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Letting the cat out of the bag: developing and evaluating strategies to promote audiation in the Year 8 pop/rock composition classroom

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Abstract

Many students lack confidence in composition at GCSE, stemming partly from a lack of direction in how to compose at Key Stage 3. Building on Edwin Gordon's (1989) research, which identifies audiation – the ability to think in sound – as a foundational component of musical creativity, I developed strategies to promote audiation skills in my students and implemented them as part of a pop/rock scheme of work with a Year 8 mixed-ability Music class. There is evidence to suggest that these strategies provided my students with a clear process to follow and that they harnessed audiation as a central tool in creating their final compositions, supporting motivic development and awareness of stylistic conventions. Findings indicate that developing students' audiation skills holds great promise in improving outcomes and enjoyment of composition at Key Stage 3 and beyond.

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Introduction

The academic, Keith Swanwick (1991), cites composition as "[one of] the most important manifestations of musical understanding" (as cited in Philpott & Spruce, 2016, p.60). This view is reflected in the *National Curriculum for Music* (Department for Education, 2013), where composition is a central strand; the *National Curriculum for Music at Key Stage 3* states that "Pupils should be taught to … improvise and compose; and extend and develop musical ideas by drawing on a range of musical structures, styles, genres and traditions" (DfE, 2013, p.2). Composition is also a compulsory element in the vast majority of formal qualifications at Key Stages 4 and 5.

In my own teaching experience at three secondary schools in England over the past two years I have found that many students lack confidence in composition, and that this emerges most profoundly at Key Stage 4 when they are expected to compose independently for the first time. Areas of difficulty include knowing where to begin, generating and developing musical ideas, and situating their work within a style. This is echoed in Ofsted's (2012) report, which indicates that the expected standard of pupil work in composition at the end of Key Stage 3, that "Most students should be able to … compose music for different occasions using appropriate musical devices" (p.29), was not met in approximately three fifths of the 90 secondary schools visited, and research by the academic Rebecca Berkley (2001) which indicates that, in the vast majority of cases, composition at Key Stage 3 represents inadequate preparation for GCSE.

This can, in part, be attributed to a lack of guidance around how composition should be taught. The *National Curriculum for Music at Key Stage 3* gives no further guidance beyond that pupils should "extend and develop musical ideas by drawing on a range of musical structures, styles, genres and traditions" (DfE, 2013, p.2). Likewise, the composition aspect of the *Model Music Curriculum for Key Stage 3* (DfE, 2021), non-statutory guidance for how curricular requirements might be met, has

attracted criticism from the Independent Society of Musicians (ISM) (2021), a prominent subject association for musicians in the UK. They find fault with its "mix of ideas which primarily seem to support understanding of formal structures and traditional notation, with clarity on creative learning that supports an awareness of 'how music works' largely missing", arguing that its intention of providing a practical framework of how to meet government requirements is missed. Subsequently it can be concluded that there is widespread uncertainty over how government guidance should be interpreted in the classroom.

One reason composition may be challenging is because it represents a higher order of musical thinking and understanding (DfE, 2013). Mícheál Houlahan and Philip Tacka (2015) argue that "A true understanding of style emerges when students can improvise/compose melodies reflecting these stylistic traits" (p.176). Creating new music requires students to comprehend stylistic conventions sufficiently to replicate and rearrange them into an original product. Research into how audiation skills can be developed in pupils represents one possible strategy for ameliorating these difficulties, building students' confidence in expressing and structuring musical ideas – the ability to 'think in sound' – so that they might find their own compositional voice. As I will go on to discuss, reflective, purposeful listening facilitates engagement with the underlying processes that comprise the finished musical product. This deconstructive process subsequently feeds back directly into students' own composition work.

My action research project took place at School A, a large village college in the East of England with over 1000 pupils aged 11-16. Firstly, I explore the strong theoretical evidence surrounding audiation and examine how this process may relate to composition, from which three central research questions emerge. Thereafter, I consider techniques suggested in the research literature which hold promise in promoting audiation skills and select those most appropriate to my context, before detailing how I will integrate them into a scheme of work. Next I examine the effectiveness of this teaching and the degree to which audiation skills were promoted in my students. Finally, I conclude that the strategies I have developed hold great promise in improving not just student outcomes but also their confidence and enjoyment in composition.

Audiation: implications for teaching and learning in composition

What is audiation?

The lecturer, author, researcher and teacher Edwin Gordon (1989a) begins by grappling with the complex notion of musical creativity, positing that it is difficult to teach, based on his belief that musical creativity is innate; "To teach a student to be musically creative is a complex, if not an impossible, undertaking" (p.3). In response, he presents the phenomenon of audiation as a means by which students' latent creativity can be harnessed. Gordon coined the term "audiation" in his research into musical development: "Audiation takes place when one hears music through recall or creation (the sound not being physically present except, of course, when one is engaging in performance)" (Gordon, 1976, p.2). More recently, in their 2015 research into elementary music education building on emergent research into musical perception and cognition, Houlahan and Tacka explore how fundamental musicianship skills can be embedded into the curriculum. They identify audiation as a central means by which these skills can be developed, defining "audiation" as "inner hearing" (Houlahan & Tacka, 2015, p.25) and "the skill of thinking music" (ibid., p.38). Both these accounts refer to a complex process involving the mental organisation and analysis of sound.

Whilst imitation, the replication of sound, is a necessary first step towards audiation, the two are distinct. Gordon (1989a) bemoans the emphasis on imitation and recognition intrinsic within the music education system. For Gordon, audiation involves comprehending sound rather than merely imitating it, moving beyond simple recognition and repetition. He succinctly summarises this through an analogy to language learning: "Audiation is to music what thinking is to a language" (Gordon 1989a, p.5). Audiation therefore necessitates higher-level musical understanding sufficient to deconstruct and manipulate a musical idea. Continuing this analogy, as in language tuition where you would typically begin with listening and reading to become immersed in the target language and build a basic vocabulary before learning to manipulate it in speaking and writing, Gordon (1999) argues that key to the development of the ability to audiate is the construction of an audiation vocabulary. This consists of a catalogue of generalised knowledge of stylistic conventions, and with it comes increased accuracy of musical expectation; "the more tonal patterns and rhythm patterns that you have in your audiation vocabulary, the better meaning you can bring to the music that you are listening to" (Gordon, 1999, p.5). Ideally this is developed early, before the age of 18 months, though Gordon acknowledges that many children arrive at school without a highly developed listening vocabulary.

However, it is important to recognise that music today is far more accessible than in 1999 – popular music is an inescapable part of the modern world, particularly for young people, through a multiplicity of sources including advertising, social media, TV, radio and streaming services, so the same may not be true of children today. Nonetheless, the degree of stylistic musical immersion remains influenced by family circumstances and parental musical tastes. This is of crucial relevance since there is most potential for developing an audiation vocabulary at the earliest stages of life.

In his (1989a) research, Gordon outlines several different types of audiation: "listening to music, reading music, writing music, performing music from recall, and improvising and performing music creatively" (p.4). In this project I will focus on three of these: Type 1 audiation, the mental organisation of sound during listening, Type 4 audiation, the recall of familiar tonal and rhythmic patterns in familiar music, followed by performance of them silently, vocally or on an instrument, and Type 6 audiation, consisting of building upon and reorganising existing knowledge of musical patterns to create or improvise music using both familiar and unfamiliar patterns. Figure 1 depicts how these types of audiation are interlinked and incremental:

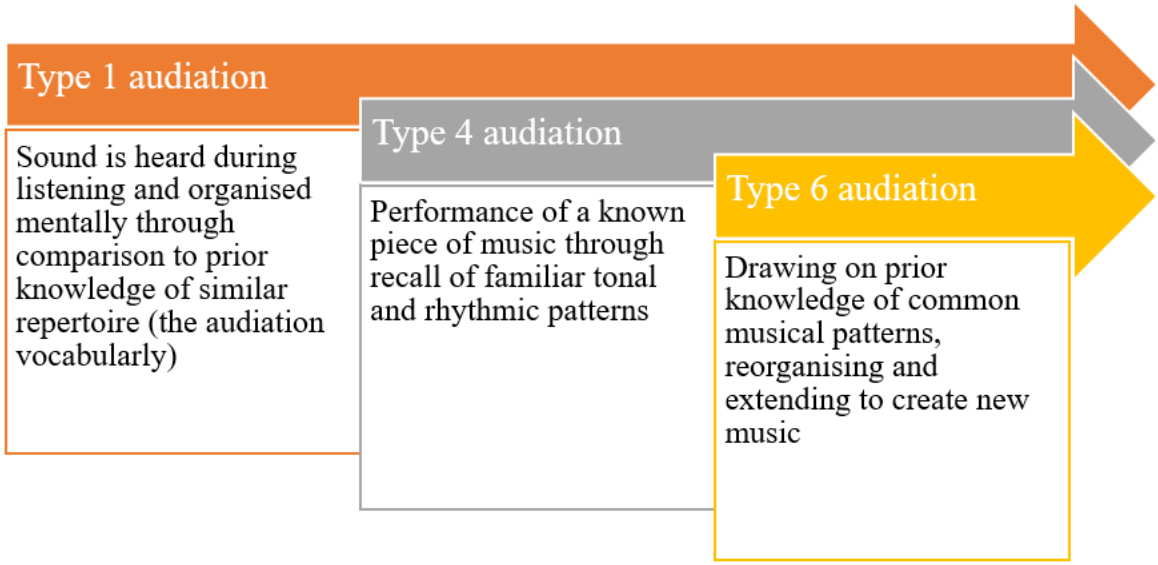


Figure 1: Incremental development of Types 1, 4 and 6 audiation

Type 4 audiation requires a firm foundation of knowledge of the underlying structures of a given piece of music for it to be replicated without need for notational aid, whilst Type 6 audiation, the most complex of the three, relies on an even greater depth of knowledge in order for these musical patterns to be manipulated.

Other perspectives: audiation by another name

Whilst Gordon's term, "audiation", is not always used explicitly, references to the phenomenon he describes and its importance in musical development are pervasive in government documentation. For example, both Ofsted's (2009) report, *Making More of Music*, and *Research Review Series: Music* (2021) refer to "the awakening of musical intelligence, … [which is] engaged through involvement in musical experiences and enables the development of musical understanding" (Ofsted, 2009, p.40). They go on to define "musical understanding" more specifically as "where pupils 'hear' and create the music in their heads" (p.44), and identify it as the principal way of promoting creativity in students, concurring with Gordon's (1989a) research, as well as an area that is frequently significantly underdeveloped. This concept of "musical understanding" aligns closely with ideas of audiation explored above, particularly Houlahan and Tacka's (2015) definition of audiation as "thinking music" (p.38); both imply a layer of consciousness beyond passive listening. Its underdevelopment goes some way towards explaining my experiences of students struggling to compose, since this process relies on musical creativity.

Like Gordon (1989a), Ofsted (2009) draw a parallel between music and language-learning, focussing on the structural similarities: "Music is a language with its own syntax and structure" (p.40). They invoke this argument to advocate for Music lessons to be more 'musical', having observed pupils making more progress in lessons with a greater emphasis on practical music rather than verbal explanation. These sentiments are echoed in Ofsted's (2012) report, based on observations of 90 primary schools, 90 secondary schools, and four special schools in England between September 2008 and July 2011, where similar large-scale issues regarding teachers' lack of awareness of how to facilitate creativity in their students are detected, and once again they advocate for "active music-making or … the use of musical sound as the dominant language of learning" (Ofsted, 2012, p.4).

Martin Fautley (2014) on the other hand uses different terminology again, referring to "Compositional insights gained through aesthetic and cognitive understanding, in the form of listening and reflective learning" (p.11). This also has much in common with Gordon's notions of audiation discussed previously, as well as Ofsted's (2009; 2012; 2021) term, "musical understanding". Fautley aligns with Gordon in the importance of his (1999) concept of developing an audiation vocabulary, even if he does not refer to Gordon's work directly. Fautley draws instead on the developmental psychologist Jean Piaget's (1923) work on processes of assimilation and accommodation, assimilation being a

response to a new event consistent with an existing schema, whilst accommodation is when a schema is modified or a new schema created in response to a new event. He advises that teachers should "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" (p.36). Hence, "the unfamiliar needs to be made sense of through ways of thinking and acting that already exist in the child" (Finney, 2009, as cited in Fautley, 2014, p.30). Fautley's (2014) conceptualisation of building a mental framework of patterns (schemas) through which to compare and comprehend new events explains the underlying mechanism behind Gordon's (1999) audiation vocabulary – the audiation vocabulary gives the listener a palette of expected norms through which they might assimilate new music with that which they are already familiar, or accommodate new music by altering or building new schemas if their existing knowledge does not match what they hear. This greatly supports the construction of new musical structures (composition) because the creation of schemas relies upon sound analytical knowledge of existing musical structures, which students can then mimic and expand on as a starting point for their own work.

Subsequently, as I have demonstrated, the phenomena that Gordon (1976; 1989a; 1999) describe – audiation and the development of an audiation vocabulary – are widely recognised, including at governmental level, and though terminology differs, the underlying processes they refer to are the same. I will go on to explore the implications of developing such an awareness on classroom composition.

Implications for composition

This area of research has great relevance towards the teaching of composition. Gordon (1989a) concludes that the ability to audiate is a crucial aspect of what it means to be musically creative: "the act of music creativity and improvisation is the act of audiating familiar tonal patterns and rhythm patterns and then reorganizing them into an unfamiliar order and sequence" (p.5), and composition is synonymous with the creation of music. The ability to mentally organise sound to create meaning is thus inextricably bound up with the compositional process.

The academic John Kratus (1994) draws directly on the work of Gordon in his study into the role of audiation in children's composition. The subjects are 9-year-olds in an urban elementary school near Cleveland, Ohio. Kratus administered the two-part *Intermediate Measures of Music Audiation* (Gordon, 1982) to three 3rd grade classes, given in accordance with the manual (Gordon, 1986),

which required the children to compose a piece of music in 10 minutes beginning on middle C and with a limited range of only white keys from the G below middle C to the B two octaves above middle C. Kratus (1994) found a "positive correlation between the process of [melodic] development and audiation [and] … a positive relationship between audiation (rhythm and composite) and silence" (p.127). This is striking because a relationship between audiation and compositional development can be observed even in a study group where no specific attention had been paid to developing audiation skills in their musical education. Despite the differing context, it stands to reason that developing students' audiation skills may well pay dividends in terms of enhancing the abilities of compositional development for older children as well.

The relevance of audiation to popular music

Popular music learning practices are closely intertwined with audiation. The strong emphasis on listening as a basis for musical understanding in the literature is closely aligned with the way popular music is transmitted through informal learning in communities of practice (Green, 2008), in contrast to the Western Classical tradition, where learning most often takes place on a 1-1 basis and there is less opportunity for deviation from the composers' directions. Lucy Green (2001) identifies key features of popular music learning practices, including "copying audio recordings by ear, without notation" and "highly-integrated activities of listening, playing, composing and improvising" (p.3). The act of learning by ear from an audio recording requires the student to audiate according to Gordon's (1989a) designation of Types 1 and 4 audiation, where careful, analytical listening facilitates performance of a rendition of the musical idea. This theory is corroborated by the results of a 2013 case-control experiment by the academics David Baker and Lucy Green, which compares the development of aural skills in instrumental students learning from specially-created audio recordings without notation to a control group, taught using traditional instrumental teaching methods. Findings suggest that "playing by ear from a recording may be beneficial for children's aural development" (Baker & Green, 2013, p.1).

Children will likely find audiating popular music more straightforward than other genres, as they are exposed to it constantly in everyday life and therefore already have an audiation vocabulary to some extent. The goal then is to harness this and bring it into their conscious awareness so that they can manipulate it in composition. Hence, this project centres around the impact of audiation on popular

music composition, and how a scheme of work aimed at developing audiation skills in Year 8 students can equip them with the tools to exploit their latent knowledge of the music they listen to all the time.

This leads me to the following three research questions:

RQ1. What kind of difficulties do students face in composition?

RQ2. How do students respond to the audiation strategies employed?

RQ3. To what extent did the strategies support the musical endeavours of the students?

Methodology

My epistemological and theoretical standpoint

The academic, John Elliott (1991), defines action-research as "the study of a social situation with a view to improving the quality of action within it" (p.69, as cited in Taber, 2013, p.107). My intervention – the audiation strategies I devised and implemented – is intended to elicit a change in the process of pupils' composition work. I look specifically at a Year 8 set of 32 students and examine in detail the work of one group of five students, selected at random. It is thus a small-scale, qualitative, practitioner-driven study, aligning with Martyn Denscombe's (2017, p.130) definition of action-research. This methodology permits me to investigate the effect of my intervention and reflect critically upon my own practice. My study can be further classified as discovery research, described by Keith Taber (2013) as research that "seeks to find out what might be important in understanding a research context" (p.45; see also Biddle & Andersen, 1986); this aligns with my aim of investigating the impact of the audiation strategies I devised.

Much of Gordon's research into audiation is situated within the positivist paradigm, relying on data generated from quantitative tests (Gordon, 1965/1995, 1979, 1982, 1989a, 1989b) designed to measure aptitude in audiation. This is an objective, scientific approach. However, I have chosen not to use this approach because my research sets out to measure the impact that developing audiation skills might have upon compositional output, which is not what Gordon's tests were designed for and is difficult to measure empirically. I am therefore situating my research within the interpretivist paradigm, drawing primarily on qualitative data so that I am not constrained by the particularities of any quantitative test. As a result, I cannot assume that "it is possible to produce definitive knowledge that is objective" (Taber, 2013, p.45), a defining feature of the positivist paradigm.

Though one weakness of interpretivist research is that it relies strongly upon the judgement of the researcher, and it is impossible to be truly objective about your own class, I had known them for only a few weeks prior to the commencement of this study, so this is minimised as far as possible. The majority of classroom research adopts this social constructivist stance because the nature of individual classroom contexts can vary hugely, so interpretivist methods offer the opportunity for "rich and deep description[s] of the research environment as a unique context" (Brundrett & Rhodes, 2013, p.14). In addition, the students themselves are often at the centre of educational research so the nature of qualitative data allows their voices to be heard (Taber, 2013, p.54).

Research Plan

Strategies for developing audiation skills

The research literature suggests the following strategies for developing audiation skills. I will examine each in turn:

An essential activity for developing audiation skills is conscious listening (DfE, 2021; Gordon, 1999; Houlahan & Tacka, 2015; Ofsted, 2009; 2012), synonymous with Type 1 audiation. Gordon (1999) notes that "without the time to absorb and audiate (think about) what was heard, what was heard will vanish without adding value for future learning in terms of generalization" (p.43), crucial in the formation of a listening vocabulary. To support critical listening in students, Ofsted (2012) recommend questions and prompts in order to scaffold analysis.

The most widely recommended strategy is "the necessity of singing" (Gordon, 1999, pp.42-43; see also DfE, 2021; Houlahan & Tacka, 2015; Ofsted, 2012). Gordon's use of the imperative instils a sense of its essential role, and Ofsted (2012) identify it as a priority in order to "improve pupils' internalisation of music" (p.8) – another thinly veiled reference to audiation. Houlahan and Tacka (2015) advocate for singing as a means "to deconstruct the music material for students and enable them to both aurally and visually identify such stylistic traits as form and common rhythmic and melodic building blocks or rhythmic/melodic turns" (p.176), embedding specific features in students' audiation vocabularies so that they can rearrange them later. In line with this research, I have exploited listening and singing as a means of analysing musical elements on a macro and micro level; for example, in Lesson 3 the audiation exercise begins with students listening first before singing the bassline from "Seven Nation Army". They then sing only the root notes from each chord so that they

can understand and internalise the underlying skeletal framework, before building back up to the original version so that they can understand how it has been decorated.

Following on from this, Houlahan and Tacka (2015) identify the Kodály method, an approach towards developing musicianship conceived in the early twentieth century by Hungarian composer and music pedagogue, Zoltán Kodály, as an important means of developing audiation. They advocate for Kodály's system of relative solmisation, whereby a distinct syllable is ascribed to each note in a musical scale, since "Successions of syllables are easier and more reliably memorized than letters; in addition, the syllables indicate at the same time the tonal function" (Kodály, 1974, p.217, as cited in Houlahan & Tacka, 2015, p.154). They argue that syllables carry additional, useful meaning, instilling an instinctive sense of tonal relationships. However, although the benefits of this system are widely acknowledged, it is relatively complex and its implementation was not feasible in the time available.

Houlahan and Tacka (2015) also suggest using hand signs during singing. Kodály adopted this technique from a system developed by John Curwen in the 19th century to help his choir develop their sense of pitch, adding in upward and downward movement of the hand to reflect the contour of the music. Houlahan and Tacka (2015) explain that "By associating a kinesthetic motion with a melodic pattern, we enhance cognition by connecting a pattern of movement with a melodic pattern" (p.156). Thus, embodiment facilitates audiation. I have simplified Curwen's system for the purposes of my study so that its implementation is achievable within a short timeframe, removing complex hand gestures whilst retaining the upwards and downwards motion, which should still promote association between kinaesthetic movement and a melodic pattern and allow students to visualise the music (see Lesson 2 in Table 1 below).

Designing a scheme of work to develop audiation skills

Inspired by approaches towards developing audiation in the literature, I devised a scheme of work on popular music composition, intending to harness the strategies explored above to provide students with a firm grounding from which to approach composition. The scheme of work consists of five hour-long lessons. Students worked in groups of 5-6, and, following Green's (2008) research into informal learning practices in popular music, I permitted students to choose their own groups. It was taught in the second half of the Spring Term, 2023, following half a term's work on popular music performance which included the deconstruction and recreation of a pop song (Taylor Swift's "Shake

it Off") as a whole class ensemble. In hindsight, this activity functioned as the beginnings of building an audiation vocabulary (Gordon, 1999) prior to the commencement of this study, as they spent several lessons breaking down the song into its constituent parts in order to perform it effectively.

My scheme of work is summarised in the research plan (Table 1 below), including a brief description of each audiation exercise and a breakdown of the data collected in each lesson:

Lesson	Content	Audiation Exercise	Data collected
1 27/2	Introduction to the project, guidance on chord progressions, students form bands and work in practice rooms to choose a chord progression	I play well-known pop songs at the piano accentuating the bassline – students sing along to the bassline – aim for students to deduce that most pop songs are based on 4-chord patterns	Initial pupil questionnaire
2 06/3	Recap brief, verse-chorus structure, introduction to melody-writing, students work in practice rooms to compose their melodies	Student's sing the melody of "I Will Always Love You" (Whitney Houston) over chords, and then sing again while using their hands to indicate the contour of the melody/movement by steps or leaps – aim to show that movement is largely stepwise with some leaps, usually between chord notes, simplicity and repetition Melody-writing: presented students with strategy of selecting one note from each chord and then decorating them as a starting point	Practice room recordings
3 13/3	Recap brief, students recall features of successful melodies, recap melody-writing, recap basslines and drum patterns (covered in the previous term in more depth)	Students sing bassline from "Seven Nation Army" (White Stripes) and then I deconstruct – have pupils sing roots of the chords only so that they can hear how it relates to the chords and uses neighbouring notes to link root notes together, before building back up	Practice room recordings
4 20/3	Recap brief, performance guidance aiming to create safe environment for sharing work, pupils finish compositions in practice rooms before sharing as a class	N/A	Practice room recordings, recording of final performances
5 27/3	Students evaluate their work and reflect upon their progress	N/A	Final pupil questionnaire

Table 1: Research Plan

Research by the academic, Martin Fautley (2014), into compositional pedagogies in secondary schools found "less reliance on notation had encouraged enhanced listening skills" (p.12). Committing music to memory is central to audiation; the memorisation process necessitates breaking musical ideas down into underlying patterns, or schemas (Piaget, 1923), so as to remember ideas from

week to week. Subsequently, I did not allow pupils to have writing materials whilst in practice rooms so as to discourage them from notating their ideas.

Adam Ockelford (2016, as cited in Ofsted, 2021) identifies a danger of students becoming overwhelmed by decisions during composition. So that '"our perceptual and cognitive processing abilities not to be overwhelmed"' (Ockelford, 2016, as cited in Ofsted, 2021), Ofsted (2021) recommend breaking down tasks into small chunks and imposing strict limitations to reduce cognitive load and make work approachable. I therefore included the following limitations in the design of my scheme of work in order to leave as much cognitive load as possible for melody writing: they must compose a four-chord progression (with another for the verse/chorus if desired); their song must have chords, percussion, melody and a bassline; the school have many diatonic xylophones and students often opt to use these in composition projects, so to simplify harmonic options I recommended they restrict the notes used to only the white notes of the keyboard and provided a list of chords that adhere to this.

Background to my study group

I examined in detail the work of one group of five students. Table 2 details my study group's prior experience of 1-1 music lessons:

Pupil	**Are they currently having instrumental lessons?**	**Have they had instrumental lessons in the past?**
Pupil H	Yes - trombone for four years	Cello for a year at primary school
Pupil Z	Yes - harp for two years	Piano for a year at primary school
Pupil A	Yes - drum kit for three years	Violin for three years at primary school
Pupil S	No	Recorder for two years at primary school
Pupil J	No	Piano for two years at primary school

Table 2: Prior musical experience of my study group

Data collection and analysis

Table 3 (next page) illustrates the methods of data collection I will use in order to analyse pupils' compositional processes and products, detailing which methods are applicable to which research questions:

	Data Collection Methods				
Research Questions	Pupil questionnaires (initial/final)	Staff questionnaires	Recording of practice room work	Recording of final performances	Lesson evaluations
RQ1: What kind of difficulties do students face in composition?	Y	Y			
RQ2: How do students respond to the audiation strategies employed?			Y		Y
RQ3: To what extent did the strategies support the musical endeavours of the students?	Y		Y	Y	

Table 3: Selection of data collection methods

Questionnaires:

I gave pupils a questionnaire to complete (see Appendix 1) in the first and last lessons of my scheme of work regarding their compositional processes (RQ1 and RQ3) and experiences of the intervention (RQ2). Pupil questionnaires give the subjects of the study a voice in line with the interpretivist paradigm (Brundrett & Rhodes, 2013). I included a range of open and closed questions intended to convey pupil's approaches toward composition and their awareness, if any, of audiation. I used self-completion questionnaires and allowed pupils not to include their name if they were not comfortable doing so in an attempt to create an open social climate and attract honest responses (Denscombe, 2017). I received 28 responses on the first occasion (four students were absent) and 26 responses the second time (six students were absent).

The majority of questions asked pupils to indicate on a five-point Likert scale their confidence in various aspects of the compositional process and methods of generating ideas, opinions on group work, overall enjoyment, and their satisfaction with the products of their work. This made it quick and easy to complete, reducing questionnaire fatigue (Denscombe, 2017). I also minimised response burden to ensure a high completion rate by keeping my questionnaire short (only a page long). The same language of questioning was maintained on both occasions (Denscombe, 2017), enabling direct comparison between the two sets of responses. Though they restrict responses to pre-determined answers, closed questions facilitate statistical data analysis (Cohen et al., 2013). I converted Likert scale responses into numerical values as follows: 5 = strongly agree, 4 = agree, 3 = neutral, 2 =

disagree, 1 = strongly disagree. I then calculated the mean and compared values from before and after the intervention.

Two questions required students to give longer responses: one regarding their understanding of the compositional process and the other exploring why students feel that they find composition easy or difficult. These are "discovery" questions (Cohen et al., 2013), so open questioning allowed for more detail and prompted students to describe their feelings, as they may have audiation skills but lack the declarative knowledge to articulate this verbally. I analysed their responses through thematic coding (Taber, 2013), identifying language that implies Type 1, 4 or 6 audiation, and then compared the frequency of students referring to each type of audiation before and after the intervention.

I also surveyed the three Music teachers at School A regarding their experiences of teaching composition (see Appendix 2). I employed exclusively open questioning on account that respondents, as experienced music teachers with a great deal of formal education, were likely to be more self-aware and better able to articulate their thought processes. As above, these are "discovery" questions (Cohen et al., 2013) to reveal the opinions of subject experts on common difficulties students face during composition (RQ1) and allow for unforeseen responses. I conducted thematic analysis in a similar way to the pupil questionnaires; however, this time I looked for common themes between their responses rather than pre-set themes, in line with the discovery approach.

Recording and analysis of practice room work and final recordings:

The sociologist Michael Patton (1990) suggests that effective observation strategies permit the researcher to "enter and understand the situation being described" (p.202, as cited in Cohen et al., 2013, p.457). I therefore decided to record my study group working on their composition independently in a practice room in lessons 2, 3 and 4 of the project (audio only), allowing me to conduct non-participant observation without the distraction of being physically present. To analyse these recordings, I transcribed the students' musical work and tracked the emergence and development of key motifs, investigating their responses to the audiation strategies implemented in lessons 2 and 3 and how they affected the compositional process (RQ2). I also transcribed students' conversation at pivotal moments of musical development to see if they demonstrated conscious or unconscious awareness of the audiation process.

To assess the impact of the audiation strategies on my study group's finished work (RQ3), I recorded their final performance (audio and video), transcribed and analysed it, considering the influence of audiation on the product of their efforts by comparing this recording to my transcriptions of the development process.

Lesson evaluations:

This data source consists of my own written reflection immediately following each lesson, as recommended by Taber (2013). I considered pupil engagement with lesson content, their responses to the audiation exercises and their impact on progress in composition work (RQ2), as well as any other pertinent matters that arose.

Validity concerns

Figure 2 demonstrates how I will address the central issue – developing and evaluating strategies to promote audiation in the Year 8 pop/rock composition classroom – from three different standpoints. RQ1 focusses on the student experience prior to the intervention, RQ2 examines how students responded during the intervention, and RQ3 explores the effect the intervention had upon the musical endeavours of the students after the intervention.

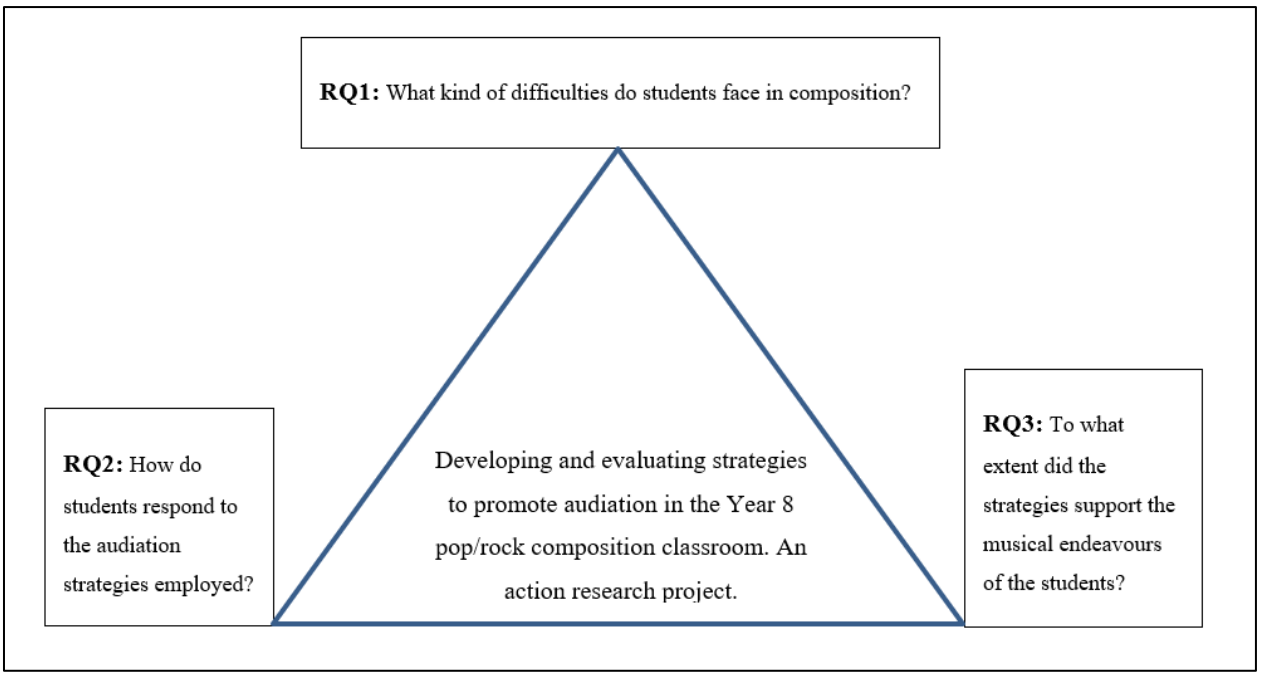


Figure 2: Triangulation of Research Questions

Evidence for each RQ is collected from at least two different sources (see Table 3 earlier), and I will cross-reference these when answering each question. I have adopted a mixed-methods approach, combining an array of qualitative and quantitative components (Bergman, 2008), as well as data gathered from the students themselves and from observers. This combination of different standpoints and data sources supports the validity of my study.

Ethics

I have adhered to the British Educational Research Association's *Ethical Guidelines for Educational Research* (BERA, 2018). Parental consent for recording of student work was confirmed prior to the commencement of this study. To the best of my belief my research will not be to the educational detriment of any pupil involved, and I have no reason to expect it to cause harm to any participant. I sought informed consent from all pupils in the study group and conducted the study following consultation with the Director of Music and a member of senior management at School A (Denscombe, 2017, p.132). All students, staff and the school are presented anonymously in this report.

Data presentation and discussion

RQ1: What kind of difficulties do students face in composition?

Responses to Question 1 of the staff questionnaire, "What difficulties do you find KS3 students experience in engaging with composition work?", revealed the following themes:

Theme	Frequency
Uncertainty about composition process	3
Difficulty in coming up with initial ideas	2
Group relationship dynamics	2
Getting on with the work	2
Off-task behaviour due to the teacher not being in the room	2
Technical difficulty – struggling to play ideas on their instrument	1
Student absence	1

Table 4: Thematic analysis of responses of the three teachers to Question 1 of the staff questionnaire

As evidenced by Table 4, there is a high degree of concurrency between responses, with most issues identified by at least two respondents even though they completed the questionnaire independently. The most common issue, identified by all three respondents, is uncertainty about the composition process. They noted that even when students manage to come up with an original idea, they struggle to develop it, as seen in Figure 3 below, for example:

1. What difficulties do you find KS3 students experience in engaging with composition work?

Teacher A: Not knowing how to get started, (what the actual composition process begins with) … getting stuck and not knowing how to problem solve, not having the background aural awareness/template to be able to come up with ideas.

Teacher B: Fear of the unknown and knowing where to begin for some. It's often getting those initial ideas down and then they make some headway.

Teacher C: Several difficulties. One, getting on with the work when they are in groups, always a challenge! Making choices. … They like to talk about the music a lot but sometimes don't get on with the business of music making. … Lack of refinement, they often come up with an idea but don't spend time thinking how to improve it.

Figure 3: Responses to Question 1 of the staff survey

This may be because more complex audiation skills – Type 6 (Gordon, 1989a) – are required to manipulate ideas (see Figure 1). Those issues identified by two respondents include difficulty in coming up with initial ideas, group relationship dynamics, getting on with the work, and off-task behaviour due to the teacher not being in the room. In fact, these may all be interlinked. "Getting on with the work" and "off-task behaviour", which Teacher A attributed to the teacher not being present, may well be the result of a deeper issue of not knowing where to begin. Pupils sitting idle often leads to off-task behaviour, and frustration at feeling stuck can cause friction in relationship dynamics, as outlined in Figure 4:

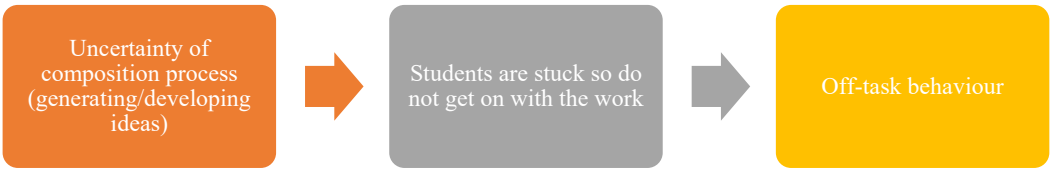


Figure 4: Interlinked student difficulties during composition work

Responses to the initial pupil questionnaire paint a similar picture. The mean response to Question 1 was 3.23, close to neutral. This indicates that, on average, students are unsure about how they find coming up with ideas in composition tasks and may reflect that this project is the first time Year 8 have done any composition this academic year. When asked to explain their answer to Question 1, 13 of the 28 responses reveal that they find composition difficult, with common themes including lack of confidence, lack of awareness of the composition process, and difficulty generating ideas. Figure 5 presents examples of five pupil responses to this Question 1:

1. For each of the following statements indicate how far you agree or disagree:

I find it easy to come up with musical ideas in composition tasks.

Strongly disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly agree ○

Please explain why you feel this way:

Pupil G: I am not very intuitive when it comes to music

Pupil E: … I find it hard to come up with compositions on my own

Pupil F: Sometimes I can and sometimes I can't

Pupil I: Sometimes I have ideas and other times I don't

Pupil L: It is hard to make something up off the top of your head that sounds good

Figure 5: Responses to Question 1 of the pupil questionnaire

Similarly, seven responses to Question 7 (see Figure 6 next page) indicate that pupils were uncertain about the composition process. Two put "I don't know", and a further two left it blank. There is a danger, however, that this may reflect that the composition process is difficult to verbally articulate, so a questionnaire is perhaps not the best means of assessing this.

As expected, responses to the staff questionnaire are far more detailed than responses to the pupil questionnaire, reflecting the staff's advanced knowledge and many years' experience. Nonetheless, data from both sources confirms that difficulty in composition is widespread; this is alarming, considering that all the students have completed composition projects in Year 7 and at primary school.

7. Please write a sentence or two explaining how you go about making your own pieces of music

Pupil S: [no response to this question]

Pupil J: [no response to this question]

Pupil K: I don't know

Pupil G: I don't know

Pupil R: I've never made my own piece of music myself

Figure 6: Responses to Question 7 of the pupil questionnaire

Responses from both questionnaires suggest that the root cause is uncertainty around the compositional process. This could stem from an issue I identified in the introduction, lack of clarity regarding how composition should be taught (DfE, 2013; 2021), leaving teachers without guidance on how to help their students and, in turn, leaving students without a process to follow. How can students be expected to excel in a complex musical skill (Houlahan & Tacka, 2015) without support? I will now examine the effects of the strategies I implemented in an attempt to combat this.

RQ2: How do students respond to the audiation strategies employed?

Immediate responses

My lesson evaluations reveal that a significant number of students were highly disengaged and reluctant to join in with singing activities in Lessons 1-3, including my study group, particularly during Lesson 3, as seen in my evaluation notes listed in Table 5 below:

Lesson	Response to audiation exercise
1	Students enjoyed hearing me play popular music examples and wanted to hear more, though were reticent to join in with singing the bass line. … I am not sure if they were unwilling to sing or if they did not sufficiently understand what I wanted them to do in the singing the bassline exercise. … I will ensure that audiation exercises that may be unfamiliar to students are more clearly modelled.
2	They were extremely reluctant to sing this melody and its simplified version in the audiation exercise, even more so than last week, even with clearer modelling, though they eventually did under duress.
3	Students refused to join in with the singing activity, despite me explaining the task, choosing an example they would likely be familiar with, giving them a starting note, counting them in, and finally modelling explicitly. They only sang after very harsh prompting.

Table 5: Evaluation notes of student responses to audiation exercises

One reason for this may be that students did not feel comfortable enough in the classroom environment to sing in front of their peers. I observed several students open their mouths as if to sing, but as soon as they realised that most others were not doing the same, they appeared highly self-conscious and stopped, as if to blend in. Such reluctance is widely reported in research literature (Ashley, 2013; 2015; Harrison, 2009; Mizener, 1993; Welch et al., 2009). Research by the chartered psychologist, Roland Chaplain, offers one explanation. Chaplain (2018) identifies that "any behaviour that is followed by reinforcement is likely to be repeated" (p.11). Reinforcement can come from other pupils as well as the teacher, and can either be positive, encouraging the pupil to repeat the behaviour, or negative, deterring the pupil from repeating the behaviour. In this situation the few students who did attempt to join in were negatively reinforced by the majority of pupils not joining in, prompting them to feel ostracised from the social group. Yet, as I will go on to demonstrate, this has not prevented them from audiating as part of the composition process, so it may be that students do not have to sing loudly and confidently to develop audiation skills and bring elements of this into independent work.

Responses in practice room work

The recording of my study group working in a practice room during Lesson 2 revealed a clear instance of audiation in direct response to the audiation exercise earlier that lesson. Pupil A began with the rhythm I had used to demonstrate playing the chord progression when modelling the composition process. This is Type 4 audiation (Gordon, 1989a), performance of a known piece of music without notational aid. He first played the whole chord to that rhythm and then selected the top note to harmonise with the first chord in the group's chord progression. Following the guidance I had given during the audiation exercise (see Table 1), he selected one note from each chord and extended his rhythmic motif by selecting B again to harmonise the second chord, A for the third chord, and C for the fourth chord. This is Type 6 audiation (Gordon, 1989a), reorganising or expanding upon known musical patterns to create new music:

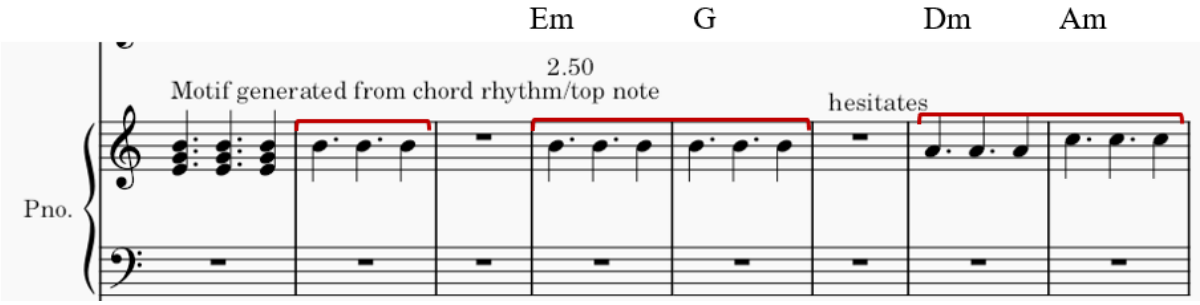


Figure 7: Audiation in action through the development of a motif, Motif A

Building on his initial idea (Figure 7), Pupil A then repeats it seconds later, decorating it with a few additional notes (ringed in green in Figure 8) whilst maintaining the rhythmic character of his initial idea:

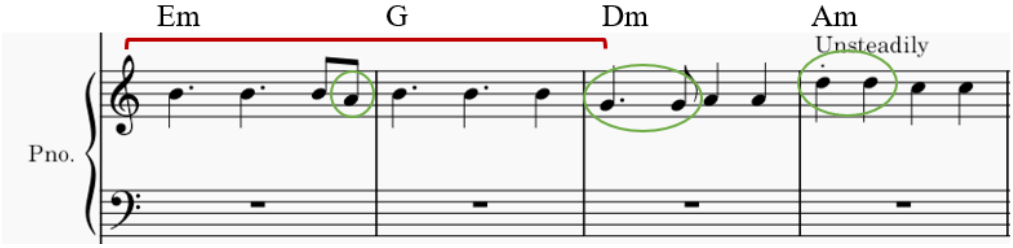


Figure 8: A decorated version of Motif A

A couple of minutes later, Pupil A experiments with augmenting the initial rhythm of his motif (compare bars 1-3 underlined in blue in Figure 9 with bars 1-3 in Figure 8). The overall melodic contour is maintained:

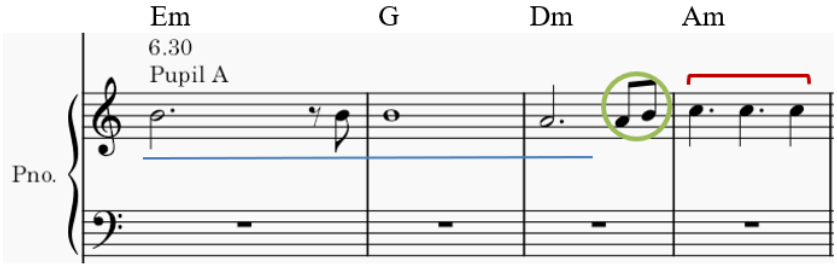


Figure 9: Rhythmic augmentation of Motif A

However, he ultimately discards this in favour of his initial rhythmic idea, combining it with an extended version of the linking passage at the end of bar 3 from his previous attempt (ringed in green in Figure 10 next page):

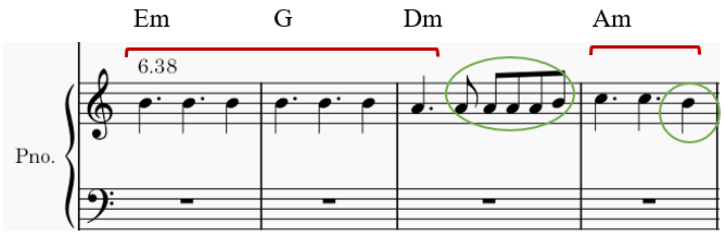


Figure 10: More complex decoration of Motif A

Another fascinating instance of audiation emerged later in the recording, when Pupil S began to improvise his own melodic idea, also drawing on audiation strategies from the exercise at the start of Lesson 2 (see Table 1) in beginning with a simple four-note motif and then decorating it, as seen in Figure 11 below:

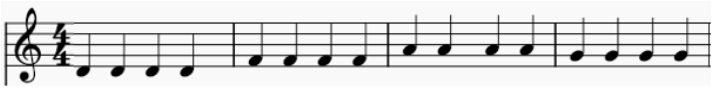


Figure 11: Motif B

When other pupils began to drift off-task, Pupil S continued to experiment absent-mindedly on the metallophone. His melodic idea gradually evolved over the course of several minutes, as shown in Figure 12:

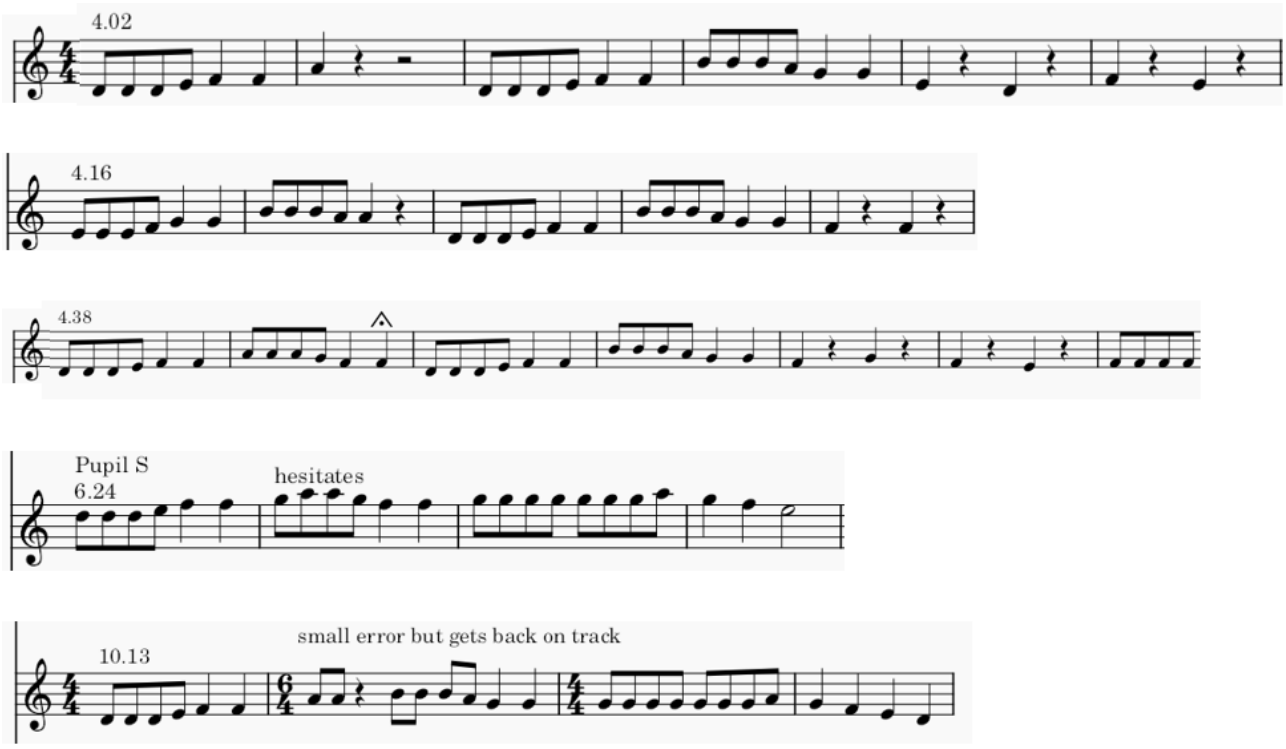
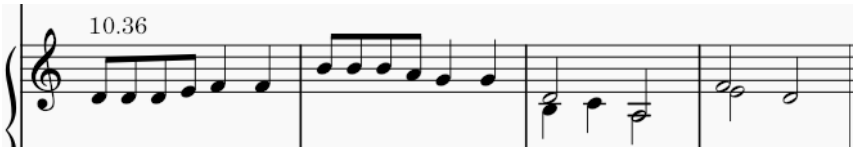


Figure 12: Development of Motif B

Eventually, at around 10 minutes in, several pupils begin to sing along as Pupil S continues to play, before excitedly exclaiming that they recognise what he is playing as the theme from the internet meme, "Maxwell the Cat" (Mysterious Cheese, 2022)**:**



"Is that the Maxwell theme?"

"Yeah, yeah, yeah!"

Figure 13: Students singing along to the theme from "Maxwell the Cat"

This is a perfect example of Type 4 audiation (Gordon, 1989a); the students are performing a known piece of music from memory on both voices and an instrument. Figure 13 above demonstrates that the second half of the theme is less well-known to the students as the pitches are more uncertain, so at around 15 minutes in, the students repeat the last two bars of their singing several times in order to help Pupil S complete the melody, harnessing audiation as an assistive strategy.

In Lesson 4 they take this one step further. After deciding to use the "Maxwell theme" as their melody, the pupils played it against their chord progression but realised that it sounded quite dissonant. Pupil A therefore made the following alterations, creating a consonant melody (compare Figure 14 to Figure 12):

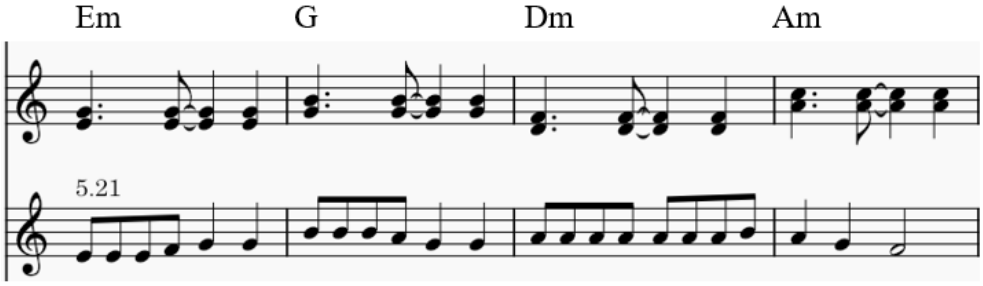


Figure 14: Adaptation of "Maxwell the Cat" theme to fit with their chord progression

- He transposed bar 1 up a tone so that it primarily uses notes from the E minor chord
- He realised that the notes in bar 2 fit well with the G major chord so left it unchanged
- He transposed bars 3-4 up a tone so that they primarily use notes from the D minor and A minor chords in each bar respectively

This is exemplary of Type 6 audiation, where known musical patterns are reorganised and extended to create new music (Gordon, 1989a).

In both of these examples audiation functions as a pivotal tool in the students' motivic development. Their processes could be interpreted as a direct response to the audiation exercises, which encouraged students to analyse the underlying structures of familiar music and how it fits against harmonic progressions in order to promote the development of their audiation vocabularies (Gordon, 1999). Both students enact Type 4 audiation: Pupil A borrows the rhythm I used when modelling to the class, whilst Pupil S works out how to play an existing piece of music aurally. In order to do this, both pupils must first have employed Type 1 audiation, recalling a sound not physically present (Gordon, 1989a). In the second example, Pupil A additionally employs Type 6 audiation when rearranging Pupil S's work to fit with their chord progression. Subsequently, there is evidence for the three types of audiation (Gordon, 1989a) this study is concerned with occurring. Alongside this, there is a discernible link between the students' output and the audiation exercises I implemented, as evidenced by Pupil A audiating a rhythmic motif that I had modelled earlier in the lesson.

(Data presentation and discussion section continues on next page)

RQ3: To what extent did the strategies support the musical endeavours of the students?

Pupil questionnaires

I have coded the written responses from the pupil questionnaires below by highlighting those parts that relate directly to the categories of audiation outlined in my literature review:

yellow = Type 1, blue = Type 4, green = Type 6 (Gordon, 1989a).

Approaches to composition prior to the intervention

In the initial questionnaire, three pupils' responses to the open question asking them to explain their response to Question 1 referred to audiation as a strategy:

1. I find it easy to come up with musical ideas in composition tasks.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Please explain why you feel this way:

Pupil Fl: because I take some ideas that I've heard and transform them in a better one

Pupil E: Because I listen to music a lot and so I hear different musical ideas. These inspire me sometimes in classwork.

Pupil P: Because I can play around with the notes and think what sounds best

Figure 15: Responses to Question 1 of the pupil questionnaire referring to audiation as a strategy

A further pupil's response to Question 7 also referred to audiation as a strategy:

7. Please write a sentence or two explaining how you go about making your own pieces of music

Pupil L: I start by thinking of other songs and ideas in my head and then I start to do trial and error to find what sounds good.

Figure 16: Responses to Question 7 of the pupil questionnaire referring to audiation as a strategy

Approaches to composition following the intervention

In the final questionnaire, as before, three pupils' responses to the open question asking them to explain their response to Question 1 referred to audiation as a strategy:

1. I find it easy to come up with musical ideas in composition tasks.

Strongly disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly agree ○

Please explain why you feel this way:

Pupil H: Because I have musical knowledge and I know it's exeptable [sic] to magpie some parts ["magpie" refers to the borrowing of material from other sources]

Pupil Fr: I remember pieces of music I have played in my music lesson or class and put a slight twist on that piece of music to create a new piece

Pupil S: The music I listen to helps me develop musical ideas in the lesson

Figure 17: Responses to Question 1 of the pupil questionnaire referring to audiation as a strategy

Four pupils' responses to Question 7 referred to audiation as a strategy, with only one pupil's response noteworthy in both this and the above instance:

7. Please write a sentence or two explaining how you go about making your own pieces of music

Anonymous: I take inspiration from other songs

Anonymous: I like to think it through my head first then I try produce whatever I come up with on the spot then add in my processed piece with it.

Pupil H: I would think about how the different pieces go together in my head and decide what I put where

Pupil M: I play around with different stuff, get inspired by things I like. I love working in a team because there are more ideas.

Figure 18: Responses to Question 7 of the pupil questionnaire referring to audiation as a strategy

Comparison of approaches to composition (before and after the intervention)

The frequencies of each type of audiation in the pupils' responses before and after the intervention are shown in Table 6:

Type of audiation	Colour	Frequency before intervention	Frequency after intervention
Type 1	Yellow	4	6
Type 4	Blue	0	3
Type 6	Green	2	4

Table 6: Frequency of audiation types in open questions of initial and final questionnaires

The increased length of responses when the questionnaire was repeated could be considered to reveal that pupils had greater insight into the role of audiation in the compositional process following implementation of the audiation strategies and were therefore better able to verbally articulate it. A greater number of responses to the second questionnaire indicated that audiation techniques had formed part of their approach; six different pupils in the final questionnaire, compared with four in the initial questionnaire. Table 6 shows that frequencies of all types of audiation rose after the intervention, including more pupils progressing towards higher levels of audiation, Types 4 and 6 (see Figure 1 earlier), suggesting a greater number utilised audiation strategies in their musical endeavours.

Figure 19 (next page) shows the mean response to each of the closed questions in the pupil questionnaire before and after the intervention. There was a slight increase in mean response to six of the seven questions concerning pupils' experiences and approaches towards composition, indicating that a greater proportion of students agreed with the statements. This may reflect greater clarity of compositional approach and greater confidence. In addition, there was a small increase in mean response to Question 2 ("I work out what sounds good by hearing music in my head"), the question most specifically concerned with audiation, reflecting that 11 students were aware of this forming part of their compositional process after the intervention as opposed to 10 before.

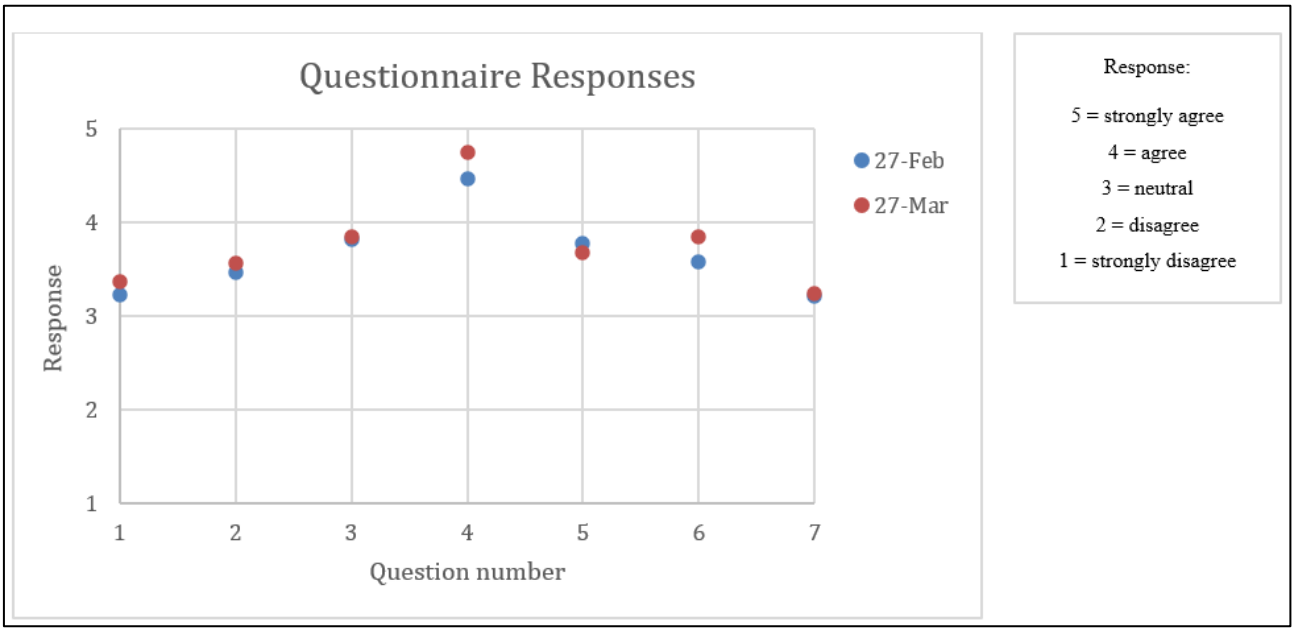


Figure 19: A graph to show average responses to closed questions in pupil questionnaire

The greatest increases were seen in responses to question 4 ("I prefer to choose who I work in a group with rather than be put into a group by the teacher") and question 6 ("I enjoy composition"). The increase for Question 4 may also link to ideas I have already begun to explore around the importance of a safe learning environment in order to audiate, since development of these skills was the focus of this scheme of work. It is pleasing that a greater number of students responded that they enjoyed composition after completing my scheme of work. This increase could be attributed to increased confidence in their compositional abilities as a result of the audiation exercises I implemented. It may also pertain to external factors however; this is the first piece of composition work Year 8 have done this year so they may have forgotten that they enjoyed it, or they may have enjoyed working with friends.

There was a very slight decrease in responses to question 5 ("I find it easy to agree with others in my group which ideas will work best in our composition"). This may reflect a greater number of students gaining the ability to come up with musical ideas for themselves as a result of improved audiation skills, resulting in more to choose from and therefore more division within groups. Since students overwhelmingly agreed that they enjoyed working with their friends, it is unlikely that this decrease is down to friction within groups. However, the change is too small to draw any firm conclusions.

Final performance recording

The recording of my study group's final performance reveals that they ultimately selected Pupil S's melody to use in their composition. In this way, ideas developed through audiation formed a significant part of their final piece of work.

Conclusions

There is evidence that my strategies for developing audiation hold great promise for improving student outcomes in the Key Stage 3 pop/rock composition classroom. Data from practice room recordings in particular strongly suggests that students were actively employing all three types of audiation considered in this study (Gordon, 1989a), and recordings of final performances indicate that motifs developed in this way had a significant impact upon the end products of their work. Furthermore, as demonstrated in Table 6, responses to the pupil questionnaire suggest that more students were progressing toward higher levels of audiation, with greater numbers aware that they were actively drawing upon their knowledge of stylistic convention – their audiation vocabulary (Gordon, 1999) – in their work. Finally, responses to the pupil questionnaire reveal that a greater number of students agreed that they enjoyed composition and that they find it easy to come up with ideas in composition tasks after the intervention, indicating that this research holds promise for improving pupil enjoyment and confidence in composition as well.

However, this is not a 'sticking plaster' strategy; a sea-change in teaching is required to ensure that all students are provided with a clear approach towards composition, allowing them to experience the joy of exploring and developing their own creative voice. Covert references to audiation as a means of improving student outcomes are already pervasive in government documentation (Ofsted, 2009; 2012; 2021), but greater detail in describing how the composition aspects of the *National Curriculum* might be implemented is required. This would facilitate greater continuity between primary and secondary schools, supporting student progress at every stage, as well as between schools, ensuring that all students have access to high quality teaching. More broadly, these findings highlight the importance of equipping students with the necessary tools to approach a task if they are to complete it successfully. This is equally applicable to all areas of Music education and all subject areas. I will without a doubt incorporate the principles of this approach into my teaching of composition and bear in mind these transferable findings throughout my career.

Implications for future research

A number of questions remain that deserve to be explored in greater depth. This study only concerned a small number of students and my study group had quite a lot of prior instrumental experience between them, so it would be pertinent to explore whether these results are replicable on a larger scale. Additionally, my study only covered a period of one month. It would be interesting to investigate the longer term benefits, as students' audiation vocabularies will only improve with time, and, as with any skill, the more students practice, the more they are likely to improve. Also, whether or not these findings are transferable to composition in other genres is worthy of consideration, as explored in Green (2001). Students likely already have a strong foundational audiation vocabulary in popular styles, whereas many lack such subconscious awareness of music in other styles. It would thus be fascinating to assess whether similar results could be achieved in a style where the majority of students have little or no prior knowledge. Finally, an unexpected finding during this study was the impact of feeling safe in the classroom environment upon active participation in the audiation exercises. It was fortunate that the students in my study group did feel comfortable enough to utilise these skills in the safe space of the practice room away from the rest of the class. Therefore, future research could consider the effect of grouping students on their confidence to actively engage during practice room work.

Limitations

One limitation of the pupil questionnaire is that due to pupil absence the makeup of the group for the final questionnaire was different to the initial questionnaire. This may well have impacted upon the results, and, as I permitted pupils to respond anonymously if they felt more comfortable doing so (see Methodology), it was not possible to exclude all pupils who were not present for both questionnaires. Nonetheless, use of data from a broad range of sources ensures the impact upon my findings is minimised as far as possible.

Another limitation was that I severely underestimated the importance of creating a warm classroom environment where pupils feel safe to engage with singing activities; I have relatively little teaching experience, had not known the class long, and had not sufficiently anticipated their reluctance to sing before beginning my scheme of work. Coincidently, the same audiation exercises were far more successful with my other class, who I taught shortly after this one each week. This may be due to the different combination of students creating a different social environment, or because I took into

account the difficulties experienced with the first class and introduced light-hearted singing warm-ups before attempting the audiation exercises. These drastically warmed the mood in the room and the vast majority of students took part enthusiastically. I would absolutely implement these if I were to do a similar study in future, or indeed any singing activity.

The presence of the recording device in my study group's practice room proved a significant distraction at first; they were unnerved by its bulky appearance and felt like they were being watched. However, they appeared to acclimatise relatively quickly, and verbal references to its presence largely disappeared after Lesson 2, so I do believe that the data collected is meaningful, even if there is a chance that they slightly modified their behaviour in response to its presence.

Finally, my findings are limited by the nature of an action research project. The findings relate to one instance in a specific context with a specific group of students, resulting in a lack of generalisability (Denscombe, 2017). In addition, although I selected the study group at random, all five students had either current or prior experience of 1-1 music lessons. It would be pertinent to explore whether similar results could be achieved in a different context with students with no such additional experience to draw upon.

However, this study remains rigorous due to its basis in the firm evidence that informed my research design (see Literature Review), and my findings concur with those of other, similar studies (Kratus, 1994), lending additional weight to my research.

References

Ashley, M. (2013). Broken voices or a broken curriculum? The impact of research on UK school choral practice with boys. *British Journal of Music Education, 30*(3), 311-327.

Ashley, M. (2015). *Singing in the lower secondary school*. Oxford University Press.

Baker, D., & Green, L. (2013). Ear playing and aural development in the instrumental lesson: Results from a "case-control" experiment. *Research Studies in Music Education*, 35(2), 141–159.

Bergman, M. M. (2008). *Advances in mixed methods research theories and applications*. SAGE.

Berkley, R. (2001). Why is teaching composing so challenging? A survey of classroom observation and teachers' opinions. *British Journal of Music Education, 18*(2), 119-138.

Biddle, B. J., & Andersen, D. S. (1986). Theory, methods, knowledge, and research on teaching. In M. Wittrock (Ed.), *Handbook of research on teaching* (pp. 230-254). Macmillan.

British Educational Research Association (BERA). (2018). *Ethical Guidelines for Educational Research* (4th edition). Retrieved April 19, 2023, from https://www.bera.ac.uk/publication/ethicalguidelines-for-educational-research-2018-online

Brundrett, M., & Rhodes, C. (2013). *Researching educational leadership and management: methods and approaches.* SAGE Publications Ltd.

Chaplain, R. (2018). *Teaching without disruption in the secondary school: a practical approach to managing pupil behaviour*. Routledge.

Cohen, L., Manion, L., & Morrison, K. (2013). *Research methods in education*. Routledge.

Denscombe, M. (2017). *The good research guide: for small-scale social research*. McGraw-Hill Education.

Department for Education. (2013, September). *Music programmes of study: key stage 3: National curriculum in England*. GOV.UK. Retrieved October 2, 2022, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239088/SECONDARY_national_curriculum_-_Music.pdf

Department for Education. (2021, March). *Model Music Curriculum: Key Stage 3.* GOV.UK. Retrieved March 26, 2023, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974359/Model_Music_Curriculum_Key_Stage_3.pdf

Fautley, M. (2014, January). *Listen, Imagine, Compose: Research Report.* Retrieved March 24, 2023, from https://listenimaginecompose.com/app/uploads/2017/03/Final-Report-FINAL-VERSION.pdf

Gordon, E. E. (1965). The Musical Aptitude Profile: A New and Unique Musical Aptitude Test Battery. *Houghton Mifflin Co. Tests: Testing Today*, 1–3.

Gordon, E. E. (1976). *Learning sequence and patterns in music.* GIA.

Gordon, E. E. (1979). The Developmental Music Aptitude as Measured by the Primary Measures of Music Audiation. *Psychology of Music,* 7, 42–49.

Gordon, E. E. (1982). *Intermediate Measures of Music Audiation.* GIA.

Gordon, E. E. (1986). *Manual for the Primary Measures of Music Audiation and the Intermediate Measures of Music Audiation*. GIA.

Gordon, E. E. (1989a). Audiation, Music Learning Theory, Music Aptitude, and Creativity. *Suncoast Music Education Forum on Creativity*, 75-81.

Gordon, E. E. (1989b). Testing Music Aptitudes from Pre-School Through College. *Gordon Institute for Music Learning Newsletter,* 2(2), 4–6.

Gordon, E. E. (1995). Testing Musical Aptitudes from Preschool Through College. In M. Manturzewska, K. Miklaszewski, A. Bialkowski (Eds.), *Psychology of Music Today: Proceedings of the International Seminar of Researchers and Lecturers in the Psychology of Music, Radziejowice, Poland, 24-29 September 1990*, (pp. 170–176). Frederyck Chopin Academy of Music.

Gordon, E. E. (1999). *All about Audiation and Music Aptitudes*. *Music Educators Journal, 86*(2), 41–44.

Green, L. (2001). *How popular musicians learn: a way ahead for music education.* Ashgate.

Green, L. (2008). *Music, informal learning and the school: a new classroom pedagogy.* Ashgate.

Harrison, S. (2009) *Male Voices: Stories of Boys Learning through Making Music*. ACER Press.

Houlahan, M., & Tacka, P. (2015). *Kodály today: a cognitive approach to elementary music education* (Second edition). Oxford University Press.

Independent Society of Musicians. (2021, October 6). Reviewing the Model Music Curriculum in detail. *ISM*. Retrieved March 23, 2023, from https://www.ism.org/news/reviewing-model-music-curriculum

Kratus, J. (1994). Relationships among children's music audiation and their compositional processes and products. *Journal of Research in Music Education*, *42*(2), 115-130.

Mizener, C. P. (1993). Attitudes of Children toward Singing and Choir Participation and Assessed Singing Skill. *Journal of Research in Music Education*, *41*(3), 233–245.

Mysterious Cheese. (2022, December 17). *Maxwell The Cat* [Video]. YouTube. Retrieved February 12, 2023, from https://www.youtube.com/watch?v=l8W98L94gw8

Ofsted. (2009, February). *Making more of music: An evaluation of music in schools 2005/08.* GOV.UK.

Ofsted. (2012, March). *Music in schools: wider still, and wider.* GOV.UK.

Ofsted. (2021, July 12). *Research review series: music.* GOV.UK. Retrieved November 28, 2022, from https://www.gov.uk/government/publications/research-review-series-music/research-review-series-music

Philpott, C., & Spruce, G. (2016). *Learning to teach music in the secondary school: a companion to school experience.* RoutledgeFalmer.

Piaget, J. (1923). *La langage et la pensée chez l'enfant: Études sur la logique de l'enfant*. Retrieved December 4, 2022, from http://pubman.mpdl.mpg.de/pubman/item/escidoc:2375486/component/escidoc:2375485/Piaget_1923_language_pensee_enfant.pdf

Taber, K. (2013). *Classroom-based research and evidence-based practice: a guide for teachers*. SAGE.

Welch, G., Himonides, E., Papageorgi, J., Saunders, T., Rinta, C., Stewart, C., Preti, J., Lani, M. V., & Hill, J. (2009). The National Singing Programme for primary schools in England: an initial baseline study. *Music Education Research*, *11*, 1–22.

Appendix 1

Pupil Questionnaire

For each of the following statements indicate how far you agree or disagree:

I find it easy to come up with musical ideas in composition tasks.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Please explain why you feel this way:

_____

_____

I work out what sounds good by hearing music in my head.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

I decide what sounds good through trial and error.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

I prefer to choose who I work in a group with rather than be put into a group by the teacher.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

I find it easy to agree with others in my group which ideas will work best in our composition.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

I enjoy composition.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

I am pleased with the pieces I compose.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
○	○	○	○	○

Please write a sentence or two explaining how you go about making your own pieces of music.

_____

_____

Appendix 2

Interview questions for music teachers on their experiences teaching composition

1. What difficulties do you find KS3 students experience in engaging with composition work?
2. What strategies do you use to support KS3 students with their composition work?
3. How confident do you feel in teaching composition?
4. To what extent do you feel KS3 pupils succeed in creating convincing, stylish compositions?
5. Do pupils enter GCSE courses confident in their abilities as composers?