, talking with students about the processes involved in creating improvisations and compositions can provide clear insights into the students' musical understanding and development. It is within this kind of forum that appropriate musical vocabulary can be encouraged and developed. This can lead naturally to a deeper analysis and appraisal of music, both orally and written.

Implications for practice from this project included:

- It is important for students to be made aware that listening is not a separate, discrete, skill;
- Sharing and reflecting on students' work, own and others, throughout the compositional process is invaluable. This has implications for planning and timing of activities;

- Ethical caring is desirable in situations where students' work is being critically evaluated, and sensitivity needs to be displayed when engaging with personal and interpretative aspects of students' listening responses;
- In this project, visual art work provided a stimulus for musical response, and was also effective in placing art and music into its historical context of place and time. For the students at St Marylebone School, where all the arts are valued, this approach acknowledged wider philosophical and pedagogical aims;
- Sufficient and suitable technology should be readily available for recording and listening back to work in progress, and for recordings to be uploaded and accessed online.

Nuggets

- Raise student consciousness of the close relationship between composing/improvising and listening;
- Discarding ideas is fine, not everything needs to be perfect straight away – need to build confidence;
- Encourage groups to try out piece in front of class *twice*, with feedback and discussion in between;
- Need to build listening into planning and teaching and integrate into practical, as ongoing not as an end behaviour.
- Improvising is an important compositional tool and a way of developing a democratic community of musicians.

Project 4: How do you introduce music to young people that they do not already know about and make it relevant to their learning - exploring values and context of contemporary art?

This project took place in Sir John Lawes School, Harpenden, Hertfordshire. The team consisted of Lizzie Hastings (Teacher), Fraser Trainer (Composer), and John Finney (Researcher).

In this project school a class of twenty-five 13-14 year old students were introduced to the work of a contemporary composer through a whole class workshop approach, nurturing both individual and whole class listening, imag
ining and composing. In this way the class met with what was distinctly 'unfamiliar' and what exemplified contemporary art music practice with the intention of critically engaging in its values and aesthetic ideology. Through development of communal workshop musicianship intensively exploring musical materials, compositional strategies and musical architecture corresponding to a work by Fraser Trainer, *Gadget*, the class worked towards their own extended composition and appreciation of *Gadget*. Overall students reported a mind-opening experience and of becoming familiar with a contemporary composer and his work as a positive educational experience.

In this project the methodology that was adopted was that the composer, Fraser, would work with a class, whilst Lizzie, the teacher, did the same thing without Fraser, working with a parallel class. Fraser's composition, *Gadget*, involves the building of cyclical patterns through repetition and accumulation, the creation of polyrhythmic textures giving

rise to melodic patterns derived from a pool of pitches, the interlocking and layering of patterns of varying length, the creation of dark dense textures and working within palindromic structures. For Fraser, establishing a listening-thinking ethos to the workshops was a non-negotiable prerequisite for imagining and composing. Lizzie later noted that:

All the students were treated as musicians, equal to the composer, and were told that 'every sound matters'. The students spent considerable time on 'simple' activities, such as clapping and listening, and there was a very high level of concentration in spite of the amount of repetition.

In the project work, pupils were given two sets of starting points. These were:

- A pitch pool A B C D Eb F G A
- A two bar riff derived from the pitch pool played throughout by Fraser

Both pitch patterns and the nature of the spaced riff were disruptive of norms calling for fresh musical thinking (imagining). Each pupil created their own two or three note cell with Fraser's power riff being responded to with sharp rhythmical responses. As ideas were refined so an extended piece was assembled. The piece was rehearsed intensively and by the end of the session the class had arrived at an unimagined place through their imaginative responses to the musical language of Gadget.

In terms of the way the project at this school also included parallel teaching, Lizzie admitted that working in parallel with a professional composer had been challenging for her at first, until she realized that it made sense to work in her own way rather than try to emulate Fraser. This makes ownership of composing pedagogy a transferable element in terms of what Shulman (1986) refers to as *Pedagogical Content Knowledge* (PCK), in that Lizzie is not trying to appropriate Fraser's PCK, but to add to her own.

Conclusions from this project included:
Together we have learnt:

1. How to listen more deeply and critically
2. How to take risks and move beyond norms and stereotypes
3. That composing is a slow process and that it is important to learn how to stay with the process
4. That 'relevance' is created by the participants and in particular through the ethos generated by the workshop leader
5. That repertoire-based composition teaching works

Key questions

1. How can time be found in the school music curriculum for sustained periods of workshopping?
2. Is a composing-centred curriculum incompatible with the prevailing conception of a music curriculum?
3. To what extent is it possible to deploy an alternative model of learning in the school, that is, one rejecting the use of 'behavioural objectives' and beholden to associated forms of school accountability? Instead of 'doing' and 'learning' what about 'making music well' and 'knowing music well'?
4. How will Lizzie's learning translate to teaching composition at GCSE?

Implications for our practice

1. For Lizzie, that she continues to explore ways of developing workshop composition teaching
2. For Fraser, that he continues to use his own work in his teaching; the presence of the composer and his work together is important.
3. For John, that he notes and thinks more about the distinction between musical materials, compositional strategies and the music's architecture (not structure) and how these interrelate in the teaching of composition.
4. For all, that we 'look after every note'; 'make it matter if you think it matters'!

Unexpected outcomes

1. For Fraser, the way is which boundaries collapsed for the students in moving from 'the counting up game' to instruments leading to a purple patch of intense creativity.
2. For Lizzie, the discovery that boys rather than girls were the risk-takers in the parallel class.
3. For Lizzie, the pupils' capacity for sustained involvement in the process of the music making
4. For John, that pupils were able to categorise listening styles in novel ways.

Nuggets:

1. Aim to make authentic connections: play to the strengths of the artist/teacher – try to follow the creative methods or starting points as closely as possible
2. Work as intensively as possible: Composing benefits from an intensive approach – so does group work, risk-taking and group cohesion. Creative projects are an opportunity to work very differently from class music lessons. This increases the chance to truly inspire!
3. Hand over the tools for creativity: Do not worry about relevance! It is the empowerment and opportunity to create / hear / understand that will make it relevant.
4. Style is not important: Compositional models really work, but it is not about imitating style. The really useful skills are to understand compositional fundamentals that may apply to all forms of music-making – the material elements of composing.

Project 5: How can performers and composers best be used as a resource in the classroom?

This project took place in King Edward VI Grammar School for Girls, in Handsworth, Birmingham. The project team here was made up of Nick Heppel (Teacher), David Horne (Composer), Sean Clancy ('Apprentice' Composer) Kyle Horch (Performer), Martin Fautley (Researcher), and Victoria Kinsella (Research Assistant). The pupils were a year 10 GCSE option group.

Pre-project planning was a significant feature in the LIC activities as a whole, and this project was no exception. One aspect that was novel in this project was that the pupils involved were asked to think about the sort of music that they wanted to compose before they had begun. This was enacted in part by an on-line closed forum, housed on the school's intranet, which enabled discussion of the pupil's work. The pupils knew that they would be composing for a solo saxophone, and they knew the name of the performer

before they started. This also formed part of their pre-task preparation, and they used the internet to source information about both the instrument and the performer.

Initial stages of the project involved the composer talking to the pupils about a number of factors, including referring to the original thought the pupils had had about what sort of piece they wanted to write. There was also discussion concerning the notion of contrast in music, and how this might be obtained. Following this the pupils set off to work individually. Some chose to work using tuned percussion, or keyboards, another used the classroom piano. Some eschewed instruments and began notating straight away.

Findings

From the reflective discussions three key themes emerged. These were:

- Intentionality
- Questioning
- Discussions

Intentionality refers to what the pupils wanted their music to be about, and what their composing intentions for it were. Although the medium of sax solo was established, the pupils had considerable latitude in the ways they could write for it.

Questioning emerged as a key issue, not only in what was said, but in the ways that composer(s) interacted with the pupils. As a result of thinking about this, David, the composer, became very aware of not only what sorts of questions he was asking, but how he was asking them. Indeed, he found himself framing his ideas for the pupils in the form of questions, rather than saying directly ‘do this’. In doing so an effect of the framing was that pupil intentionality remained to the fore. At all time the composing was in the ownership of the pupils, the composer was not composing on the pupils, as it were, he was acting as a sounding-board for their ideas.

From the work on questioning, discourse also came into focus. It was found that the composers were having qualitatively different discussions with the pupils, with, in one case, David spending some fifteen minutes working with one pupil. He was quite surprised when this pointed out to him. Although not meant pejoratively, it has been noted in other classrooms that teacher-pupils interaction is often focussed onto task-completion, rather than of quality of ideas (Fautley, 2004), here this was not the case.

As there was both a composer and a performer in this project, a fairly clear division of labour occurred. This meant that the composer dealt with the compositional process, and the performer was concerned with matters appertaining to bringing the composition to life. One of the effects of this was that the performer was also involved in questioning interactions with the pupils, and one of the ways in which this was manifest was in uncovering exactly what the pupils had in mind when they put pen to paper.

The first level of questioning which the performer tended to use with regard to this was one of immediate intentionality. Kyle, the performer explained the rationale behind such questions:

The reasons behind these questions were: so I could play the music accurately and therefore provide the aural example I felt it was my role to provide. Also sometimes to gently bring up issues related to the "process" to which I referred frequently in the reflection discussions, where a written score is a sort of message in a bottle from an

imagining person (composer) to a realizing person (player) who needs to decode both the specific and implied instructions contained within the score, making them a reality to be heard/appreciated by a listening person (audience). The first job is to be sure, as a player, that I am seeing the specific, objective instructions - pitches, rhythms, articulations, and dynamics - correctly; then I could work toward the more subjective things that might be implied by the score. So these questions obviously helped me get it right for them … It also pointed out some issues with choices in presentation. For example, in an score with no bar lines, accidentals only apply to the note they are immediately next to, are not carried on to the end of the bar as they are in barred pieces.

The difference that having a professional performer in the classroom was significant in the ways in the pupils viewed the work:

Pupil A: I was really excited when I heard that a professional player was actually going to play this piece , its better than me playing it!

Pupil B: you should have seen us when we first found out we were getting professionals , we were like oh my gosh! I think it is a cool thing. If you think about it its really not what most people tend to have during their GCSE. Its like I have a real composition, because its being played by a professional.

Key Learning:

- Questioning is a key pedagogic skill for all - composer, performer, as well as teacher.
- Intentionality is significant - what do pupils what to compose?
- Language matters - what is said to pupils is significant in enabling them to develop their own ideas
- True Assessment for learning (AfL) can make a real difference
- The on-line forum helped the pupils interact in a secure environment

Key Questions:

- What makes a good question?
- What is higher order thinking in the creative process?
- How relevant is Bloom's Taxonomy to this?
- How can we account for progression in composing?
- How much (or how little) do pupils need to know before they can commence a composing task?

Implications for practice

- Asking good questions is a skill - it needs thinking about, and planning for
- Think about what is said - why was that question asked, and what asked at that particular point?
- How long can be spent talking with individual pupils about their work?
- Think about using other musicians in the school – Peri's, 6th formers, teachers, to help realise pupil ideas
- Think musically

Unexpected outcomes

- The composers spent longer talking to the pupils than the teacher

- Composer interactions were focussed on qualitative developmental work, teacher ones characterised by task completion matters
- Composers did not correct pupil work (e.g. notation), but allowed ideas to flow
- Pupils knew what they wanted to achieve, in many cases, and needed specific help realising this
- Composers really thought about their verbal discourse

Nuggets

- Listening is like “composing backwards”!
- Composing is an evolutionary process
- The role of the performer involved tre
- ating pupil music with the same intensity as that of the established composer
- Questioning helps learning – it is not just to prove recall
- Talk to the pupils about what they are doing, and what they want to do

Project 6: How can ICT in the classroom encourage the use of creative and experimental thinking?

This project took place in Fallibroome Academy, Macclesfield, Cheshire. The project team here consisted of Phil Kennedy (Teacher), the composer Duncan Chapman, and Jonathan Savage (Researcher).

Early discussions in the project resulted in the choice of a title: *Endless Journeys.* This seemed to reflect the project at several levels, i.e. all of the project team were on a journey of discovery within the project, and were not entirely sure where they were going or where they would end up! There was a deliberate openness to this that all agreed suited the new approaches to creative and experiential composing with technology within the project. This contrasts strongly with conventional approaches to the teaching of musical composition in schools, which are often far from open.

ICT in music education and composing are clearly huge areas, and ones which change and develop frequently. In order both to make the project manageable, and to use appropriate material, the project team decided to utilise three contrasting approaches. These were:

1. Looping, Delays and Echoes

Linked to a simple Max MSP patch on a laptop computer, a microphone was used to ‘gather’ sounds from the class. Pupils used their own instruments or voices to generate sounds when ‘requested’ by the ‘conductor’ (the pupil with the microphone). The MSP patch captured the sound and repeated it for a few seconds with a gradual fade. An improvised musical piece was constructed over time by the group with specific decisions about musical elements (pitch of notes, their duration, volume, etc.) left to individual pupils whilst the overall shape of the piece was discussed and agreed by the class.

2. Sound Plant
SoundPlant is a freeware tool that turns a computer keyboard into a triggering device for pre-recorded audio samples. These can be manipulated in various ways. Within the project, it was used as a tool for individual composition work. Pupils were encouraged to use a piece of pre-recorded audio (from the first session) as a basis for their own interpretations of the Endless Journey theme.

3. Speaker Twitching
Speaker twitching involved pupils assembling a basic electronic circuit of their own including paperclips and a speaker. When assembled correctly, the paperclip can be used to touch the speaker cone, producing a range of sounds.

Discussion
Looping, delays and echoes 'musicalise' what you play into them; seemingly random sounds are combined and through the repetition create a sense of flow and purpose. Duncan has found that this can be a very powerful tool for empowering the timid. Also, as the echo gives two very different types of sound texture (very rhythmic patterns from short sounds and long drones or sustained sounds from sounds that are longer than the loop length) it is a way of introducing and stimulating critical listening through asking specific questions such as "What did you notice?".

Soundplant is a quick and easy way of getting people to rethink how they might use the computer as a performance tool. Soundplant has a very shallow learning curve (unlike many of the other software applications available) and provides a "blank sheet" (like Word, Photoshop or Audacity) that does not suggest a specific type of music that you can make with it.

Speaker twitching was chosen because we wanted to stress a sense of exploration, the idea that one can find interesting sounds in the most unlikely of places (Cage's quote "Beauty is underfoot wherever we take the trouble to look" comes to mind). It is also a fun activity, very hands on, and challenges the idea that technology is always complicated and 'virtual'.

This project team also took the decision to present the pieces produced by the students in a public concert at the end of the composing process. Again this had ramifications for the ways in which they worked, including issues concerning how the students felt an audience would receive unfamiliar sounds produced in unconventional ways. This led to numerous discussions about the performance practice of electroacoustic music.

Another problematic area which was encountered when working the students was that of music and metre. The natural, predisposed student obsession with metrical frameworks was noted at various points throughout the project. The focus in many of the compositional activities was on the nature of sound itself, with tempo and rhythm initially taking a less important role. This contrasts strongly with students' wider musical experiences and work within their instrumental learning and classroom music making (which includes approaches that centre around popular musical styles with which students are most familiar). Again, this entailed students exploring the very nature of what music is, and what it means to different audiences. As Phil, the teacher, observed:

I think there is a danger of thinking that there is "Music" and there is "Music Education", separate from "real" music. I like to think of the school as one of the sites for music to

happen. What I am trying to do is to encourage the students to think about music in a wider way. I'm not that concerned that they 'like' a particular genre or piece but it does seem important to me that music continues to be a 'mindful' activity. (Phil, comment on case study, 26/6/12)

Findings from this project included the key notion that students became aware that the technology of musical production does both limit and extend ideas. The challenges that technology brings to the process of musical composition are an intricate component in the creative process. Developing students' appreciation of these issues was an important part of the project.

Key Learning:

- Our main role as teachers of musical composition is to educate our students' sonic sensibilities;
- The key way to do this is through the design and implementation of authentic, open-ended compositional tasks mediated by appropriate technologies;
- Whatever technologies are used in the teaching of musical composition, it is important to recognise that they all have particular affordances and limitations;
- Engaging and educating for the 'unfamiliar' takes time and energy; students will need to be challenged and nurtured in equal measure;
- As with all music teaching, developing a skilful pedagogy is the absolute key to ensuring the best quality process and product. "There is no curriculum development without teacher development" (Stenhouse, *in* Silbeck 1983).

Key Questions

- How can students be challenged to unpick their intellectual assumptions about what music is, and how it is represented?
- How can students be encouraged to move outside their own musical comfort zone and current experience as instrumentalists and embrace alternative models of musical composition?
- How can students' affinity to beat or metrical musical frameworks be ameliorated and re-conceptualised within compositional projects?
- How can teachers be convinced that homemade or open source technologies are of equal value and offer similar opportunities to expensive, professional tools?
- How can teachers and composers forge mutually beneficial collaborations so that the composer does not become a poor version of the good teacher, and the teacher is more confident and comfortable with working with composition?

Implications for Practice

- Link together conventional instruments with digital technologies whenever possible. This allows for students to make connections between what they know, and what they are being encouraged to know;
- Use students' experience as musical performers to frame their emerging experiences as composers; musical performance and composition should be taught in a holistic way whenever possible;
- Recognise the balance between structure and freedom in a compositional activity and try to ensure the pace of the activity responds to this effectively;
- Scaffolding and framing a compositional task are important once students have been given time and space to explore it for themselves;

- Be creative in the choice of digital technologies and make them central to the activities that are undertaken with them.
- Look for opportunities to collaborate with others within interesting projects. More generally, develop a repertoire of interesting and intriguing compositional approaches for use within your classroom teaching.

Unexpected Outcomes

- Even making electronic circuits with paperclips and speakers can become a musical activity!
- Vegetables are musical instruments!
- The commitment and enthusiasm with which students engage with and explore new ideas. This was not unexpected, but it is a constant source of fascination and delight to us all.

Nuggets:

- Never underestimate your students' abilities to think or hear differently.
- You do not have to start where students 'are at'. You can challenge their musical prejudices head on.
- Why not suspend your own judgement about their musical products for a while? You do not need to assess everything in every lesson. Why not enjoy the journey?
- Developing a skilful pedagogy for musical composition is the most important thing you can do to improve the quality of your students' music education.
- You can never ask too many questions!

Overall Project Findings and Discussion

Clearly there is a great deal to synthesise from the various projects. The findings from the various individual projects clearly relate to the specific research questions each was looking into, and in the material from the projects there is a wealth of data, of findings and of outcomes. In this section the overarching threads that bind together the various projects are analysed and discussed.

It is apparent from the various pieces of work which have been undertaken that the project's aims have been met. For the teachers in the schools concerned, pedagogies have altered. All of the teachers spoke, in their different ways, of how their teaching has developed. One teacher said that this work has been amongst the best CPD (continuing professional development) he has had in music teaching for many years, and that the impact of it will be felt by his classes long after the project is over. Although the project impacted only on relatively small numbers of students in the various schools, The teacher's views cited above were echoed by others at seminar day 3.

The composers too have had their perceptions challenged. This was a very different project from the way that composer-in-school projects are usually organised. These three comments, from different composers, serve to illustrate this:

- Composer A: "I realised early on that this would be different from my usual composer-in-schools shtick!"

- Composer B: "Unlike other projects, I couldn't plan this on my walk from the railway station to the school"

- Composer C: "At the start I was just itching to get going, and felt the planning was holding me back, it was only when we got into it I understood why"

These are worth considering in some detail. The first and second quotations are interesting, because the composers in question were talking about having a normal way of working which they put into practice each time they went into a school. This project, with its planning and reflection, not only prevented that taking place, but forced them to listen to, and accommodate, the views of the teachers and the schools. This was felt to be a good thing by all concerned. In the third quotation, the composer in question again had an already established way of working, and felt that they could operationalise this universally. Meeting with the teacher and the school made them realise that context mattered, and that a 'one-size-fits-all' mentality was not necessarily a good thing.

Moving now to specific learning which accrued from the projects, ten significant themes emerged. These were:

1. Questioning
2. Higher order thinking
3. Valuing pupil work
4. Intentionality
5. Planning
6. Partnership roles and power
7. Structured reflection
8. Learning
9. Process and Development

10. The place of final performances

These will now be considered in more detail. As will become apparent, many of these link with each other.

Theme 1: Questioning

Questioning is a key teacher skill, and we know that a considerable amount of teacher time is spent on the act of questioning. We also know that "…questioning is one of the most common teaching strategies that teachers around the world use to induct children into new knowledge" (Staarman & Mercer, 2010 p.82). And it is this last phrase that is the key here, 'new knowledge'. We also know that "…asking questions that require short, factual answers may actually inhibit students' intellectual activity" (Staarman & Mercer, 2010 p.82). This is an easy trap for non-specialists to fall into. A sea of willing pupil hands may each recall the answer to a question, but this does not mean that learning is taking place.

One teacher said to a composer "did you realise some pupils weren't engaging with your questions?" the composer replied "I was just asking those with their hands up". The teacher then said that if pupils were not engaging, they needed bringing back on to the task in hand, which the teacher had done by intervening. Many teachers are familiar with 'no hands up' questioning (Black et al., 2004), which serves to engage all pupils. This was a useful learning curve for the composer, and is an area which those not used to working in schools may well benefit from. Questioning for thinking also links to Bloom's taxonomy, which is considered in *Theme 2* below.

In the project 5 description above, it was seen how one composer, David Horne, re-evaluated his own approach to questioning. One of the major pieces of impact that the LIC project has already had is that Ofsted have picked up on the King Edwards project in Birmingham as an example of good partnership working (Ofsted, 2012a). David Horne was interviewed by Ofsted, and observed:

Working with schools through the BCMG has made me a better composer – and it's also improved my teaching and lecturing work in higher education, too. I need to think about the composing process more analytically so that I can show students how music works and can be made to work, to develop their curiosity – and this is different to lecturing them about how I or other composers have worked. (Ofsted, 2012a p.17)

It has already been discussed in the project description how David thought about questioning. The comment he made to Ofsted links to one he made in the school, where he said:

"I was thinking a lot more about what I was saying; I was thinking why I am saying what I am saying. It's important to compliment and to point out the good things that are going on. So while I was doing that I was getting them [the students] to talk a lot, and ask questions."

One of the functions that a composing tutor plays is to model asking the questions that they hope the learner will later go on to ask of themselves:

The questions 'that every composer must ask' are the ones which good composing tutors model for their students; asking the questions which they hope later the students will ask of themselves. This will be done for work brought by students to a class or tutorial. The

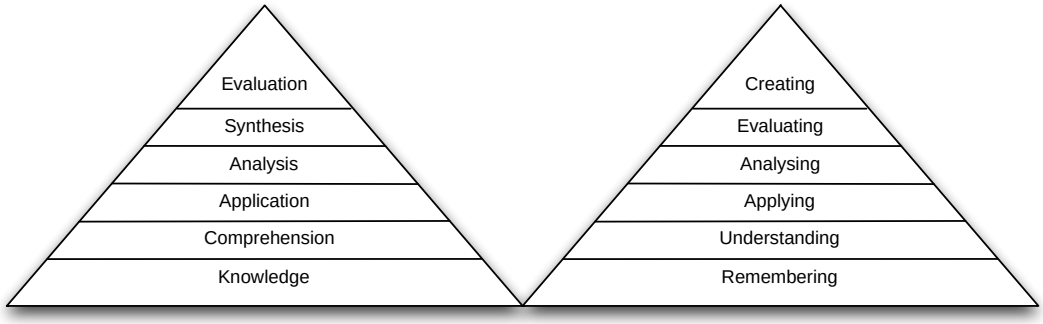
role of the tutor will be … to be questioning students, especially concerning choices, of what they did and why they did it, and of how the resultant composition emerges from such procedural choices. (Fautley, 2014 p.201)

This is exactly what David was doing with the school pupils.

Theme 2: Higher Order Thinking

Many schools in the UK are familiar with Bloom's taxonomy (Bloom, 1956), which categorises thinking into 'higher order' and 'lower order' modalities. Some schools also know about the more recent revision of this (Anderson & Krathwohl, 2001) which change some of the details of this, introduces a new highest category of 'creating', and changes nouns into verbs. A visual representation of both the original and revised versions is shown in figure 2.

Figure 2: Bloom's Taxonomy and revision



Bloom 1956 Anderson and Krathwohl 2001

What the LIC activities throw into sharp relief is that composing music takes students very rapidly towards higher order thinking according to the revised model. It also shows that good questioning, discussed in *Theme 1* above needs to take into consideration the various aspects of this in order to be truly effective. From analysis of composer talk, one way in which this can be shown to take place is by the use of question stems. These have been written about in education literature (*inter alia* Fautley & Savage, 2007; 2008), and consist of providing the opening part of a question, which can then be used to 'fill in' the final wording as circumstance and context require. From LIC composer observations some common stems noted were:

Question stems:

- 'What would happen' (Bloom: Analysis)
- 'What about' (Application)
- 'I wondered if' (Synthesis/Evaluation)
- 'I think you could' (Application/Analysis)
- 'I can't persuade you' (Evaluation)
- 'You could try' (Application)
- 'I think that' (Evaluation)

These could be used to form the basis of getting those who work with young people on future projects to think about the sorts of questioning they employ, and of the sorts of questions they could use to take learning forwards.

Theme 3: Valuing pupil work

Across all projects, the ways in which pupils conceptualise and operationalise the creative process was observed and discussed. There are many issues which are worthy of discussion here, but a common one is that of the origins of pupil thinking concerning composing. A common preconception arises from the way this is perceived in popular culture. Many videos of songs give the appearance that what happens is that performers go to a studio with a few mates, have a few minutes of party-like singing, and the result is a finished song, which appeared to take as long to create and record as it does to listen to. For this reason many feel that their initial ideas, because they do not arise fully-formed (in the manner of the video described), are not worthy of consideration. This mind-set requires careful addressing and handling. One effect is that pupils reject their initial ideas forthwith, as they do not feel they are finished, therefore 'not worth anything', as one pupil onserved.

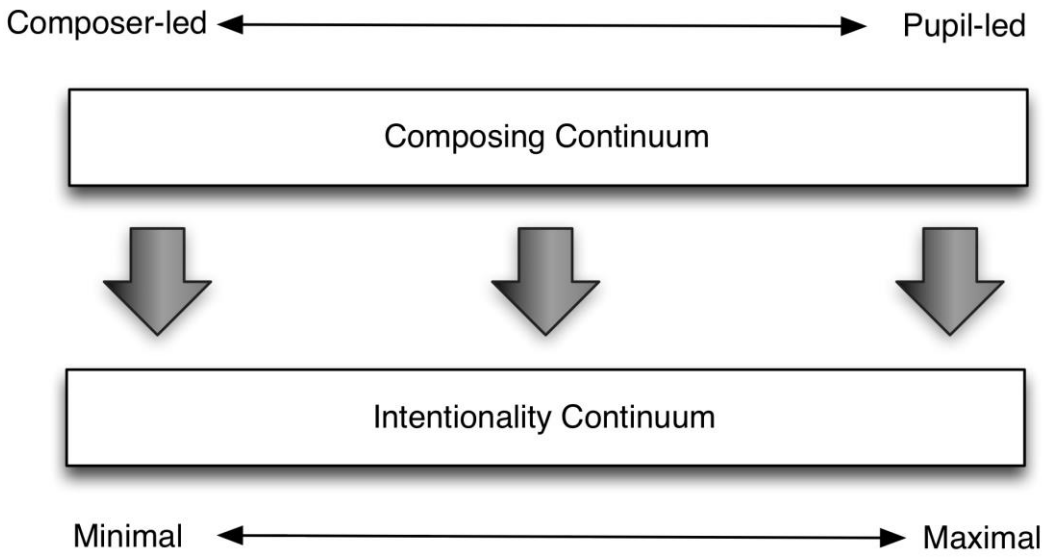
In order to address this issue, one composer pointed out to the pupils that "there are very few bad ideas, but quite a lot that haven't been worked on properly". Pupil composing ideas can be very fragile green shoots, and it is worthwhile for those involved with them to nurture them by valuing. In visual art, from an early age, young people have had their creative utterances valued, the blob with sticks that represents a very young child's hedgehog picture will have been displayed on the fridge at home. In Music the fridge-picture stage is often omitted. So early utterances in music can take place at an older age than the stick-pictures, yet still require valorisation. It is the role of the composer and teacher to do this.

Sometimes an adult can tell a pupil 'that idea won't work'. How does the adult know? What internal experiential processes are they going through to reach this conclusion? As (with some exceptions) this project did not involve final performances, there was less of a likelihood of composers 'steamrollering' over children's ideas in order to reach a good end point. But this is a point worth bearing in mind for future projects.

Theme 4: Intentionality

Closely related to valuing is the notion of intentionality. What did the young people *want* to compose? Did anyone ask them? In some of the LIC projects they did, and it became clear that the young people had clear ideas of the sorts of music they did want to compose. This raises yet another issue where the LIC work was different from other artist-in-schools projects. Here pupil voice mattered. In some non-LIC projects, what happens is that, in essence, the composer 'composes on' the pupils. They do as they are told, the composer makes all of the important decisions, and the pupils are the worker-ants. In the LIC work the pupils were normally given much more agency with regard to their own work, and ideas. What this means is shown diagrammatically in figure 3.

Figure 3: Composing Intentionality Continuum



As we move towards the right-hand side of the picture pupil agency increases, and their intentionality is taken into consideration. There is, of course, a balance to be achieved between form and anarchy, and so there is always a point in composers being there to make decisions, but there is also a point in allowing pupils to express their intentions.

In some LIC schools the pupils described in advance of composing what they would like their pieces to involve, and be about. This is an interesting model, and one which it would be interesting to develop in future research.

Theme 5: Planning

LIC was designed from the outset to involve planning. The seminar days for all were followed by in-school planning sessions for those concerned. After some initial concerns and apprehensions the power of this in enactment was felt by all. The projects themselves were felt to be stronger, and clear in terms of what was expected by all. This theme links very closely with the next, and it is therefore worth introducing that, and then considering the two together.

Theme 6: Partnership roles and power

We know form other artists-in-schools projects that there is danger of the artist being seen as the expert, and the teacher playing a supporting role. To challenge this, the LIC project asked five important questions of its participants:

1. Who is the expert?
2. Is the teacher only there to 'ride shotgun'?
3. Are the teacher's skills downplayed?
4. Where is the axis of power?
5. Is this understood?

It is important to note that at some point all involved, composers, music teachers, performers, researchers, arts organisation personnel, were all undergrads on very similar courses. Most have music degrees or their equivalent, and all would have rubbed shoulders in College, Conservatoire, or University, so a common heritage is there. At some point these various stakeholders diverged in their career choices. A corollary of this is that notions of 'who is the expert?' take on a whole different hue. Stories of projects where the teacher is only there to 'ride shotgun', in other words to 'do discipline' are not uncommon. As we saw with questioning, the teacher is an expert in teaching and learning, and knows their pupils and the school context. Just as no teacher would dream of 'parachuting in' and teaching a lesson without knowing something about the pupils they will be working with, so no project should take place without this information either.

In the past teachers have spoken of their skills being downplayed, only to have to 'grit their teeth' whilst they see poor practice being employed in their classrooms. The LIC project entailed some difficult conversations at times, but as both teachers felt empowered, and composers were working in partnership with teachers and schools, this was a significant development. Done well, this also redistributes the axis of power, so that all expertise is acknowledged. This is important to the success of such projects.

Avoid 'Seagull projects"
One major piece of advice to come from the LIC project therefore, is to 'avoid seagull projects'. Put crudely, this is where artists fly in, create an almighty flap, poop on everything, fly off, leaving others to clear up the mess! This was shown in one of the PowerPoint presentations arising from LIC, reproduced in figure 4.

Figure 4: "Seagull Projects"

Theme 7: Structured Reflection

In traditional physics, a reflection occurs typically in a mirror; no mirror=no reflection. One of the themes to emerge from LIC was the nature of reflection, and what it entails. It is commonplace now to initiate reflection activities, and require those taking part in a project, lesson, or pedagogic endeavour to undertake reflection. But rather as with physics, what if there is no mirror? In the LIC project the role of the researcher was multifarious, but one purpose was to stimulate reflection. The results of these reflections reveal that structured reflection, being *prompted* to think about issues, were more significant than simply leaving people to reflect 'without the mirror', as it were. Reflection is clearly important, and the opportunity LIC afforded to stakeholders to reflect in structured formats is a key piece of learning from this project for the future. It allowed deeper reflection to take place, and has, as transcripts of conversations reveal, really enabled thinking.

One example of this has been the place of notation. At one of the symposium days Robert Bunting challenged the composers to really reflect on the place of musical notation in their own thinking. This was clearly uncomfortable for some. The commonplace use of the synonym 'writing' for 'composing' being but one example of this. Composing is not necessarily 'writing', and using language in this way can reveal untroubled thinking. Having a mirror to reflect produced more meaningful reflection than simply staring into an abyss of nothingness!

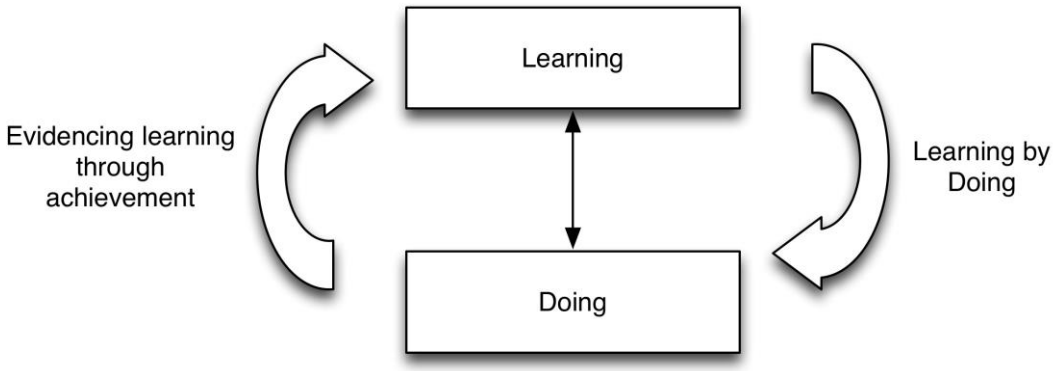
It is for these reasons that building in structured reflection is seen to be an important part of good project management in schools. The old saying that some people have ten years' experience, and others have one years' experience ten times is apposite here. We do not want people to keep repeating what they do over and over again, and the use of a reflecting agent has helped considerably. As one composer observed: "this process has illuminated many possibilities both for myself and for some ways in which [we] can work in future…"

Theme 8: Learning

We have known for many years that planning for activity is much easier than planning for learning. By including time for planning into the LIC *modus operandum* questions of learning and doing were brought to the fore early on. In schools where the LIC project would be running in KS4, there were clear concerns about the match with examination syllabi and specifications. There is not time in a busy programme of study for activities which although possibly meaningful, are tangential to the main course. This meant that composers and teachers together needed to think *together* about learning. It also meant that any preconceptions of projects being solely concerned with *doing* were rapidly dispelled. Doing alone is no longer enough, whilst there is learning in doing, certainly, the learning that will be taking place needs to planned for, and thought about sequentially (which will be considered in Theme 9). Pam Burnard observed as a finding in her case study that "…Composing pedagogy involves recognising that creative learning and doing composing are interrelated."

As figure 5 shows, learning and doing are intertwined, and need to be considered in this fashion:

Figure 5: Learning and Doing



(Source: Fautley & Savage, 2011 p.64)

From the various reflective sessions in the LIC project schools, there were discussions concerning the different emphases between *doing* and *learning*. These were not as simple as being that teachers had concerns for the latter, or composers with the former. There were interesting and important dialogues, and, in a number of ways, went to the heart of much of the discourse concerning music education (especially at Key Stages 3 and 4) at the moment.

Useful questions which arose from these discussions were

- What do we want the pupils to learn?
- What do we want the pupils to do?
- What do the pupils need to have learned *before* they are able to achieve what we want them to do?

Again, these are worth rehearsing with anyone involved in any form of practical in-school project.

Learning is central to school activity, and one of the strengths of the LIC project was the ways in which collaborative learning took place. As Pam Burnard observed in her case-study:

This case study suggests that there is real value and much to be learned from creative collaborations in GCSE learning environments. In these environments the spotlight is on the coming together of music makers in schools and communities; developing symbiotic relationships between composers and players; composing and performing new music from new scores; and the challenge of seeing creative learning in action for both students and teachers in the GCSE classroom programme.

Theme 9: Process and Development

One of the findings which emerged from the projects was that of the role of *composing-as-process*. All of the individual LIC projects made much of this, where composing was to be seen as being a *process*, an active form of engagement. This was recognised throughout, and probably comes as no surprise. Many aspects of the composing process were

investigated, and the individual projects suggest ways of teaching and learning with regard to this.

Linked to the notion of process is that of development, and what it means to get better at composing. Clearly in a short-term project development is difficult to access, but all the projects believed the pupils concerned in the various schools had got better at composing. Likewise composers and teachers had got better at teaching it! So what exactly did improve? John Finney provided a conceptual framework for this question in his case-study:

Accessing the unfamiliar wasn't straightforward and the idea of composing music a strange one. Or to take another theoretical position and based on Piaget's notion of assimilation and accommodation, the twin processes by which our mental schemas (ways of thinking) are changed and expanded, the unfamiliar needs to be made sense of through ways of thinking and acting that already exist in the child yet at the same time in need of disturbing (see Finney, 2009). Here it may only be helpful to think of Piaget as providing a useful working metaphor, and one that easily fits with common assumptions and folk theories of learning. There is common talk of acknowledging prior learning, building on existing understanding, level of challenge, freedom and constraint in task setting and so on. Although there is little attention to children's ways of thinking, ways of making sense other than some loose appreciation of individual learning styles. But learning styles tell nothing about mental schemas and predominant thought structures at stages of development.

So what does progress look like and sound like in pupil composing? In many ways this question links to higher order thinking and Bloom's taxonomy, where progression through to higher order thinking is desirable. One of the findings from the LIC project is that to really facilitate progression in composing, teachers and composers need to slow down the process of composing, as doing so has deepened learning considerably in terms of creative progression. This position chimes with an Ofsted recommendation to music teachers to "do more of less" (Ofsted, 2009 p.14). The LIC project represented a slower way of working, as sessions were often more spread out than many typical classroom projects, which may well take place over not more than four lessons. As one teacher observed "in future I will make my projects last for longer, and make them so that we learn more in a single deeper one, rather than in lots of shallow ones".

One of the key areas which does progress in pupil composing is that of *mastery*. Project schools reported pupils becoming more familiar with the process of composing, and of being able to place more emphasis on the development of ideas. In sections above the notion of a piece of music arriving fully-formed was expounded. In mastering process, pupils come to realise that from initial, potentially quite small ideas, composing involves developing these ideas, working them out, often in sound, and seeing what their practical potential might involve. In one LIC project school the pupils have written themselves letters, to be used next time they compose, with specific instructions, for example, on what to do if they get stuck! This is embedding mastery in action. It is likely to take time!

Another aspect which emerged from the projects was the importance of using audio and/or video recording to record work in progress performances undertaken by the pupils. This has been observed to be an issue in music teacher pedagogy (Fautley, 2013; Ofsted, 2012b). In LIC projects the importance of composing as a developmental activity was underscored by the use of such recording to both chart progress, and help with true formative assessment purposes.

Theme 10: The place of final performances

LIC was not conceived as a teleological final-performance focussed process. There will, of course, be some artists-in-schools projects which are all about this, but as to use a phrase from a contributor to the online *teachingmusic.org.uk* forums, “musically meaningless and ‘wacky’ large scale concerts” may not be the best way to develop musicality, proficiency, and mastery in pupils. The LIC projects which did opt for a final performance found that this had an influence, or ‘backwash’, to use an assessment terminology, on the music produced, which may not have been for the best. Obviously music exists to be heard, and the discipline of performance can be a good thing. However, it can be worthwhile, especially in composing projects, of being aware that this can have a potentially negative effect on the way in which the creativities of young people can be skewed.

Much good music making, good composing, and good learning has taken place in the LIC project. Some of this is available via the medium of audio and video recording, and so what has done has not been lost (Savage, 2007). This focus on the role of final performance is simply a warning to future projects to think about *purpose*, and who it is for, and who will benefit.

Significant Learning

A great deal of significant learning has emerged from this project. One of the major tasks has been codifying this into ways which can be used. In the pages which follow, a tabular format has been employed which shows, in reduced and simplified fashion, much of the significant learning from this project.

The way that the table has been laid out is like this:
The first column gives a numerical identifier number for the row. The second column outlines the pedagogical or learning issues being discussed. The wordings of these are taken in many case directly from project documentation from the individual projects. In the next column are suggestions, or a very brief outlining of the issues. There then follow three columns of coding. These should be treated as highly reductive ways of viewing what has been discussed in the preceding columns.

Significant Learning Colour Coding Key.	
	Technology
	Evaluation
	Creative strategies
	Unfamiliar Music
	Teacher role and pedagogy
	Listening
	Expert performers
	Ownership

	Pedagogical Issues/Learning Issues	*Suggestions/Discussion*	*Coding 1*	*Coding 2*	*Coding 3*
1	Pupils need time to practice and learn how to use new technological tools. Sometimes this is difficult for pupils to understand. A way of addressing this is to relate it to pupil's learning of traditional instruments.	Simple instruments, including 'speaker twitching' removes necessity for advanced technique	Pupils	Practise	Technology
2	Encourage the pupils to engage in discussion about the use of technology within the context of a live performance Ask questions such as 'How can you tell if a laptop is being played with expression?' 'How important is the visual element of music performance to the audience?'. Also encourage them to be inventive and experimental in the live performance of their own music pieces using technology.	Using tech becomes a normal part of learning music in school from an early stage	Pedagogy	Questioning	Technology
3	Collect and share with pupils different kinds of music notation. This allows pupils to explore the whole idea of what music notation is for and helps them to think about what might be an appropriate notation for their music, and for presenting it in a way that it could be revisited at a later date, or that another person could perform it.	Notation does not just need to be Western MS. How can Computer instructions be notated? This can be part of early learning in music ICT	Pedagogy	Questioning	Notation
4	Contextualise pupil's work within the broader electroacoustic and live electronics music tradition. Music by Nic Collins, Morton Subotnick, Stockhausen, Pauline Oliveros could be used. Also use this music to encourage discussion of 'what is music?'.	Broaden listening base of KS3 music by including challenging pieces	Pedagogy	Listening	Challenging Music
5	Greater complexity in technological tools is not necessarily a good thing or something which produces technological or educational progression. Make students aware of and engage them in a discussion concerning how the use of technology both limits and extends our ideas. The challenges that technology brings to the process of musical composition are an integral component of the creative process. Developing students' appreciation of these issues is important.	Using tech alongside acoustic classroom instruments to compose	Pedagogy	Technology	Complexity

6	Our main role as teachers of musical composition is to educate our students' sonic sensibilities: the key way to do this is through the design and implementation of authentic, open-ended compositional tasks mediated by appropriate technologies	Sounds themselves can be explored, using both acoustic and ICT sources	Pedagogy: Teacher Role	Sonic Sensibilities	Authentic
7	Whatever technologies are used in the teaching of musical composition, it is important to recognise that they all have particular affordances and limitations	Teach composing using suitable musical sound sources, the affordances of ICT can greatly add to, say, percussion. Teach lessons where the same thing is played on different instruments. What effects does this have?	Pedagogy	Technology	Affordances
8	Engaging and educating for the 'unfamiliar' takes time and energy; students will need to be challenged and nurtured in equal measure.	What is familiar to the pupils in *this* school? What is unfamiliar? What will stretch them?	Pedagogy: Teacher Role	Questioning	Challenging Music
9	As with all music teaching, developing a skilful pedagogy is the absolute key to ensuring the best quality process and product. "There is no curriculum development without teacher development" (Stenhouse in Silbeck, 1993)	What do you teach? How do you teach it? Why do you teach it?	Pedagogy	Pedagogic Content Knowledge (PCK)	
10	How can students be challenged to unpick their intellectual assumptions about what music is and how it is represented?	Asking this question can stretch pupil thinking. Can be incorporated into KS3 lessons from the outset.	Pupils	Assumptions	Challenge
11	How can students be encouraged to move outside their own musical comfort zone and current experience as instrumentalists and embrace alternative models of musical composition?	Ask instrumental teachers to undertake composing activities during instrumental lessons.	Pupils	Thinking	Challenge
12	How can students' affinity to beat or metrical musical frameworks be ameliorated and re-conceptualised within compositional projects?	First pupils need to meet music like this, then make it. Possible simple way is via film music?	Pupils	Assumptions	Challenging Music

13	Explore homemade or open-source technologies. These are often of equal pedagogic and musical value, and offer similar opportunities to expensive, professional tools.	Along with lessons on 'what is music', it can also be asked 'what is a musical instrument'?	Pedagogy	Questioning	Thinking
14	Link together conventional instruments with digital technologies whenever possible. This allows for students to make connections between what they know and what they are being encouraged to know	Plan for learning using a range of resources available in school.	Resources	Traditional Instruments	Technology
15	Use students' experience as musical performers to frame their emerging experiences as composers; musical performance and composition should be taught in a holistic way whenever possible	Composing becomes a regular part of teaching and learning in music lessons from the earliest stages	Pedagogy	Composing	Practise
16	Scaffolding and framing a compositional task are important once students have been given time and space to explore it for themselves.	Ofsted: "Do more of less"	Pedagogy	Scaffolding	Do more of less
17	Be creative in the choice of digital technologies and make them central to the activities that are undertaken with them	Musical teaching and learning will depend on what is available, but can be used by all pupils, at all stages.	Pupils	Challenging Music	Challenge
18	At first sight the popular music experience of a class might seem very distant from contemporary art music. Common formal structures such as periodic phrasing, harmonic conventions, extended phrases and developmental variation are frequently not found in contemporary art music. However, the conceptual focus and use of metaphors to determine structure might provide the bridge between popular music and pupils' personal expression. The use of metaphor, often the title of the piece and an abstraction, may be capable of resonating in multiple directions for the imaginative listener, and may provide the bridge to comprehension and understanding.	Choose listening examples of music from the outset which challenge pupil views of music	Pedagogy	Challenging Music	Listening

19	Extract materials and compositional strategies from established contemporary works. Work intensively with pupils to assimilate the new material and explore unfamiliar compositional strategies.	Structure of music is amenable to ready teacher description. Explore how musical structure involves developing material, as well as generation of ideas	Pedagogy	Listening	Deconstructing
20	Demand musical precision in individual and ensemble musicianship. Insist that musical gestures are given intention by being imagined, sculpted and attended to in their execution. Establish a listening thinking ethos where pupils give attention to the placing of sounds in relation to each other and support them understanding their place in the architectural whole. Teacher: *'All the students were treated as musicians, equal to the composer, and were told that 'every sound matters'. The students spent considerable time on 'simple' activities, such as clapping and listening, and there was a very high level of concentration in spite of the amount of repetition.'*	What does listening to music involve? Can lessons be planned which explore different types of listening?	Pedagogy	Listening	Deconstructing
21	Composing pedagogy: Composing needs deconstructing so pupils view it as a *process* which has stages, not treated as single closed edifice, but one which is amenable to intervention.	Composing is complex - it needs teaching as a series of stages. Plan lessons on: Generation of ideas; organisation; assembling piece; practising in sections	Pedagogy	Composing as *process*	Deconstructing
22	There are different kinds of listening: dreamy listening, listening for detail, listening for inspiration, listening for imagery. Which one are you asking the pupils to do, and do you allow for and make explicit the different kinds?	Listening is complex. Plan for ways of teaching *about* listening, as well as for lessons *involving* listening	Pedagogy	Listening	Deconstructing
23	Take pupils inside a composer's way of thinking, their values and aesthetic commitments through intensive musical workshopping using the language and syntax of composers . This is a critical part of the process of opening of minds to the unfamiliar and making it	What words are needed to talk about music? Are these needed to think about music? Old NC = 'appraising'; lessons on music terminologies in use. Good teacher modelling	Pedagogy	Questioning	Composerly thinking

	relevant to pupil's learning. Pupils learn how to think inside musical processes as part of their developing composing practice. *'Everybody in our class can now listen to Gadget and get their head around it and get into the music. Once you have got your head around the language, once you have done this then you enjoy it.'* Pupil				
24	Pupils bring their own musical experiences into any given composing task. When presented with and immersed in unfamiliar music, material and processes, pupils make it relevant through appropriation and assimilation	Challenging questioning on simple music, as well as more complex types	Pedagogy	Questioning	Challenging Music
25	Listening as crucial to success	What does it mean to listen to a piece of music? Is this a learned skill? If so, how? What would good examples to listen to include?	Pedagogy	Listening	Deconstructing
26	Composing is a slow process and it is important to learn how to stay with the process	Composing is complex - it needs teaching as a series of stages. Plan lessons on: Generation; organisation; assembling piece; practising in sections	Pedagogy	Composing	Deconstructing
27	'Relevance' is created by the participants and in particular through the ethos generated by the workshop leader/teacher. Hand over the tools for creativity. Don't worry about relevance! It's the empowerment and opportunity to create / hear / understand that will make it relevant	Link to art - what is the musical equivalent of, say, Pollock? Picasso?	Pupils	Style and Genre	Relevance
28	Style is not important. Compositional models really work, but it's not about imitating style. The really useful skills are to understand compositional fundamentals that may apply to all forms of music-making - the material elements of composing.	Teenagers very aware of style and genre, being outside this immediacy actually has strengths in the teaching and learning process	Pedagogy	Style and Genre	Authentic

29	Aim to make authentic connections - play to your strengths as a composer/teacher - try to follow the creative methods or starting points as closely as possible		Pedagogy	Composing	Critique, not criticise
30	Create a democratic space in the classroom where all ideas are welcome and shared. Give pupils permission to try things and brainstorm ideas openly. In a safe space allow them to generate multiple ideas to both narrowly defined and open-ended activities. The creative ensemble format provides a critical starting point for the development of ideas	From the outset, music is experienced as a 'meant offering'. Rather than criticise, develop critique as mode of classroom talk	Pedagogy	Safe risk-taking	Thinking
31	Give pupils individual composing tasks/commissions based on knowledge of pupils previous work. Make them specifically tailored and designed to meet the interests and needs of each pupil which expand upon their own sound vocabulary. These could be made more personal by being delivered in named envelopes. Exam board criteria can provide a frame, but within that individual foci can be maintained.	Differentiation by task	Pedagogy	Differentiation	Thinking
32	Work with pupils as a whole class creative ensemble. This can allow pupils to develop complex levels of musical and social knowledge and roots music as an inherently collaborative social art. The creative ensemble format provides a critical starting point for the development of ideas and the challenges of judging the value and worthiness of ideas.	Whole class improv and performing lessons	Pedagogy	Group work	Co-operation
33	The creative ensemble workshop format positions composing as an activity of experimenting, trialling, exploring, developing and combining ideas. These practices are characterised by processes which are relational, and beholden to the participatory skills, interests, enthusiasms and performance possibilities of a particular class. Teachers/composers can use this format to model open-ended participatory exploratory processes which reflect the real world practices of many contemporary composers.	Lessons on what group work looks like. How to organise group work. What are the 'ground rules' for successful group work? In *this* school? In *this* class?	Pedagogy	Composing as process	Composerly thinking

34	Use technology such as iPads and sound recorders to record and share work-in-progress, and to revisit old and new drafts. It also means that a wide range of exemplars at different stages of the process can be saved for future use.	Record - and playback - what pupils produce regularly, not only at the end of a project.	Pedagogy	Audio Recording	Composing as process
35	Remember that you can be and are a model to the pupils of what a contemporary composer can be. '*The composer provided a model of a contemporary eclectic creative individual – an inspired, enthusiastic, engaged contemporary composer whose taste spanned a wellspring of styles and an expansive range of musical genres. He didn't portray himself as the exceptional creative genius but rather acted as a collaborator and facilitator...who modelled composing as an activity and a process, and valued the emerging music as music emerging'.*	The teacher is an often under-exploited musical resource in the classroom. Do your pupils know what instruments you play?	Pedagogy: Teacher Role	Composing as process	Modelling
36	Composing is a process that needs daily practise. Encourage pupils to compose something every day even if very short.	Encourage sonic notebooks. ICT – possible use for.	Pedagogy	Practise	Composing as process
37	Creative music classroom are places where risk-taking can be undertaken safely. Ideas are valued	Critique, not criticise	Pedagogy	Safe risk-taking	Thinking
38	Recording used to help pupils with the process of composing	Formative use of recordings	Pedagogy	Audio Recording	Composing as process

39	Give the pupils time to think about and discuss their composing intentions before starting. Think about using the schools intranet for these discussions. This allows the pupils to support each other, make comments and suggest ideas to their peers and refine their ideas. It can create a sense of community, create cohesion in the group and allow them to critique their work outside of the classroom. Not only is this useful to the pupils but also to the teacher, allowing them to have a clear idea of what inspires their pupils and to support their planning. *'Because many of them used quite emotive adjectives, there was a certain understood language that they created themselves about the kind of pieces they wanted to write' – This gave the composers an understanding of their personal language from the inside which informed the way they got the pupils to think about their work and the language they then used to talk to the pupils.'* This may seem like time away from composing *per se*, but remember the Ofsted notion of 'do more of less'.	After lesson, pupils 'thought out loud' using intranet	Pedagogy	Intentionality	Do more of less
40	Encourage pupils to do research as a pre-composing task. This encourages peer-to-peer learning, pools existing pupil knowledge and allows the teacher to build upon pupil prior knowledge. For example, pupils knew they would be composing for a solo saxophone before they started. Using the internet they were able to source information about the possibilities of the instrument (range, extended techniques etc.) the kind of music it performed and the performer who they were writing for.	Allow the pupils to learn by finding out in advance about the topic. This enables those who know already to find out more, and those who know little to start appropriately	Pupils	Thinking	

41	Be aware of the kinds of questions that you ask. A key part of questioning is working with pupils to uncover their intentions for the music they have planned. Questioning should be aimed at moving learners towards the higher stages of Bloom's taxonomy. The higher order thinking stages are concerned with involving pupils in evaluation, synthesis, and analysis. The revised version of the taxonomy (Anderson et al 2001) is even more appropriate for us here as it places creating at the tip of the taxonomy, followed by evaluating and analysing. Whichever is used, it is important to move away from base level 'remembering' type questions, and onto ones which engage the pupils with HOTS (higher order thinking skills).	Plan for questioning in advance. Use open-ended questions. Aim for higher order thinking	Pedagogy	Questioning	Bloom's taxonomy
42	Different kinds of teacher/composer -pupil conversations and interactions might include **Questions**, **Evaluative Comments** and **Statements**. Effective **questions** might start with 'What would happen if…', 'What about…', 'I wondered if…', 'I think you could…', 'You could try...', 'I think that.....'. Here the teacher/composer frames his or her ideas for the pupil in the form of questions rather than directly saying 'do this...'. Framing them in a way in which pupil intentionality remains to the fore, in which the teacher/composer acts as a 'sounding board'. **Evaluative comments** might start with 'I like...', 'Good idea...'. **Statements** might start with 'I notice that...', 'You are quite clear about that....'. *'What we are doing is asking the pupil to evaluate what they have done and why they have done it, and what they think they have done. And looking essentially at what ways they think they can improve it and facilitating this process.'* Asking good questions is a skill, it may be useful to have some question stems (as above) on which to add finishing phrases as appropriate. Planning for questioning and commenting may seem excessive, but it helps in the	Composer talked with pupils about musical and compositional aspects. Teacher often concerned with task completion. Use the question stems to form basis of regular interactions 'What would happen if…' 'What about…' 'I wondered if…' 'I think you could…' 'I can't persuade you…' 'You could try…' 'I think that…'	Pedagogy	Planning	Questioning

	early stages of developing this work, and of taking pupil thinking forwards.				
43	There is a tendency for teacher-pupil interactions to focus on keeping pupils on task and moving towards the completion of composing projects. Make sure that this is balanced with conversations that focus on pupil ideas, on process, and on what the pupils are trying to achieve. Remember that the music teacher is a musician in the classroom too!	The teacher needs to think about what they say, and what the purpose of the talk is	Pedagogy: Teacher Role	Questioning	Composing as process
44	Think about bringing in professional musicians for your pupils to compose for. This could be a member of a local professional orchestra, a peripatetic teacher or a music student. When pupils are not composing for themselves to perform this means that they are not limited by their own technical accomplishments. This allows them to concentrate on quality of ideas and their realisation and frees them up cognitively to concentrate on the composing aspects of the task. Ask your local music hub for suggestions as to who would be appropriate to use, and how this might be funded	Use other musicians available in the school. 6th formers, Peri's etc.	Pedagogy	Use other musicians in school	Performing

45	Pupils working with a professional musician can use them to figure out ideas, explore different options through giving the performer specific instructions. This fosters independent learning and adds a level of excitement at hearing their music played by an experienced performer. *'I am really just trying to give her an idea of what it sounds like, so she can see if it sounds like what she thought it was going to sound like.'* professional musician. *It became a piece in its own right, even if it wasn't how I initially wanted it to sound, it became something different, which I was pleased with.'* Pupil	Performer talks with pupils about their intentionality	Pedagogy	Performing	Intentionality
46	Just as questioning by the teacher/composer of the pupils should be about uncovering their intentions, the performer's questions are aimed at uncovering their performance intentions. *'The first job is to be sure, as a player, that I am seeing the specific, objective instructions - pitches, rhythms, articulations, and dynamics - correctly; then I could work toward the more subjective things that might be implied by the score.'* Typical first level questions might be 'What is this note?', 'You had a sharp there, shall I carry it forward to this point too?', 'How fast does it go?'. This might move onto 'What does this mean, can you tell me?'. *'It is the player's job not just to play the specifics accurately but also to find this implied potential and make it a reality. With such young composers, often their pieces had a potential of which they weren't 100% aware and which wasn't always intended. And sometimes because scores were unfinished, they could imply various potentials. So by asking these questions I could zero in on what it was intended a bit better. And if the answers were vague or unsure, I could demonstrate a few different potentials and that might help them decide or be clearer in their imaginations about their creations, and help them see perhaps by notating more specifically in one way or*	Process of composing should make performance of final product more informed	Questioning	Intentionality	Composing as process

	another they might communicate their intention to the player more clearly and then have a better chance of having a real performance get close to matching their imagination.' Professional performer				
47	Some young people will find it easier than others to verbalise their ideas and learning. Be aware of the danger of assuming pupils don't have the necessary knowledge just because they don't have the language to express it.	One way around this might be to ask the pupils to show instead of tell. 'Play it to me, don't talk about it'	Pupils	Language	Tacit knowledge
48	Encourage pupils to stick with and value their own initial ideas and contributions. Young people are used to being presented in popular music culture with fully-formed musical artefacts in which the processes are often invisible. Frequently the impression is given that the process involved was simply getting together and having a jam. This could be one of the factors that makes young people, who can be advanced musically, reluctant to stick with or develop their initial exploratory ideas, often dismissing or discarding them if they are not of the highest rank.	Composing is complex - it needs teaching as a series of stages. Plan lessons on: Generation; organisation; assembling piece; practising in sections	Pedagogy	Composing	Deconstructing
49	Valuing pupil contributions is a crucial part of evaluation especially at the beginning of the composing process. Sometimes using an external generative system, for example magic squares to generate melodies, removes the ideas from the wholly personal, and, therefore, if the results are not immediately felt to be useful, the problem can be located with the system rather than the individual.	How can sounds be generated? Dice? Mozart game? Letters from poems? 'Taking a note for a walk'. Try different starting points with different lessons	Pedagogy: Teacher Role	Composing as process	Valuing Pupil contributions
50	Do not assume that just because 'doing' is taking place that the pupils are therefore learning.	What do want the pupils to *learn*? What do you think they did learn? Are these different?	Pedagogy	Planning	Learning vs. doing

51	Use the revised version of Blooms Taxonomy for questioning with musical examples.	See item 42	Pedagogy	Thinking	Bloom's taxonomy
52	Music learning evaluation can take place in a musical fashion and is often embedded in many workshop style learning processes, in particular, when working as a whole class/group creative ensemble. For example, *'non-verbal evaluation can happen through affirmation of an idea, through playing it back, building on it, suggesting a change, restarting a piece from one idea and letting it develop in a constructive new way and allows feedback to be given without the person receiving it loosing face'* (Composer). Making these processes visible to pupils teachers/composers can help pupils can gain an awareness of their own artistic judgements. Pupils develop the ability to make musical judgements in a musical fashion.	Discussion lessons from early stages - what makes a good piece of music? Whose judgements matter? How do we rate music? What do our own judgements rely on?	Pedagogy	Thinking	Critique, not criticise
53	Support pupils to develop their own criteria for evaluation of their work. Help them to make these specific and continually feed this back into the ongoing refinement and rehearsal of the music. *'Pupils need to learn concepts by which to measure, for example, consonance/dissonance, expressive value of intervals, tightness (were we all together?)'. This will enable them to create their own criteria and concepts for evaluation. By doing this they will begin to carve out their own artistic intent, and clarity of style'.* (Composer)	Develop criteria for quality with the pupils. 'In this project a good one will…'. Or maybe *post hoc*: 'A good one has…'	Pedagogy	Success criteria	Pupil voice
54	The ability to self evaluate is crucial for creative solo or group composition tasks. When we hear refinement happening (e.g. speed, degree of detail, degree of change) we are witnessing progression.	Ask pupils to set themselves targets. Discuss with them if they have met them. Be rigorous in revisiting these.	Pedagogy	Success criteria	Evaluation supporting progression

55	One of the most effective ways a teacher/composer can support pupils evaluating their own work is through the teacher/composer making their own thinking and decision making visible to the pupils. Why do they choose a particular musical idea as a starting point?, how do they know it has potential for development?, why do they choose to move to or bring in another idea at a particular point? How are they evaluating as they go along?	What does 'liking something' mean? Use lessons for pupils to produce music which they revise (See items 21 & 26) but then discuss *why* revisions took place.	Pedagogy	Thinking	Valuing Pupil contributions

Analysis

It is important to note that in the table above codings employed are intended to aid understanding, and are *not* to be regarded as definitively closed. Indeed, a number of alternative codings are equally valid. However, providing these codings, and then undertaking analysis of them shows a number of interesting features:

Table 3: Codings Count

Count	*Item*	*Count*	*Item*
40	Pedagogy	1	Complexity
10	Questioning	1	Affordances
9	Thinking	1	Traditional Instruments
9	Composing as process	1	Relevance
8	Pupils	1	Scaffolding
7	Deconstructing	1	Group work
6	Listening	1	Differentiation
6	Challenging Music	1	Modelling
5	Technology	1	Language
5	Pedagogy: Teacher Role	1	Notation
4	Composing	1	Sonic Sensibilities
3	Practise	1	PCK
3	Intentionality	1	Resources
3	Challenge	1	Co-operation
2	Assumptions	1	Use other musicians in school
2	Authentic	1	Tacit knowledge
2	Planning	1	Pupil voice
2	Success criteria	1	Learning vs doing
2	Composerly thinking	1	Evaluation supporting progression
2	Style and Genre		
2	Critique, not criticise		
2	Do more of less		
2	Safe risk-taking		
2	Audio Recording		
2	Performing		
2	Valuing pupil contributions		
2	Bloom's taxonomy		

This can also be represented in chart format:

Chart 1: Codings Count

This shows that the count for *Pedagogy* although clearly an outlier statistically, is nonetheless one for which the LIC project has highly significant implications. It also shows a number of other thematic elements which have been discussed during the course of this report. It is important to note that the codings count should not be taken to represent relative importance, merely that these are areas which are of interest to the pedagogy of composing, and the ways this can be considered and enacted in schools.

From these codings it becomes possible to draw out a range of areas of interest to others working in the field of composing pedagogy. When taken alongside the ten thematic areas outlined above, this becomes a significant resource.

Recommendations

A wealth of material has been presented in this LIC report. From this twenty-five key recommendations are made. These apply to a variety of stakeholders, and a number of them cross over between groups, but for the sake of simplicity they are divided into main categories.

A) For those working in and with schools:

1. Develop questioning skills: All those working with young people would benefit from doing this. Plan for 'hard' questions in advance, especially those at the higher-order end of Bloom's taxonomy;
2. Added to asking good questions is the notion of involving all the pupils in the questioning process, not just those who may know the answer;
3. Consider intentionality: What do young people actually want to compose?
4. Do more of less: Organise the curriculum so that there are more in-depth composing projects (in which listening and performing will also figure significantly), lasting for longer time-scales;
5. Value fragile initial ideas: These need nurturing, compositions do not emerge fully-formed, pupils need help to understand this. The next point helps with this…
6. Deconstruct the composing process for pedagogic purposes: This report outlines ways, and points to references, as to how the composing process can be broken down for teaching and learning;
7. Deconstruct the listening process for pedagogic purposes: As with composing in item 6, work with pupils on different types of listening;
8. Do not shy away from challenging music: Pupils might know what they like, but they also like what they know. If they do not know, they cannot like - yet!
9. Critique - not criticise: There is a difference, it needs modelling for the pupils, but doing so maintains valuing their music;
10. Language: Use language carefully when discussing pupil work (See also items 5 and 9);
11. Learning versus doing: There is a symbiotic relationship between these in music education; those working with young people should be able to articulate what pupils will learn, as well as what they will do. This involves…
12. Planning for learning: Planning is hard, and time-consuming, but important;
13. Contextualise the work: What have these pupils, in this class, in this school, done before? Why this project, with them, here, and now? One size does not fit all;
14. Success criteria: What will a good one look like? What will it sound like? How will the pupils know?
15. Audio/Video recording: Use for work in progress, not just for final results. Recording is a useful AfL tool. Encourage sonic notebooks;
16. Technology need not be expensive: Freeware applications are readily available that can rival costly counterparts;
17. Involve other musicians in the school: Peripatetic music staff, sixth formers, other teachers;
18. Think about progress - what develops in a programme of study across a number of years? What develops in composing?
19. What is the role of notation? "Writing" music is not common across all cultures, styles, and genres. If notation is used, who is it for, and why?

B) For Arts organisations, and others working with educational projects:

20. Should there be an end performance? Is an artist in school project about process, or product? A focus on final performance can skew learning;
21. Allow time for reflection: When funding artists in schools projects, cost in time for structured reflection for key participants. This makes a significant difference to both process and learning;
22. All those involved in school-based work would benefit from understanding the learning contexts and accountability cultures of contemporary educational establishments;
23. Related to item 13, examine the unique context of each school or setting, and, in consultation with staff there, tailor intervention projects to suit needs of users, not demands of providers;
24. Support the embedding of LIC practice in schools through the commissioning of resources, development of CPD; and involvement of sometimes hard-to-reach classroom teachers;
25. Support within new and extant networks the dissemination of findings on what constitutes good practice in composer-in-education projects and training for composers and others interested in working in educational settings (beware of seagullism!).

Areas for further research

The LIC project has revealed a great deal, but there is still work to be done. Five key areas for future research are:

1. Linking composing with creative thinking skills;
2. Investigating what higher order thinking might involve in pupil composing;
3. Longitudinal study of pupil progression in composing;
4. Further pedagogic development and testing of LIC approaches to teaching composing;
5. Understanding the role of composing and creativity in the general educational development of all children and young people.

Conclusions

Pedagogy, and pedagogic content knowledge, do not develop easily. The LIC project has shown that skilful pedagogy, of composers learning from teachers, and skilful composing pedagogy, of teachers learning from composers, are fruitful ways of working. For much of their time in school, teachers will be working solo with pupils, without a composer to partner. On these occasions, learning from LIC, especially the thematic points from the previous section, will be key to the teacher developing the composing work of their pupils.

Composers too may not work in such planning time-rich environments in future. For them the lessons of partnerships, of building upon the expertise of the teacher, and of developing their own pedagogy, again including key elements from the themes identified above, will be key to successful work.

For arts and funding organisations, questions of purpose are raised. Certainly end-of-project performances with smiling happy children and glasses of wine for patrons are nice, but are they addressing *learning*? Is this philanthropic window-dressing, or work designed to make a real difference to the lives of young people?

And alongside these, attitudes need thinking about. 'Seagullism' is not the best way to develop long-term meaningful partnerships with schools.

Endnote

LIC has produced a huge amount of data, far more than was envisaged at the outset. This report summarises what has been learned, and at the same time gives voice to the participants – the composers, teachers, pupils, researchers, and musicians involved. It has pointed towards where there are still gaps in the knowledge-base. There is still a great deal to be done with the LIC materials, and further analysis is already taking place, and will continue so to do. In a similar vein, dissemination of the findings, and working with teachers, schools, composers, musicians, arts organisations, hubs, and other interested stakeholders on embedding this work into practice is an on-going task.

However, as a direct result of LIC we now know a great deal more about the pedagogy of composing, and of the ways in which the creative ideas of pupils can be developed. Likewise, we also know a lot more about the creative processes of young people, and of ways in which creative thinking takes place, and can be fostered and developed.

There is evidence of high-quality learning by composers, apprentice composers, and teachers, and of deep learning by pupils. As a result of this project we would want all those involved with composing in schools, but also with music and the arts in schools more generally, to be aware of what has been learned, and also to build on the very significant work that LIC has achieved.

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