Changing Key

Adolescents' views on their musical development across the primary to secondary school transition

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Acknowledgements

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Executive summary

Every year, most 11 and 12 year olds in the United Kingdom experience a major rite of passage when they transfer from small, familiar primary schools to larger and more complex secondary schools. Changing Key is interested in how these young adolescents[1] perceive their musical development across this school transition. It is situated in the 'adolescent voice', by eliciting the unique perspectives of young people in order to provide a window into adolescent worlds of music and school transition.

There are at least two key reasons to conduct this study. First, research finds consistent dips in achievement in English, mathematics and science on entry to secondary education[2], and a recent study extends this to music education[3]. However, prior research explaining this disengagement is limited to the classroom context. Changing Key extends this research by working with the stance that music pedagogy and learning does not occur in a vacuum. The adolescents in this study were questioned holistically, regarding how they perceived music in their broader daily lives, and how this connected to their school experiences. As far as we know, this is the first study of music at school transition which takes this broader ecological approach.

Second, we know that school transition presents adolescents with many challenges and opportunities that bring the relationship between adolescents and their schools into sharp relief. Hence school transition provides us with an ideal opportunity to investigate how the musical resources and climate for music learning provided by schools interplay with adolescent development. This in turn should provide educators with valuable information on how to design developmentally appropriate music pedagogy.

[1] The developmental period of adolescence is thought to begin at around age 9/10 years old. Eccles, J. S. (1999). The development of children ages 6 to 14. *The Future of Children WHEN SCHOOL IS OUT, 9*(2), 30-44 for more details.

[2] Hargreaves, L., & Galton, M. (2002). *Transfer from the Primary Classroom: 20 Years On* (University of Cambridge ed.). London: RoutledgeFalmer.

[3] Marshall, N. A., & Hargreaves, D. J. (2007). Crossing the humpback bridge: primary secondary school transition in music education. *Music Education Research, 9*(1), 65-80.

When deciding how to design education, educators often rely on tradition or theoretical frameworks. However, it is also important to evaluate what works best for adolescents. This information can be elusive and tacit to adults who are necessarily distanced by age and culture from the adolescent perspective. Changing Key attempts to elicit authentic adolescent voices by using developmentally appropriate research methods[4]. First we involved adolescents in an active participation workshop that attempted to relieve their fears and misconceptions about being an interviewee. Second we conducted a series of loosely structured interviews with open ended questions designed to tap into their worlds rather than impose adult understandings. In keeping with this approach, our summary of findings is an attempt to showcase adolescent opinions, in oppose to communicating a particular research or educational paradigm.

The adolescents in Changing Key transferred from seven primary schools to three secondary schools in September, 2010. The three school pyramids were located in Devon, London and Bolton which are a rich mixture of rural and urban English localities. The active participation workshop and the first set of interviews were conducted in the last term of Year 6 at primary school. We then interviewed adolescents once in each of the three secondary school terms throughout the 2010-2011 Year 7 school year. In addition to the adolescent voice, we included the opinions of classroom music teachers who were asked to observe adolescents' behaviours in music class and report on these at the end of each term using a checklist survey. By including this information we are able to discuss what adolescents were saying in relation to what their teachers perceived.

We analysed the interview and survey responses thematically, looking for patterns in adolescents' views that were consistent across the three locations of study. Second we analysed the perspectives of two case study children whose musical pathways began similarly then diverged after transition. The case studies demonstrate how issues of key concern to adolescents, as observed in the report, manifested as narrative threads within individual lives. The key findings section pulls together overarching themes from a much

[4] Symonds, J. E. (2008). Developmentally Appropriate Research Methods: A Strategy for Use with Child and Adolescent Participants. *Building Research Capacity, 14*, 4-7.

broader collection in the main body of the report. Therefore readers are advised to consider both this and the more detailed views presented in the following chapters.

Key findings

Adolescents' views on the music curriculum

- The majority of adolescents reported that school was their main access to formal music tuition and instrumental learning. Five of the 25 adolescents discussed receiving instrumental tuition outside of school.

- Many adolescents perceived their primary school music tuition to be basic and infrequent. In some schools it was reportedly limited to playing percussion instruments and singing children's songs. After transition, many adolescents compared primary school music unfavourably to their new experiences of more complex music pedagogy. However, a small number of adolescents felt uncomfortable learning music theory and longed for a return to the practical lessons of primary school.

- Adolescents reported that their secondary school teachers took a 'start from scratch approach', where they were taught basic music theory in term one, then moved to a combination of theory and learning instruments in term two, before engaging in more creative music making activities in term three. This approach reportedly suited the majority of adolescents, who did not receive formal instrumental training outside of school.

- The five adolescents in our sample who learned an instrument outside of school mentioned being frustrated by a lack of differentiation in primary and secondary school classroom music, and by the start from scratch approach. In term two at secondary school, two of the five became student assistants which temporarily relieved their frustration. In term three, several of these adolescents reported

enjoying being able to work more at their own pace as a result of the curriculum shift towards creative music making activities.

Adolescents' views on instrumental learning and extracurricular music

- In term one at secondary school, many adolescents from all locales reported being impressed by their school's provision of musical resources including a bigger variety of instruments and extracurricular musical activities. Adolescents were also enthusiastic about the increased complexity of music pedagogy and specialist experience of their teachers.

- Simply having increased provision of instruments and extracurricular musical activities inspired many adolescents to want a career in music for the first time, and strengthened others' existing musical career aspirations.

- Adolescents in all locales reported being encouraged to sign up for instrumental lessons at secondary school. However, adolescents in London and Bolton reported that these lessons were oversubscribed and several adolescents had to wait until term three to begin lessons.

- Adolescents reported coping with the delay in instrumental learning in different ways. For example a girl who had learned the flute at primary school coped by temporarily teaching herself recorder. In contrast, our case study Peter aspired to become a professional Djembe player at primary school, then dropped his aspirations when the Djembe was not immediately provided at secondary school.

- The majority of musical extracurricular activities that adolescents described occurring at primary and secondary school were selective, such as school orchestra, choir and musicals. The secondary schools provided some non-selective activities such as vocal band and 'junk band' where adolescents made instruments out of junk.

- Adolescents who reported trying out for these activities in term one were generally those who also reported having instrumental lessons outside of school and being highly agentic in learning music in their own time. Adolescents who decided to sign up for activities (selective and non-selective) in subsequent terms generally attributed this to wanting to join their friends in these activities.

- Adolescents who passed auditions for the selective activities mentioned feeling special some reported increased musical career aspirations. Those who failed auditions reported diminished musical hopes with some establishing themselves as 'non-musical'.

- Eight of the 25 adolescents who distinguished themselves as 'musical people' at primary school and in term one at secondary school, described themselves as non-musical by terms two and three. The most common reasons given for this loss of musicality were not playing an instrument or being involved in musical extracurricular activities, in comparison to other adolescents. The five adolescents who felt more musical at secondary school commonly attributed this to beginning these activities.

Adolescents' views on music at home and in the peer context

- Before transition, most adolescents reported being engaged in musical 'creative endeavours' where they composed, performed and learned music informally with friends or alone. These endeavours occurred at home and at school. Many expected to stop creative endeavours at school after transition, due to the unfamiliar school environment and the bigger Year 7 peer group.

- We received a few reports of increased performance embarrassment and in Year 7 very few adolescents continued to report performing their endeavours to adults.

Increased self-consciousness and a loss of desire to spend time with adults is common for this age group[5].

- The start from scratch approach employed by secondary school classroom music teachers reportedly encouraged many adolescents to begin composing music at home for the first time in term one. In terms two and three we received fewer reports of creative endeavours, suggesting that this increase after transition was temporary. For the majority of adolescents, reports of continued endeavours primarily involved singing informally with friends to music played on mobile phones. A few adolescents moved towards more formalised endeavours by the end of the year, such as forming a rock band.

- Before transition, many adolescent were without firm justification for why they liked certain types of music. Most commonly they reported liking the same type of music as their families and friends. However, after transition we received more nuanced reports of why they liked certain musical genres. Commonly this involved exploring the musical tastes of their new friends, and forming a common preference for popular, 'new music'[6] (mainly R&B and pop). Several adolescents reported feeling pressurised by their peers to conform to this 'new music' culture.

- After transition several adolescents described gaining more independent control over technologies for downloading and sharing music. The aforementioned social pressures to conform to the 'new music' genre were reportedly enforced by the peer-group via these mobile technologies.

- Many adolescents discussed the important role that their parents and older siblings played in their musical development. Mothers were most commonly mentioned in reference to providing transport to music lessons and supervising instrumental practice. Fathers and older siblings were reported as being particularly influential in

[5] Simmons, R., G., & Blyth, D., A. (1987). *Moving into Adolescence: The Impact of Pubertal Change and School Context (2009 edition)* (Vol. 2). New Brunswick, London: Transaction Publishers

[6] This term was used by several adolescents to refer to this particular musical genre and we have adopted it as an 'in vivo' descriptor.

introducing adolescents to different types of music. Reports on the influence and support of families were consistent across transition.

Teachers' views on adolescents' musical behaviours across transition

- In general, teachers viewed adolescents with greater musical accomplishment as being more socially confident and exhibiting less depressive, anxious and aggressive behaviour.

- Teachers reported an average dip in social confidence in music class in Year 7 term one, with a gentle rise in social confidence throughout Year 7.

- Teachers reported that adolescents on average became more musically anxious and exhibited more depressive behaviours in class throughout in Year 7.

- Teachers perceived a general, gradual increase in adolescents' musical accomplishment across transition.

Key messages

Differences between KS2 and KS3 music

Adolescents perceived a sharp division in the provision of classroom music and resources for learning instruments between primary and secondary school. Many adolescents looked forward to the increase in provision at transition. After transition many adolescents rated primary school music as inadequate. They were impressed by the more complex pedagogy and greater provision of resources for learning music at secondary school, but then became disappointed by delays in receiving instrumental lessons due to oversubscription and competition for places. These findings suggest that ***many adolescents in this project would have benefited from more complex music tuition at primary school and from a more accurate match between demand for and provision of instrumental lessons at secondary school.***

Music provided at school was clearly interlinked with adolescents' broader musical development outside of the classroom context. The following two points explicate our findings in this area:

Musical activity

Adolescents who received private instrumental tuition reported being frustrated when they were forced to learn at the same rate as their peers at primary school and in relation to the start from scratch approach employed at secondary school. Many adolescents who did not receive private tuition reported that their exposure to more complex music pedagogy in Year 7 term one inspired them to engage in more musical activity outside of the classroom. However, a change in musical identity for some adolescents (see below) might have contributed to our finding of reduced reports of these creative endeavours in terms two and three. Although it is potentially impossible for teachers to accurately judge the range and quality of the musical experiences of their students, ***more differentiation in classroom learning would have encouraged the musical development of the minority of adolescents who received private instrumental lessons***.

Musical identity

Many adolescents established themselves as being non-musical people during Year 7, in relation to long delays in the provision of instrumental lessons, their failure to pass auditions in extracurricular musical activities, and by comparing themselves to adolescents who did play instruments and had passed auditions. Similarly, adolescents who received private instrumental lessons across transition judged themselves to be special and musically talented in comparison to other adolescents. This rather narrow view of what it means to be musical is at odds with projects such as Musical Futures which attempts to recognise the widest range of musical achievement. ***Adolescents at this age might need instruction in thinking more holistically about what musical experience and musicality means, in order for them to avoid making potentially premature judgements about their musical identities***.

Methods

Research context

Seven primary schools and three secondary schools were approached to join the study in May 2010 as part of a collaborative venture between the Musical Bridges convener, Adrian Chappell and Local Authority and music services personnel. The schools formed three pyramids (multiple primary schools feeding to a single secondary school): one each in Devon, London and Bolton. These geographic areas were chosen to represent a mixture of rural and urban contexts in England.

The following table summarises key features of each school involved.

Table 1. Schools in Changing Key

Locality/School	Geography	Roll size*	Ofsted grade	Specialism
Devon				
Primary 1	Rural	300	Good	None
Primary 2	Rural	150	Outstanding	None
Primary 3	Rural	150	Satisfactory	None
Secondary	Rural	2000	Outstanding	Sports, Science & Language
London				
Primary 1	Urban	700	Satisfactory	None
Primary 2	Urban	400	Inadequate	None
Secondary	Urban	1300	Outstanding	Music
Bolton				
Primary 1	Urban	300	Satisfactory	None
Primary 2	Urban	300	Satisfactory	None
Secondary	Urban	1500	Good	Creative Arts

* Role sizes rounded to preserve anonymity.

Research participants

The Year 6 classroom teacher in each primary school was asked to select four Year 6 adolescents who were mixed in prior musical experience, musical enthusiasm, gender and ethnicity (see the appendix for our request to teachers letter). A total of eight adolescents

were selected in each locality. This required recruiting an additional primary school in Devon. Three adolescents changed to schools not involved in the project and were therefore lost from the sample. This resulted in 25 adolescents participating in primary school and 22 participating in secondary school.

Table 2. Number of adolescents in Changing Key

	Devon		London		Bolton		Total	
	Year 6	Year 7	Year 6	Year 7	Year 6	Year 7	Year 6	Year 7
Boys	4	3	3	3	4	4	11	10
Girls	5	5	5	4	4	3	14	12
Total	9	8	8	7	8	7	25	22

Of the 25 participants, three (12%) had ethnic minority backgrounds and are given the pseudonyms of Nsedu, Mohammed and Ali.

Research ethics

After adolescents were selected by teachers, their parents were supplied with a letter outlining the project. Consent was given in writing and by telephone. Primary and secondary classroom teachers who were asked to observe adolescents' behaviour were given a letter outlining the project and their rights as participants.

Many adolescents have no prior experience as research participants, and have little experience on which to base their evaluations of what it might be like to be involved[7]. In order to scaffold the Changing Key participants' understanding of research we designed an 'active participant' workshop[8] that explained the research process in simple terms using slide shows and discussion. The workshop tutored the adolescents in research ethics (for example withdrawing from the project) and interview coping skills (for example not saying things just to impress, or in obligation to, an adult researcher). This workshop was

[7] Symonds, J. E. (2008). Developmentally Appropriate Research Methods: A Strategy for Use with Child and Adolescent Participants. *Building Research Capacity, 14*, 4-7.

[8] These methods were initially designed and tested by Dr. Symonds in a previous transition investigation and were also used in the Paul Hamlyn Foundation funded *Learning Futures* project.

conducted in the morning of the first interviews in July. Following the workshop the adolescents were asked to give their final informed consent.

The names of the adolescents, their teachers and schools have been made anonymous in this report. Each adolescent chose their own pseudonym during the active participation workshop and wherever suitable these have been used. Details on project participants and data from the teacher survey are held centrally in a secure online account accessible only to the immediate project team.

Research methods

Schools were visited once per term. During this day, the researcher interviewed each child for 30 minutes and collected a survey of adolescents' behaviour in music class from the music teachers. During this time the researcher also made informal observations of the schools in order to contextualise the research. Details of the research methods are given below, whilst information on the analysis can be found in the appendix.

Table 3. Research timeline

2010	May	Year 6	Term 3		
	June				
	July			Interview	Survey
	August	*Summer holidays*			
	September	Year 7	Term 1		
	October			Interview	Survey
	November				
	December				
2011	January		Term 2		
	February			Interview	Survey
	March				
	April				
	May		Term 3		Survey
	June				
	July			Interview	

'Myself and Music' Interviews

A set of 18 interview questions (see the appendix) were designed by the Changing Key project team as a result of collaborative meetings in May and June, 2010. These questions addressed adolescents' musical identity, and musical experiences with family, friends, teachers and in music education. Tag lines of *and what do you expect this will be like once you've changed schools?* and *…now that you've changed schools?* were asked in primary and secondary school respectively. The interview questions were piloted for use with two 11 year old girls in June, 2010. Some words were adjusted as a result of the pilot study.

The set of questions were asked in each of the four sets of 30 minute interviews. The interviews were recorded digitally by the interviewer and transcribed by an external transcriptionist[9]. Adolescents were allowed a 'silent friend' in the interviews if requested, to make them feel more comfortable.

'The Musical Child in Development' Survey

The Musical Child in Development survey asked teachers to rate adolescents' musical, social and mental health behaviours in music class, once per term, using a tick box format. The musical behaviour questions were designed by Professor David Hargreaves and the social confidence questions were designed by Professor Peter Muris. Both professors consented to the use of the questions in this research. The mental health questions were designed by Dr Symonds. More information on the questions and the survey design can be found in Chapter 3.

The survey was administered as a structured interview to the adolescents' primary school teachers in July 2010. In Year 7, secondary school teachers completed the survey independently and returned it to the project team when they next visited the schools. This method used in secondary schools countered for difficulties in scheduling interviews with multiple teachers on the single day of visitation.

[9] WJS Secretarial Services and Rapid Transcriptions

Theoretical background

Changing Key was informed by a theoretical framework developed by Nigel Nicholson in 1987[10], regarding changes in behaviour when individuals move from one job to another. In 2008, Professor Maurice Galton observed a strong link between the Transitions Cycle framework and school transitions, and our research team is happy to be able to exercise this link in the Changing Key project. Here we describe the Transitions Cycle in reference to school transition.

Phase one: Preparation.

Before changing to a new environment such as a secondary school, individuals attempt to achieve a state of readiness by anticipating what this new environment will be like. Often they size up their strengths and weaknesses in relation to their anticipations. They may become anxious about the new environment given that they are unable to entirely predict whether they will cope with the stress of change. An example is of an adolescent who hopes for better musical activities in their new school, so that they can exercise their budding musicality in the new environment.

Phase two: Encounter.

First impressions of the new environment dominate this second stage. Individuals engage in rapid information processing and experience enhanced perceptual and emotional reactions. For example, adolescents may feel overwhelmed by the complexities of their new school, or may experience a 'honeymoon period' where adjustment takes place through rose coloured glasses. The core task of this phase is to be able to cope with and enjoy the challenge of exploring and making sense of the new environment. At the encounter phase Nicholson recommends that we have "a map, a bicycle and good weather" (1987, p.187). The map allows us to navigate our new surrounds, the bicycle is the freedom to do this and the good weather is to do so in a climate of psychological safety. Although schools often give timetables and school maps to new pupils, they rarely if ever give maps of social and academic expectations which might help adolescents speed up their adjustment and avoid the pitfalls of unexpected occurrences.

[10] Nicholson, N. (1987). The Transition Cycle: A Conceptual Framework for the Analysis of Change and Human Resources Management. *Research in Personnel and Human Resources Management, 5*, 167-222.

Phase three: Adjustment.

At this point, initial encounters give way to a process of assimilating and accommodating new information from the environment, such as adapting to new teaching styles and expectations. Nicholson does not indicate how long it takes to move into this phase but we assume that by the second term most pupils are becoming adjusted to their new school. By adjustment, Nicholson means how people decide to fit themselves to the new environment. People can either change themselves to suit the environment or try to force it to fit with their needs. For each individual, a balance must to be struck between their personal flexibility and the flexibility of the environment in order for successful adjustment to occur. In the classroom setting this might involve adolescents changing their learning styles to fit with the teacher's expectations, or resisting new behavioural rules in order to assert their identities dominantly in class .

Phase four: Stabilisation.

This last phase occurs when the balance between the individual's needs and their environment has been worked out. The new behavioural patterns that emerge are indicative of whether the individual is flourishing or not given the type of adaptation that they have achieved. For example, adolescents who willingly adapt their learning styles in response to new pedagogies might have greater school success than those who are resistant to these new demands.

The phases are described as a cycle because individuals continuously encounter and adapt to new environments. For example, adolescents might take up a new extracurricular activity or change subjects across the years. In this study we use the transitions cycle to frame our understanding of the process of adjusting to a new school in general, but also acknowledge that it can be replayed as adolescents move from Year 7 into Year 8.

The following diagram illustrates how we apply the phases to different time points during the primary to secondary school transition.

Table 4. The primary to secondary school transitions cycle

Primary School Term Three	Secondary School Term One	Secondary School Term Two	Secondary School Term Three
Preparation	Encounter	Adjustment	Stabilisation

Chapter 1: Changes in musical activity

This chapter summarizes the children's perspectives on the main types of musical activities they were engaged in. These activities include listening to music, learning an instrument, independent creative activities (we refer to these as 'creative endeavours'), classroom music and extracurricular activities.

Listening to music

Neighbourhood context and musical preferences

In each of the three Changing Key locations, adolescents were exposed to different types of music and expectations for listening to music.

In Dagenham, adolescents tended to describe R&B and Hip-Hop as the most prominent type of music in their environment. They frequently uttered expressions such as, 'everyone listens to…' and 'just to fit in', in the interviews, both before and after school transition. The pattern of responses indicated that everyone was expected to conform to a particular cultural norm, whether it was to their taste or not.

In comparison, adolescents in Bolton described their awareness of a wide range of musical genres. Their awareness of music embraced the musical preferences of different family members, for example grandmothers who liked the operatic 'Three Tenors'. Rap was popular among the peer group. The secondary school operated a School radio at lunchtimes, run by Year 11 students. Adolescents reported that the radio station had a unifying effect on the school peer group and enhanced their school experience, for example when particular songs became popular for a few days. In addition, some parents and siblings were reported to learn these new songs from the students on a weekly basis.

In Devon, adolescents reported being aware of an even broader range of musical styles. Generally mothers played a more prominent role in their adolescents' musical lives. For

example, some mothers listened to Classic FM on car journeys and other mothers were actively involved in their child's music practice. The adolescents described a number of musical events in their community such as barn dances, the Devon Dub 'n'Mix, the Ivybridge Music Festival and community singing in villages.

Families and musical preferences

Many adolescents reported listening to music for pleasure with their families. Some attributed their first memories of liking music to parental influence. "My Mum got me into music" (Fred, Year 6, Term 3), "When did that happen?" (Interviewer), "When I was in year three" (Fred, Y6, T3)[11].

Across transition there were steady reports of fathers influencing their children's taste in rock music. The following two examples of Bobby and Holly demonstrate the consistency of this influence across time.

> "How long have you liked Arctic Monkeys and their music?" (Interviewer), "About three years ago when I was like seven, my Dad started to listen to them and I started listening to them and I liked them (Bobby, Y6, T3). "How long have you been interested in the rock music?" (Interviewer), "Well really like the past three or four years because my family they like listen to all that kind of music and everything" (Bobby, Y7, T1).

> "My dad's got me used to garage now. He plays all loud in the car" (Holly, Y7, T1). "[I'm listening to] more like my dad's music now, 'cause he's always playing it (Holly, Y7, T3).

This influence was predicted to continue into Y8. "'Cause my dad's always finding new music and we always like seem to like it and it's quite good" (Trevor, Y7, T4).

Some fathers facilitated their children's cultural awareness by listening to music of their home culture with their families. "We still listen to music together sometimes" (Nsedu). "And what kind of music is that?" (Interviewer), "It's English music, Yoruba music, [Nigerian]

[11] Throughout the report in reference to the quotations, we abbreviate Year 6 and Year 7, and terms one, two and three, as Y6, Y7, T1, Y2 and T3 respectively.

and church music" (Nsedu, Y6, T3). "My Dad used to listen to like the same songs in his car and now he just carries on… He's into Bangladeshi music" (Ali, Y7, T3). "And what about you? Do you like Bangladeshi music?" (Interviewer), "I like some of them but not all. But I think when I grow older I probably will" (Ali).

Many adolescents were exposed to 'new music' by their older siblings, and were taught by siblings how to download and to exchange electronic music files using mobile technology. This was consistent across transition. "Well my brother had the songs on his phone so I asked him for it for Christmas, and that's how I got it… He's fourteen. He's in Year 10. He has all the latest music" (Izzy, Y7, T2). "But because my brother likes to listen to music quite loud in his room … stuff like Pop music and kind of soft music… I do pick up from there and ask him where it's from and normally listen to his kind of music" (Barbara, Y7, T3).

Peer groups and musical listening behaviours

Groups of friends often used music as the backdrop for a range of social activities. The most common activity reported was socialising after school without adults. This 'unsupervised play'[12] is commonly associated with the emergence of an adolescent subculture. "We go to this place [outdoors], we call it the maze because it's like a mini maze, and we just chill out there and listen to music" (Fred, Y6, T3). After transition, some adolescents increased their time spent in unsupervised play, thus listened to music together more often. "Well I wasn't really allowed to go to the park but now I am which is where I listen to some music. So I'm listening to music a lot more than in my primary school" (Amy, Y7, T1). "So you take your iPod up to the meadow with your friends... so this has just started happening since you changed schools?" (Interviewer), "Yeah" (Fido, Y7, T1).

In terms two and three, there was some adjustment in social listening behaviours as increased homework inhibited adolescents from seeing their friends after school. "They don't come round my house as often because they've got homework as well. But … yeah,

[12] Symonds, J. E. (2009). *Constructing stage-environment fit: Early adolescents' psychological development and their attitudes to school in English middle and secondary school environments*. Doctoral Thesis. Faculty of Education, University of Cambridge, UK. http://www.dspace.cam.ac.uk/handle/1810/223866

we still do it [listen to music together]" (Holly, Y7, T2). However, the range of behaviours continued throughout Y7. "Um, well we just kind of like … it isn't always at my house, like sometimes we go to like the meadow, go swimming and stuff and we just listen to music just in the background" (Fido, Y7, T3). "Me and my mates listening to my stereo and playing on [music computer] games rapping" (Fred, Y7, T3)."Where you would listen?" (Interviewer). "Like after school, like when I'm walking to school… with other people" (Nsedu, Y7, T3).

Peer groups and musical listening preferences

Across transition, there appeared to be an expansion then consolidation of peer group musical tastes. In Y6, most adolescents reported sharing their musical taste with their friends. Firm listening preferences were often reported without any justification. "Do you know what you like about the songs?" (Interviewer), "No, it's just the ones I listen to everyday" (Alexia, Y6, T3). Some justification for listening preferences in Year 6 was given, as discussed, in relation to the influence of family and older siblings.

Interestingly, many adolescents expected that their musical tastes, and the tastes of their friends, might change following school transition." I'll probably go into the new music what's coming out" (Daisy, Y6, T3). "Well, she might change her style of music…" (Holly, Y6, T3). Holly began listening to a wider range of music before transition so she could prepare to make new friends with different musical tastes. "In the six weeks before I started here. I decided I shouldn't just stick with one bit of music so I should like listen to other kind of music and what my mates like so I can stand it" (Holly, Y7, T1).

After transition, these expectations were realised as adolescents made new friends who introduced them to (mainly) popular songs outside of the adolescents' repertoire. "Loads of them are interested in lots of different types" (Peter, Y7, T1). This introduction to new music continued across transition. "Well, I know a lot more people so I know a lot more music songs than I used to. It makes me feel like I've explored more new music" (Trevor, Y7, T2).

Although new friends brought new songs, for many adolescents this was confined to one type of music: popular new releases. “So, Lily, what music do you normally listen to, now that you’re in your second term here?” (Interviewer). “It’s normally like R&B… and mostly rap and pop. My favourite singer now has changed… I started going out with my [new] friends and they’re listening to her songs and so I started listening to them” (Lily, Y7, T2). Reports indicated that pressure from the wider school peer group to listen to this ‘new music’ impacted some Y7 adolescents after the first term. “Well, it’s quite a big thing in secondary school because if you don’t like know any new music you’re a bit weird” (Amy, Y7, T2). “I like feeling the same like... being the same as others. Because you want to be the same as them, because if you’re left out, you feel goonish” (Steven, Y7, T3). Amy expected that this social pressure would continue into Y8. “Depends what my friends like where I’m moving to” (Amy, Y7, T3). “So it’s important to blend in” (Interviewer). “Yeah” (Amy).

An unusual case in the sample was Junior, who did not expand his musical tastes immediately after transition. “Do you try to get them into your music?” (Interviewer), “No not really because they’ll listen to what they’re listening and I listen to what I’m listening to” (Junior, Y7, T1). However, by term two, Junior had begun skateboarding, which prompted him to change his musical tastes in line with the wider social identity of this activity. “Loads of skateboarders do listen to stuff like this…like guitars and things and stuff” (Junior, Y7, T2). “And how long have you been listening to the skateboardy type music?” Interviewer. “Since I started skateboarding which is like two... about three months ago” (Junior, Y7, T2).

Autonomous listening behaviours

Across transition there appeared to be an increase in autonomous listening behaviour. As discussed in the family section, many adolescents in Year 6 listened to the same music as their families did, when at home. However, learning to manage technology as they became older enabled them to become more independent listeners. “Now I’ve come here [to secondary school] I can change it [the music television channels] myself… I have more confidence” (Bobby, Y7, T1). For many adolescents this involved downloading and sharing music using mobile technology. This facilitated peer group musical taste as discussed above, but also encouraged more autonomous listening behaviour. “Yeah, everybody has their own

music. But sometimes if, say, I liked another person's piece of music on their phone they would send it to me and I would have it on my phone as well" (Julia, Y7, T3).

Learning an instrument

School instrumental tuition

In primary school, the majority of adolescents were exposed to different instruments in class such as trumpet, the violin and the ukulele. However only one school was reported to offer individual instrumental tuition: in recorder. Many adolescents looked forward to taking up an instrument once they reached secondary school, and some had observed their older siblings learning instruments there. "What do you think it'll be like in your next school?" (Interviewer). "I think I might take up playing an instrument… I think I want to play the violin, don't know yet" (Daisy, Y6, T3). "Well at the College they've got a lot more variety of instruments, as my sister knows" (Peter, Y6, T3). Several were curious to learn more about instruments they had enjoyed in primary school class, or had tried out at home.

On arriving at secondary school, adolescents were invited to sign up to learn a much wider range of instruments than they had previously been exposed to. Some adolescents were unenthusiastic about learning instruments for a variety of reasons including financial restrictions, dislike of individual tuition and prior disappointing experiences. "I was hoping to learn the saxophone but mum said it would cost too much" (Peter, Y7, T1). "I tried violin but it was too hard... I decided not to do here because it would be even harder" (Holly, Y7, T1). However, most adolescents considered instrumental lessons to be a positive opportunity and were keen to learn.

Increased feelings of maturity linked to transition encouraged adolescents' confidence to learn instruments. "And did you say you were too scared to try and play an instrument?" (Interviewer), "I did but I'm not scared now… like last year" (Billy, Y7, T1). "Now I'm a bit bigger I might try and do more complicated instruments, like I never tried out before" (Peter, Y7, T1). Simply having lessons available to them inspired several adolescents' musical career aspirations. "And has changing schools made you feel more certain or less certain

about [becoming a singer]? (Interviewer), “More certain… Because like at primary they don’t do like lessons and singing but [here] you can pay to have singing lessons” (Lily, Y7, T1).

Despite being encouraged to sign up for instruments on arrival at secondary school, most adolescents found that instrumental lessons were oversubscribed and that they had been placed on waiting lists. “Did they tell why you can’t start?” (Interviewer), “Because I don’t think there’s enough spaces” (Mohammed, Y7, T1). By the second term, a few adolescents had started learning instruments although many were still waiting. “Do you know how long you’ll have to wait? (Interviewer). “Not sure… probably up to Year 8… loads of people are probably interested in electric guitar so I’ll have to wait.” (Steven, Y7, T2). For some this waiting continued until the end of the year. “So you’ve waited all this time since September ... What’s it been like waiting this long?” (Interviewer). “I keep on asking Miss when are we going to get it. So .. yeah. Pretty confusing really because I was meant to get it after Easter, and it’s past Easter now” (Bobby, Y7, T3).

During the year, some adolescents who had not signed up in term one either signed up or decided to do so at a later date. “I’m quite interested in music so I’m trying to persuade my parents to let me do music” (Julia, Y7, T2). “So what would you like to do?” Interviewer. “I’d like to play the violin” (Julia, Y7, T2). Observations of friends learning an instrument inspired this for some. “I might like to play the piano I think ‘cause my friend plays the piano.” (Trevor, Y7, T3). Y8 was seen as a fresh start to begin learning an instrument. “’Cause it’s like the middle of the year now, it’s near the end, and there’s no point starting it [learning an instrument] now ‘cause you can just start it new next year” (Holly, Y7, T3).

Throughout the year, adolescents who learned instruments at school reported that this process awarded them personal and academic benefits. “It does make me feel good that I’m learning more and more about the guitar. And it’s helping myself because I enjoy it. It helps me because it feels like I’m getting somewhere” (Mohammed, Y7, T2). “In what way do you think you’ve got better?” Interviewer. “The way I understand music. I know I could read music before, but I can work out how do to it faster, slower, louder, softer” (Barbara, Y7, T3).

Private instrumental tuition

Across transition, only five adolescents had private instrumental tuition outside of school. Parents facilitated these lessons, by for example setting expectations about practice times, purchasing equipment and providing transport to music lessons. Adolescents reported that these lessons provided them with positive, structured activity. “I used to be playing out a lot... I didn’t go to any clubs or anything, but now I’ve got the piano, I’m a lot happier and I’m doing something… that I like and it’s fun.” (Amy, Y6, T3). However, strict practice routines could be difficult to cope with. “I used to play the French horn and the piano. But then I stopped the piano... I had to get up 6:00 am in the morning to get changed, eat breakfast and then play both instruments. It was just too overwhelming” (Justine, Y6, T3).

No adolescents in Changing Key reported giving up private instrumental tuition across transition. However, one girl observed her friends quitting soon after transition. “Abigail has stopped doing the clarinet and Sadie has and my friend Hannah has” (Nicole, Y7, T1). Do you know why they’re stopping? (Interviewer), “I think it’s just because we’re getting older and we’re like trying different things” (Nicole, Y7, T1). Another boy noted that increased homework pressure impacted on his ability to practice after school. “I’m still playing the ocharina” (Fido, Y7, T1), “Has it changed at all since you’ve changed schools?” (Interviewer), “I think it’s a bit less now…because I have more homework (Fido, Y7, T1).

Across Y7, adolescents’ reports of continued practice indicated increased dedication towards learning their instruments. “I passed my Grade 3 in February… so that’s really good. Now I’m on my Grade 4 on the clarinet” (Barbara, Y7, T3). Some parents were actively involved in this. “My Mum’s starting to join in more on my violin practices… she makes me practice longer and she’s helping me to learn them more quickly” (Justine, Y7, T2). Being dedicated towards an instrument was accompanied by musical career aspirations. “I’d like to be like a piano teacher. Um .. I don’t know if I’d want to be like a professional… But I’d definitely like to be a teacher” (Amy, Y7, T3).

Creative endeavours

In this report we refer to the informal, deliberate and sometimes spontaneous processes of learning, composing and performing music for creative pleasure, as 'creative endeavours'. A distinguishing feature of these endeavours was that adolescents assumed ownership of and authority over musical activity. Mostly these endeavours occurred alone or with friends. Creative endeavours were more commonly mentioned in Devon and Bolton and were mentioned at equal frequency by boys and girls. There was only one comment coded under the category of creative endeavour in Dagenham in all four waves of interviews. There are many possible explanations for why creative endeavours were not mentioned in Dagenham. One is that the high level of socialization to listen only to R&B music in the local context might have inhibited creativity. Another is that adolescents were involved in creative endeavours but felt that it was uncool to mention these, in line with the more pressurized musical social order.

Learning and composing

At primary school, several adolescents reported learning how to sing and play songs in their bedrooms. "I have a CD that's how the music is meant to be played, and then I'll play it and we compare the difference and everything" (Amy, Y6, T3). This independent learning assisted their musical skills development. "it's helping with my beat...you have to count down in your head, and every beat is like another number and it just keeps on beating and beating" (Fred, Y6, T3). Adolescents' compositions were spontaneous and informal or deliberate, notated constructions. "I write some random songs when I'm at home, not that good, but gives me something to do" (Daisy, Y6, T3). Not having enough formal musical learning could impede these more formal constructions. "I've done it once or twice but then it just gets a bit difficult to draw all the notes" (Barbara, Y6, T3).

After transition, adolescents experienced a shift in the complexity of music learned in class. In line with this, we received a surge of reports of composing music at home. "I started writing music a lot more because I was in music class and... I learnt a lot more so I got better

at it" (Holly, Y7, T1). This increase was evident across the peer group. "Well I went round my friend's house and she was doing it. And I was like I might start doing it. So I got home and I got a piece of paper and just started writing words down and I made up one" (Izzy, Y7, T1). Learning music in class was reported to assist endeavours across the year. "'Cause my mate's mum, she's got a keyboard in her bedroom and we like take it out and play with it in his bedroom and like practise on it… 'Cause like we're learning more things [at school] and it's helping us" (Fred, Y7, T3).

However in terms two and three, there were fewer reports of composing at home. Some adolescents attributed this to increased school work and homework pressure. "And what about making up music? Do you still like doing that?" (Interviewer). "No… it fades away in the back of my mind…When I got to college because I had to remember a lot of stuff. Like homework sheets and my books and I have to remember a lot of important stuff" (Peter, Y7, T2). "I still do write my own songs… but I don't write as much… Because I don't really have a lot of free time" (Nicole, Y7, T2).

Performing

At primary school, many adolescents reported performing songs and dancing in front of family and friends at home and at school. We like to dance…. In my living room normally but sometimes out in the playground. It's quite fun to do it there" (Barbara, Y6, T3). This participation helped some adolescents identify that they were musical. "Do you think that you're a musical sort of person?" (Interviewer), "Well, I can't play any musical instruments, but I can listen to music and I can make up a dance" (Holly, Y6, T3).

Several adolescents expected to feel more self-conscious performing publically after transition, in relation to their new peer group. "I don't think it would feel the same… I think it will be a bit different up in the College… there's so many people there. There's thousands" (Barbara, Y6, T3). "Do you think you'll still dance when you change school or not?" (Interviewer), "No. Because maybe I'll get embarrassed" (Billy, Y6, T3).

After transition, adolescents continued to sing and dance informally. However there were fewer reports of rehearsed performances to parents. More often adolescents reported performing spontaneously or rehearsing with friends in a more private setting. “But now, because my mate’s like singing… when he comes out we like go to mine, we get the lyrics and we’re like go on a bike road and we read them” (Fred, Y7, T1). “Um, [we] normally try and do beat box and stuff… with my friends in the house” (Peter, Y7, T3). A few adolescents mentioned performing spontaneously with friends at school, with no particular audience in mind. “At school we all go to form at dinner time and rap while Miss is doing work and we just sit in the corner and do rapping” (Fred, Y7, T2).

Making new friends after transition enabled some adolescents to find well matched peers to perform with. “I’ve made friends with this new lad who’s moved into our area and he sings a lot. So I do some of Eminem’s rapping and he … you know Eminem and Rihanna did “I love you way you lie”… I do the rapping and he does “I love the way you lie” (Fred, Y7, T2). “And you said that after school on Mondays you do a band. What’s that like?” (Interviewer). “It’s really good because I’ve made some new friends and we’re doing a show in March/April time” (Nicole, Y7, T3).

Reports such as Nicole’s (above) indicated that by term three, some adolescents were beginning to engage in more formal, organised endeavours, requiring a greater degree of self-regulation and social organization skills. “I think [that in Y8] it might be a bit different because um ... some of my friends play instruments and we might play a bit together and things like that… one of them plays drums, one of them plays electric guitar, and I play the acoustic guitar” (Mohammed, Y7, T3).

Classroom music

Curriculum

In most primary schools adolescents were taught music by their classroom teacher who was not necessarily a specialist in that area. Lessons were primarily spent playing instruments in groups or learning elementary musical theory. Two national music programmes of Sing Up

(to promote singing) and Wider Opportunities (a government drive to enable all children to be able to learn an instrument in primary school) were implemented in one Bolton and one Devon school respectively. Adolescents were taught instruments (including clarinet, flute, recorder and brass instruments) by visiting music teachers or by their class teacher, in five of the seven primary schools. In one school, the provision for music consisted solely of singing in school productions. Schools in Devon and one school in Bolton were notable in their music provision.

Adolescents expressed a wide range of hopes for learning music at secondary school. These included music tuition being more complex, interesting and grownup. “More harder stuff but better stuff… they’ll teach you in adult’s notes and stuff” (Izzy, Y6, T3). They also reported how these hopes, if met, would encourage their musical development. *“*What sort of things will the music teacher do there [in secondary school]?” (Interviewer), “I think he might help me to understand music and I might carry it on in GCSE” (Steven, Y6, T3). Fewer fears than hopes were reported and included stricter teachers and difficulty learning new instruments.

In term one across secondary schools, adolescents noted a ‘start from scratch’ approach operating. This introduced them in more detail to the basics of music including notation, rhythm and tone. “We learn about different sounds like vibrations and stuff and we learn about... like how you can make a sound change” (Nsedu, Y7, T1). This met many adolescents’ hopes for more complex learning. “I think I like the college way better, because it explains in more detail about the notes and then you can go onto bigger steps” (Trevor, Y7, T1). It also met their hopes for more interesting and adult learning. “In primary school it’s more childish… you’ve got to learn about 10 [green] bottles....” (Steven, Y7, T1). However some adolescents desired a return to the practical lessons of primary school. “I think I preferred the music at, lessons at my primary… We got to try lots of different instruments” (Cherry, Y7, T1).

In term two the curriculum in two schools shifted towards playing instruments and composing, making use of what adolescents had learned about music theory. “We’ve starting learning the steel drums in music lessons. But before we were just clapping and

using pencils and rulers and stuff to make music. Then as we get more experienced we're using big instruments" (Peter, Y7, T2). This was accompanied by more expressive aspects of music theory. "What sort of things did you learn this term in music?" (Interviewer). "The elements of music… Like dynamics, tempo" (Barbara, Y7, T2). However in one school, adolescents were still mainly elementary music theory. "We ain't done anything different this term. We've just learnt about notes and all that" (Holly, Y7, T2).

By term three, adolescents were primarily engaged in creative activities, combining performance and composition. "We had to make up tunes and then we went on Cu base [computer program] in the lesson and put it all together and we finished today making the rhythms. We just put them all together" (Fido, Y7, T3). These activities were fairly autonomous. "We're learning to... play Scottish songs that are on the keyboard… but make our own notes up for it, instead of using other people's, making our own. So ... it's fun" (Julia, Y7, T3). Several adolescents hoped that this creative, more complex activity would continue in Y8. "They might teach us maybe a bit more advanced stuff [in Y8]" (Justine, Y7, T3). "Are you looking forward to advanced stuff?" (Interviewer). "Yeah definitely" (Justine, Y7, T3).

Frequency

In most primary schools, music was taught infrequently in comparison to other subjects and in two schools music lessons had stopped entirely by the end of Year 5. "What sort of things does your music teacher actually do when they're teaching music here?" (Interviewer), "I haven't had many music lessons in a while so I can't really remember" (Justine, Y6, T3). The omission of music from the timetable may have allowed teachers to focus on preparing adolescents for their Key Stage Two SATs examinations. At secondary school music was mainly taught once a week. Several adolescents wished for more lessons. "Because we only have it on Mondays we should have it on like a Thursday as well" (Ali, Y7, T1). "Because I only have one lesson of music a week and it's only an hour long so we don't get to do that much… and the teacher has to explain it and stuff... I wish it was longer" (Julia, Y7, T1).

Differentiation

Adolescents who took private instrumental lessons at primary school were considerably more advanced in music theory than their peers. This manifest in their experiences of classroom learning across transition. At primary school, several of these adolescents reported disengagement. “I did find it a little bit boring to start off with, because they were teaching everyone else the notes and how to read music and everything, but I already knew it” (Amy, Y6, T3). Teachers were reported to have a lack of understanding of adolescents’ experience outside of the classroom. “I know how far I can do but they might not know that” (Izzy, Y6, T3).

On arrival at secondary school, several of these adolescents continued to be at odds with the curriculum, mainly due to the start from scratch approach taken by teachers. “Well the first time I started playing it we had the notes on the screen but then I just started playing it off by heart... and just started playing it really fast” (Nicole, Y7, T1), “Is that a lot faster than everybody else?” (Interviewer), “Yeah” (Nicole, Y7, T1). This lack of differentiation also affected adolescents who actively pursued music outside of school without private instrumental tuition. “I know I can do, I’m capable of doing a lot, lot more than we’re doing so once I asked her can we move on” (Peter, Y7, T1). Adolescents’ observations of this disparity in formal musical knowledge affected their perceptions of themselves and others. “It makes me feel good that people were learning the same things that I learnt when I was in my clarinet lessons” (Barbara, Y7, T1).

In term two, two schools temporarily resolved their differentiation issues by allowing adolescents with more training to become student-assistants. “If Miss says “Keep an eye on … such and such “ I go over and talk to them and listen to them and then I go back to Miss and do feedback” (Nicole, Y7, T2). “Sometimes Sir says “Can you help them because they’re having trouble” (Amy, Y7, T2). As described above, the curriculum shifted towards more autonomous composing and performing in term three. This allowed these adolescents the freedom to stretch themselves. Also we received some reports of teachers setting extension work in term three. “Sir just set me harder work that was like the sharps and flats of each scale” (Amy, Y7, T3).

Personal musical development

In term one at secondary school, many adolescents were impressed by the enhanced musical resources such as a wider range of instruments, better practice areas and computer composition programs. This often inspired greater enthusiasm for music. “There’s loads of instruments and music teachers and there’s more professional equipment… I didn’t really want to try that much in music… Now I know there’s loads to try so” (Holly, Y7, T1). The general increase in musical activities and pedagogical complexity contributed to an expansion of adolescents’ general musical awareness. “Now thinking back on the questions that I’ve just asked you ... does any of this make you feel particularly good or particularly bad?” (Interviewer). “Particularly good, because like it’s helping me learn new things each day. And like learning more and more about music” (Fred, Y7, T3).

Many adolescents who had less formal musical training on entrance to secondary school reported increased self-confidence as they succeeded at tasks which were more challenging than those at primary school. “Well, as you get better at the music that you’re playing it makes you more confident, and more excited about doing it because you know how to do it and it’s not new” (Trevor, Y7, T2). “I felt a bit worried at first but then I got used to people looking at me… I didn’t want to show myself up so I tried even harder than normal...” (Fred, Y7, T2). “So how did you feel then?” (Interviewer). “Really pleased with myself” (Fred, Y7, T2).“It makes me feel really happy because I know I’ve succeeded and I’ll know that I’ll be able to do more harder things once I’ve done it” (Alexia, Y7, T3).

Experiencing this more complex learning contributed to a shift in some adolescents’ musical self-perceptions. For example Bobby reported developing a more complex musical identity: “Well I think I am changing more musical because our music lessons… we get to learn real songs, not stuff like Green Sleeves or something” (Bobby, Y7, T1). Across the year, adolescents reported a link between learning music in class and musical career aspirations. “Well I want to be a doctor, but then if I do really good in music, something like a music … something like the person who makes music, something like that” (Ali, Y7, T3).

Extracurricular activities

Provision of extracurricular activities

At primary school, adolescents observed a limited range of primary school extracurricular activities, which generally took place at lunch, breaktimes and after school. The most common activities were traditional: choir and orchestra. There were no reports of activities that did not require a certain degree of skill for participation. Many adolescents hoped that their secondary schools would make a more sophisticated range of activities available. "They do lots of concerts and I know they do some jazz music… they've got more musical instruments to play there" (Cherry, Y6, T3). They also hoped for more musical peers to participate with. "It will be better because, when I'm at High School, there will be more people wanting to play instruments or be in a vocal band because there's a lot more people in year seven or year eight" (Lily, Y6, T3).

After transition adolescents experienced an expected increase in the extracurricular musical activities available. All schools offered traditional activities of choir and orchestra where entrance was selective depending on skill. Also some schools allowed Y7 adolescents to try out for the end of year musical. A few non-selective extracurricular activities were offered included vocal club, drumming club and 'junk band' (where adolescents made instruments out of junk). Generally adolescents opted to join these activities in term one, and if wanting to join at a later date were put on waiting lists. "And when do you think you'll get started on that?" (Interviewer). "When someone else leaves beat-boxing and vocal band because there are too many people in at the moment" (Fred, Y7, T2).

Personal development and participation

At primary and secondary school, being selected to participate in skills based activities was reported to enhance adolescents' self-confidence. "In our leavers' assembly, a few of us have been picked out to be in a choir" (Lily, Y6, T3), "How does that make you feel?" (Interviewer), "It makes me feel good because our Mums and Dads, when they watch it, they can actually hear just our voice" (Lily, Y6, T3). "I feel a bit confident now… because we

had to have auditions so I know I was quite good to get in" (Izzy, Y7, T1). Inversely, selection had negative effects on musical identity when adolescents failed to pass auditions. "Before I started this school I did do a bit of singing. I was going to be in the choir but then I didn't get through the auditions so... and I don't really have enough time any more anyway so it's kind of... yeah" (Julia, Y7, T1).

Adolescents who participated in activities reported positive influence on their self-confidence, musical capabilities and musical aspirations. "It makes me feel quite good about myself… the dance, because I'm not bragging, but I'm quite good… well, better than some other people" (Cherry, Y7, T2). "It's actually brought it [my musical capability] a little bit up. Because I've started a couple of new music clubs" (Bobby, Y7, T2). I want to um become a professional dancer and own um a dance studio" (Nicole, Y7, T3). "What's inspired you?" (Interviewer). "I prefer Ballroom and Latin, so I'm doing that… sometimes I do it twice a week" (Nicole, Y7, T3).

Some adolescents who did not sign up for activities in term one aimed to join in later terms. Many were inspired by their friends' participation. "Now I know that I want to do vocal band so … and like I wasn't too sure last time" (Lily, Y7, T2). "What made you feel differently?" (Interviewer). "Some of my other friends do it and they say that it's good" (Lily, Y7, T2). Many comments in this area reflected a desire to join activities in order to be social. "I told my mum the other day that I wanted to go to dancing, and I want to go dancing because loads of my friends go dancing" (Alexia, Y7, T3). "Would you like to do anything like that in Year 8?" (Interviewer). "Yeah… The vocal band… Because you can know more people, more friends" (Billy, Y7, T3). Others had worked up their basic skill levels to a point where they were more confident to try out for skills based activities. "Are there things in Year 8 that you're looking forward to doing?" (Interviewer). "Um ... yeah like starting new music clubs … like orchestra … hopefully I'll get in ... you have to be a certain level to get into orchestra" (Bobby, Y7, T3).

Adolescents who were unenthusiastic about participating in extracurricular activities reported a range of reasons for this. The most common reason reported was not being confident due to a lack of prior musical experience. "Well they're all better than me and I'm

not very good at singing" (Cherry, Y7, T1). "I went once [to choir] and it was like…it felt like I didn't know the songs and I couldn't really…I didn't really fit in. And I didn't really like it that much because the music was a bit hard and I couldn't learn it my own way" (Alexia, Y7, T2). Some adolescents were embarrassed to participate in front of unfamiliar peers, especially in mixed age activities. "If you don't know people and you're a bit shy and you don't like singing in front of them as much" (Billy, Y7, T1). "I'm not really confident... there's like older people there so..." (Nicole, Y7, T1). This lack of confidence was observed to crystalize in later decisions to abandon music. "Well when I was younger I wanted to be a singer but I don't have a very good voice and I just know that I'm not going to make it so I gave up" (Cherry, Y7, T2). "In primary school I was just all about music but I've sort of grown out of it" (Izzy, Y7, T2).

The increased complexity of secondary schools in comparison to primary schools also inhibited some adolescents from dedicating time to musical activities. One feature was the move to specialist teaching "I'm still getting used to teachers and stuff so I might wait until next year when I'm lot more used to everything" (Peter, Y7, T1)". Increased homework demands were also reported. "Did you want to do Charlie and the Chocolate Factory?" (Interviewer). "Um it would have been good, but I don't think I'd really have the time to practice… I've got homework" (Barbara, Y7, T3). Non-musical activities also lured adolescents away from musical participation. "I have never had time to go [to singing club] because I do a lot of sports" (Nicole, Y7, T1).

Chapter 2: Changes in musical identity

This chapter pulls together three types of data. First we analyse the adolescents' responses to the question 'are you a musical sort of person?' which was asked each term. This analysis gives us information on what adolescents thought about their 'overarching' musical identities. Next we elucidate several themes running through the previous activity chapter, that are about adolescents' musical identities. Here we summarise our findings in relation to adolescents' musical career aspirations and musical confidence. Finally we present two case

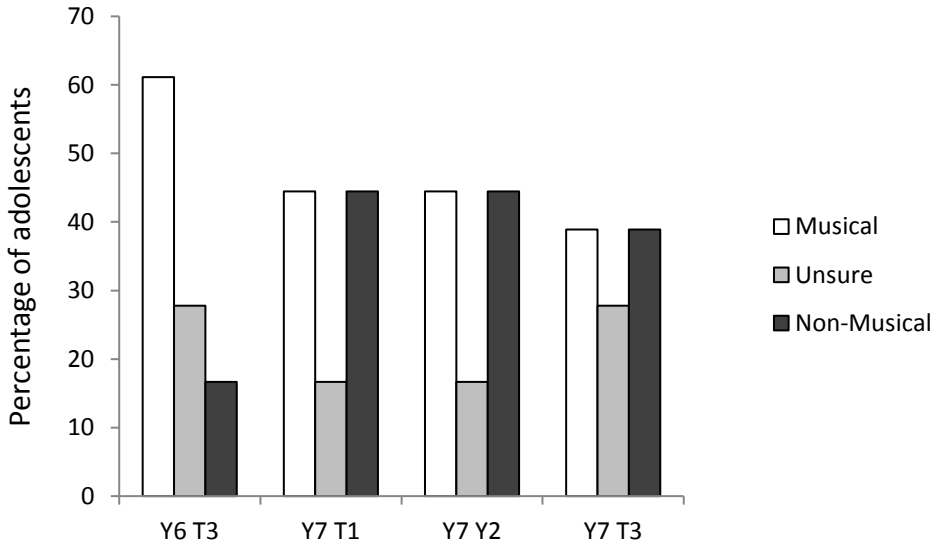
studies of adolescents with alternative musical development, to illustrate how musical activities and perceptions can differ depending on the individual.

Musical self-perceptions

Development of musical self-perceptions

In each interview adolescents were asked "are you a musical sort of person?" and were asked to explain their response. Generally adolescents said either "yes", "no" or "sort of". We analysed their responses by categorizing them into the respective categories of 'musical', 'non-musical' and 'unsure'. Figure 1 concerns the 18 adolescents who were present in every interview. It demonstrates that adolescents most commonly reported being musical people at the end of Year 6. The number of reports of feeling musical dropped sharply in Year 7, Term 1, then remained fairly stable across time. Inversely, there was a sudden increase after transition in the number of reports of being non-musical. Reports of being unsure about one's musical identity were fewer in the first and second terms of Year 7, but then increased to an amount similar to that in primary school by term three.

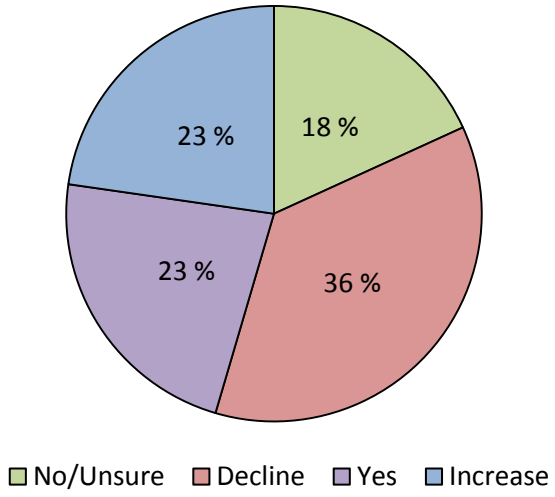
Figure 1. Musical self-perceptions across time



Next we analysed changes in musical self-perceptions for individual adolescents. Of the 22 adolescents who reported their overall musical identity on three or more occasions, four

(18%) consistently described themselves as non-musical, or a wavering combination of non-musical and unsure. Five adolescents (23%) described themselves as musical throughout the year, and five (23%) adolescents changed from describing themselves as non-musical or unsure, to musical by the end of the year. The greatest number of adolescents (eight, 36%), described themselves as musical at first then reduced their perceptions to non-musical or unsure across time. In this group, four declined suddenly in Year 7, Term 1, three declined suddenly in Year 7, Term 2 and one declined steadily across the four terms.

Figure 2. Individual musical self-perceptions across time



Rationales for musical self-perceptions

Adolescents' reasons for being musical/non-musical were readily identifiable as falling into fourteen categories. We counted how many times adolescents mentioned each category across the four interviews and identified which reasons were given at points of musical identity change for the decline and increase groups.

Generally there was a much wider range of reasons given for being musical, than for being non-musical or unsure. Most often adolescents perceived themselves as musical people when they were involved in some type of musical creative endeavour (such as singing or dancing informally) (11 responses). "Yeah… I'm always like dancing about the room and like singing along while I'm doing other things" (Amy, Y7, T3). The next most common reason for

being musical was learning an instrument (8 responses). “I think I’m a musical sort of person because I think I can sing. I get into music and I get into musical instruments like guitar, piano and violin and all that” (Alex, Y6, T3). Other reasons were being good at music, liking music, listening to music, enjoying music theory, having better resources at secondary school for music and aspiring to become a musician (4, 4, 3, 3, 2, and 1 responses).

Adolescents who declared themselves as non-musical often attributed this to not playing an instrument in comparison to other people at school (9 responses). “Um, no” (Cherry, Y7, T2). “Why do you say that? “ (Interviewer). “Because there’s tonnes of people in the school and they like play tonnes of instruments and get involved in stuff like that, but I don’t tend to (Cherry, Y7, T2). This rationale only appeared after transition, indicating that secondary school instrumental lessons provided a key point of social comparison by which adolescents evaluated their musicality. Adolescents also attributed being non-musical to not being engaged in any type of musical activity (9 responses). “No” (Billy, Y7, T3). “Why?” (Interviewer). “Because I don’t do anything like music” (Billy, Y7, T3). Other negative responses given were only listening to music not playing it, being infrequent listeners and preferring other types of activities (3, 1 and 1 responses).

The most common attribution for being unsure about musical identity was playing an instrument but not feeling entirely musical (4 responses). “Sort of but not… yeah, sort of. I am a bit now I’ve got the guitar” (Mohammed, Y7, T3). After this, attributions for being unsure were similar to those for being non-musical. These were not engaging in musical activity, being infrequent listeners, preferring other activities and only listening to music (3, 3, 3 and 2 responses). “I’d say I’m nearly… because I seem to like the other things like golf and football” (Fred, Y7, T2).

Adolescents whose self-perceptions declined to being non-musical by the end of the year most commonly attributed this to not being involved in any musical activity (4 responses) at the point of change. “Well, I sort of haven’t played a lot so my music is sort of going down” (Peter, Y7, T2). Others attributed the change to not playing an instrument, preferring other activities and being infrequent listeners (2, 1 and 2 responses). Those whose perceptions increased most commonly attributed this change to taking up a musical instrument (3

responses), whilst others became involved in creative endeavours or began listening to more music (1 response each). “I think I’m more of a musical person now because I started to think more about music and how it’s sort of works. And I used to play the recorder and I found my old recorder and I sort of started playing it” (Julia, Y7, T1).

Musical career aspirations

In this report we define a musical career aspiration as any mention that adolescents would like to have a career in music when they were older.

At primary school, many adolescents had musical career aspirations and aimed to be pop singers, rappers, guitarists, drummers, classical musicians and music teachers. Adolescents who aspired to become pop singers often mentioned that they enjoyed singing and dancing to popular songs and wanted to continue doing this for their career. “I’ve been singing for as long as I can remember really and I had loads of fun when I was doing it, so I want to carry on with it” (Alexia, Y6, T3). A few were lured by the idea of being famous. “I want to play a guitar and make up my own songs and I want to try and sing while I’m playing the guitar. And go on Britain’s Got Talent and stuff like that” (Alex, Y6, T3). Those wanting to become classical musicians mentioned both playing in orchestras and teaching their instrument, following their current instrumental music teachers. “I'd quite like to be a musician like a violinist. Or maybe be a teacher in music, violin teacher” (Justine, Y6, T3).

In the first term at secondary school we observed a sharp increase in the number of adolescents wanting to become professional musicians. In summary this shift was connected to the increased availability of musical resources. Of particular effect was the provision of instrumental lessons and extracurricular activities.

Being able to sign up for instrumental lessons inspired several adolescents to strengthen their musical career aspirations that had existed since primary school. “I want to go into singing more and in the future I want to be like pop singer or something” (Lily, Y7, T1). “And has changing schools made you feel more certain or less certain about that?” (Interviewer). “More certain… Because like at primary they don’t do like lessons and singing but [here] you

can pay to have singing lessons" (Lily, Y7, T1). Other adolescents developed these aspirations for the first time. "I either want to be a dancer or a musician" (Nicole, Y7, T2). "How long have you wanted to do that?" (Interviewer). "Since September… because I'm doing the music lessons, and I really enjoy doing the music lessons and I'm doing dancing on Tuesday nights. I really enjoy it" (Nicole, Y7, T2). Throughout Year 7, adolescents who participated in extracurricular musical activities and instrumental lessons continued to report musical career aspirations.

However not all adolescents were inspired by the increase in musical resources. Several adolescents who previously wanted to become pop singers identified these ambitions as being unrealistic throughout Year 7. "So do you aim to do things in the future that have got something to do with music now you've changed schools?" (Interviewer). "I wanted to be a singer but it was unlikely… That was my dream job but I needed something that was more likely that would happen so something like a journalist" (Holly, Y7, T1). "Yeah I wanted to be a singer, but as I got older I realised that I don't think that's going to happen" (Alexia, Y7, T3). For Cherry, this loss of ambition was provoked by comparing herself to other adolescents who were more musically experienced, and to professional musicians. "Well when I was younger I wanted to be a singer but I don't have a very good voice and I just know that I'm not going to make it so I gave up" (Cherry, Y7, T3).

Musical confidence

Throughout Y6 and Y7, adolescents gave a range of rationales given for why they felt confident in their musical capabilities. The types of rationales remained fairly consistent across transition, indicating that adolescents had used these methods of attaining confidence since earlier in childhood. However, there were shifts in the activities that adolescents participated in across transition, leading to new opportunities to gain or lose confidence using these methods.

The most frequent method of attaining and losing confidence mentioned was social comparison. This means to compare oneself to others.

- Adolescents who attended private instrumental tuition often observed themselves being able to cope more easily with classroom music tuition than their peers. This indicated to them that they were more advanced at music, which inspired feelings of musical confidence. “It makes me feel good that people were learning the same things that I learnt when I was in my clarinet lessons” (Barbara, Y7, T1).
- The same adolescents reported feeling confident in their role as more experienced practical musicians compared to their peers. “What about your new friends from the school?” (Interviewer). “I don’t think they play an instrument at all. So I’m definitely special” (Justine, Y7, T3). In the second term, being selected to be student-assistants in class was reported to have the same effect.
- Adolescents who were selected to participate in skills based extracurricular activities also felt more confident as a result of being chosen – for them this selection process indicated that they were more skilled than the majority of their peer group.
- Adolescents who felt musically unconfident often compared themselves unfavourably to other adolescents in their peer group, or to professional musicians. Also some of these adolescents had been rejected from skills based extracurricular activities.

Another type of evaluation used to create confidence was whether adolescents succeeded at individual tasks.

- Throughout Y7, many adolescents with little prior musical experience reported feeling more confident as a result of managing more complex tasks set in secondary school music class. “I think it makes me feel particularly good because I know that I’ve done better than I did before because I’ve learnt more stuff then I knew” (Trevor, Y7, T3).The types of confidence reported included feeling more musically skilled and knowledgeable, and for some being more confident to do well at other tasks outside of music.
- Adolescents who had continued with private instrumental tuition across transition reported feeling more confident as they progressed with their instruments, for example moving between grades or ability sets. “And so are you always learning faster, is that why you keep getting moved?” (Interviewer). “That’s what the teacher

said, my teacher" (Mohammed, Y7, T3). "How does that make you feel?" (Interviewer). "It makes me feel good" (Mohammed, Y7, T3).

A final rationale for changes in confidence was feeling more mature as a result of school transition.

- Two adolescents mentioned that they were more confident to sign up for instrumental lessons as they felt bigger and older. "And did you say you were too scared to try and play an instrument?" (Interviewer), "I did but I'm not scared now… like last year" (Billy). "Now I'm a bit bigger I might try and do more complicated instruments, like I never tried out before" (Peter), "What sort of things would you like to play?" (Interviewer), "I was thinking about the cello and the piano" (Peter).

Musical confidence appeared to have a major effect on whether adolescents felt that they were musical sorts of people, whether they participated in instrumental lessons and extracurricular activities, and whether they aspired to careers in music. Our findings indicate that school musical resources can increase or dampen adolescents' musical confidence in several ways. These include exposing adolescents to opportunities for success and failure in musical learning and performance, creating social markers of musicality such as learning an instrument and being selected for extracurricular musical activities, and by providing a mixed ability musical setting in which adolescents can evaluate themselves.

Case studies of musical identity

The above findings emphasise how adolescents' musical identities are formed in interaction with the social and practical musical resources in their environments. For example, an adolescent might decide they are more or less musical based on their access to instrumental tuition, the encouragement they receive from others and in relation to their prior musical experience. Although these findings illustrate how particular resources interact with adolescents' identities, they do not give a complete picture of how individual adolescents developed across the transition period.

To generate this information, we provide case studies of two adolescents who reported very different patterns of identity development, despite both ending Year 6 with enthusiasm to become professional at their chosen instrument. Peters' discussion of his musical identity was peppered with reference to a lack of social and practical resources. This became more and more apparent as the study progressed. By the end of Year 7 Peter reported almost completely disengaging from music, choosing instead to draw confidence from other activities. In comparison, over the course of the study, Amy reported affirming her identity as a pianist. Her story of identity development reveals a careful management of personal time and resources to find the best fit between her ambitions to pass grade exams and the pressures operating in the school environment.

Peter

Preparation

Would you say you are a musical sort of person?

"Well people say… I've got good taste in music. And I can really do stuff with it. Like a mixture of things. People say 'can you do this?' And so I tried it out and I was actually really good at it".

In the first interview, Peter was effervescently enthusiastic about music in general. In school music class he learned to play the djembe, an African drum. The instrument is played as part of a troupe, in music involving 'call and response' structures. As such, it offered Peter opportunities for leading and performing in groups, improvisation and invention, and coordinated bodily movement.

Having enjoyed it so much at school, Peter and his friend made up rhythms for the djembe when they were at each other's houses, and in the absence of any drums, they mouthed them. Peter discussed comparing himself to his friends in order to evaluate his competencies on the djembe. "I'm better at djembe. Even though my friends they get djembe lessons".

Despite his enthusiasm, Peter was not allowed a djembe at home. This was the first of a number of blockages to musical resources that he reported. Despite saying he would only play a djembe in the garage or the shed, he was denied one, because of the cost, and because of his Dad's migraines. "I thought I'd get a Djembe. That costs too much. Because I was still quite young then and didn't have as much money as I have now. But I'm still saving up. So it's quite annoying".

Peter had high hopes for his musical development at secondary school. "I'll probably get better at music. Then I'll learn to play more instruments. And I'll probably go in music competitions and stuff like that... And I'll probably buy my own instruments. And then probably practise them at home and get even better. And then I'll hopefully become a professional one day". Peter's statements demonstrate how his hopes to develop musically depended on the availability of instruments at home and at school.

<u>Encounter</u>

'Would you say you are a musical sort of person?'

"Well, I sort of haven't played a lot so my music is sort of going down because loads of people are not up to my standard".

At secondary school, Peter was keen to project an image of himself as being talented at music. "I'm talented in music and everyone says so, even my parents and I'm just talented and playing different instruments. I'm a quick learner with instruments but when they say something I just go straightaway". However his hopes for continuing with the djembe were dashed when he discovered that djembe was only taught in Y8, in music class. Consequentially, Peter and his friends requested that a djembe group be made available for Y7 students, a request which his teacher noted.

Peter did not appear to connect as well with this music teacher as he had with his primary school music teacher: he could not remember his secondary school music teachers' name

and never said it in any interview. This teacher was in fact quite a resource, as she ran the extra-curricular music groups (string band, opera band, brass band, junk band). Peter asked to join the junk band but his request was made too late to gain a place. At this point he had already signed up for several sporting activities.

Adjustment

'Would you say you are a musical sort of person?'

"No, because I've got more into other lessons that just music. So I'm like an all-round type".

In the second term of Y7, Peter described the activities he did during the week of the interview. These left little time for musical activity:

- Monday: homework
- Tuesday: hockey
- Wednesday: swimming
- Thursday: homework
- Friday: may start karate
- Weekend: socialising

When asked if he was playing an instrument, he replied that he didn't have time to. Although his teacher had offered to organize djembe club for him that term, Peter had turned down her offer. "I decided not to because I have loads of clubs on and loads of homework to do. And I only have a short amount of time to do homework in".

This was surprising given his previous enthusiasm for the djembe and for music in general. Close reading of Peter's interview transcript revealed the first instances of him referring to musical ability as a fixed trait, rather than as transformative. "I'm not a singing person" (Peter). "How do you know?" (Interviewer). "One, I've got a bad voice. Two, I don't like singing and that's it" (Peter). Also in this interview Peter reported comparing himself unfavourably to other friends who did better than him on their instruments that they

learned at home. “My friend, she’s got a saxophone and she plays it good, but when I try to do it I do it a lot louder but not as skilful”.

Possibly at this point, Peter’s motivation to surmount the barriers to his musical activity had expired. His turn to other activities and his descriptions of himself as an ‘all-rounder’ rather than a musical person suggest that he had reacted to these barriers by creating a different environmental niche for himself where he could succeed at other things.

Stabilisation

‘Would you say you are a musical sort of person?’

“Mm ... no” (Y7, T3).

In term three, Peter appeared to stabilise his impression of himself as a non-musical person. He predicted that this would not change as he entered Y8. “What about as you go into Year 8? Do you think you might become a musical person then?” (Interviewer). “Probably um ... no. Probably stay the same” (Peter). When questioned about his rejection of musicality he gave a very simple rationale, betraying little about his previous difficulties. “Why don’t you think you’re a musical person?” (Interviewer). “Because I don’t like singing” (Peter).

Later in the interview he gave another clue as to why he had switched off music at secondary school. “Now how much does music matter to you as you start thinking about moving into Year 8?” (Interviewer). “Um not as much [as when]… I was in primary school… ‘Cause when I was in primary school we just kept ... we played instruments, we learnt new songs, but here we like clap, clap, clap, computers, keyboards, so ...” (Peter).

Despite holding negative musical self-perceptions, Peter admitted to using musical activity as a means of gaining the attention and admiration of his friends and peers. “Are you making up any music?” (Interviewer). “Um, normally try and do beat box and stuff… with my friends in the house… and like if I get really bored and the teacher’s out from the class I

[do it then]… everyone tries to do things… but some of them are really good" (Peter). "Are you good at it?" (Interviewer). "No" (Peter).

Rather than re-engage in music, Peter described his ambitions to do more acting in school plays and musicals. He had already received some acclaim from friends and family for his performance at primary school in Joseph and the Amazing Technicolour Dreamcoat. Although in Year 7 he had decided not to get involved in theatre groups straight away, he still planned to get involved in Year 8. Peter's acting ability forms, in some sense, an emotional backstop, serving as an 'ace in the hole' to combat his loss of musical confidence.

Amy

<u>Preparation</u>

Would you say you are a musical sort of person?

"Yes. I think so… but I'm not one of those people that go to every musical and want to play music 24/7, but I do like music".

Amy's journey towards becoming a pianist began when her father brought down his old electric keyboard from the attic, that he had owned since boyhood. "I had no idea what I was doing to start off with… I bought myself some books that showed me all the letters. I got paper and wrote the letters on and stuck them onto the keys so I knew where they were… Then, I got onto private lessons and [now] I know how to read music". Taking piano lessons made a significant impact on Amy's life out of school. "I used to be playing out a lot and doing nothing really… now I've got the piano, I'm a lot happier and I'm doing something, like an instrument, that I like and it's fun" (Amy).

Her parents were very supportive of her piano playing, despite them having "no clue about piano" (Amy). "They take me to lessons and they all come with me when I'm taking my exam and they'll buy me all the books and everything that I need, so they do support me… I'm the first person in the family to play an instrument and to carry on to grade three"

(Amy). She mentioned being inspired by her piano teacher, who was fairly close in age to Amy (17 years). “I want to teach as well. I want to teach people to play the piano but I need to get to grade five to do that” (Amy).

At the end of Y6, Amy was preparing for Grade III and was finding her practice difficult to cope with. “It used to be really easy and I used to just like playing, but now it’s got harder… Sometimes I do, before I come to school, 15 or ten minutes, and then, when I get back, break it up a bit so it’s not just sitting down for half an hour and just playing” (Amy).

Although she hardly mentioned primary school music, she was quite expressive about her hopes for music at school after transition. “In the school that I’m going to, they do a lot of music and they have a lot of concerts... there is a whole music studio in their school… so I might... learn a bit in school as well” (Amy). She anticipated that she would continue with piano across the transition. “I’m definitely going to stick to piano because I’ve come a long way” (Amy).

<u>Encounter</u>

Would you say you are a musical sort of person?

“Yeah. I’m really into music…because I play music out of school and in school and I just do everything really”.

On arrival at secondary school, Amy was impressed by her new music teachers’ subject knowledge. “he can play nearly every instrument… it helps because he would know like a lot more about music as he’s got all them grades and qualifications”. Rather than join the keyboard club, which was below her standard of playing, Amy was invited to become the first ever, and only pianist in the school orchestra. This gave her confidence a boost. “They’ve never had a piano in the orchestra before so it makes me feel like special” (Amy).

Out of school, Amy had passed her Grade III and was now practicing for Grade IV. However this was becoming an increasingly challenging task. “My grades are getting a lot harder so

it's harder for me to practice for a long time whereas when they were easier I'd just practice all the time". Amy tried to manage this task by practicing in shorter bursts. "So I do like maybe 5 minutes and then listen to some music while I'm doing something else and then go back to the piano" (Amy).

She reported still being inspired by her piano teacher. "I might take music as a GCSE because my piano teacher took it and she like got an A Star… So might I take music as a GCSE and then I'll… teach" (Amy). She mentioned how her piano teachers' youth assisted her learning. "It helps to have a younger teacher because like we have more in common and it's easier to like listen to them and things" (Amy). However in this term she was told that her teacher would be leaving shortly to go to university.

<u>Adjustment</u>

Would you say you are a musical sort of person?

"Yeah…at home, if there's music on in the background on my telly… then I'm always like dancing about the room and like singing along while I'm doing other things".

In the third interview, Amy reported taking a more relaxed approach to learning piano in the first half of the term. "I learnt some Christmas songs just to get in the mood for Christmas and come January I wasn't in the mood really, for grades. I was a little tired out so I kept playing and that's when someone told me about YouTube and throughout January I was doing the tutorials" (Amy).

Also she reduced her time requirements for orchestra in relation to her more advanced knowledge of music theory. "Some of them can't read music so you have to wait there for them to learn their next note and it's a bit boring. So I did have a talk with Sir saying it was a little bit boring and he was, like, so depressed. And so he suggested that I come every other week" (Amy). This relieved a great deal of stress, as it meant that Amy need not rush home between orchestra and Girl Guides every Wednesday evening.

The potential problem caused by her piano teacher's announced departure for university was, in the end, negated, as Amy discovered that her family would be moving to another county at the end of Year 7. This meant she would have to find a new piano teacher anyway. Amy was quite relaxed about the problem, although she clearly contemplated the prospective loss of this resource. "She is still going to university but she's going in … I think it might be May so I'm going to try and get my Grade IV done before she leaves… '[We're moving to] a little village… so I'll find a teacher up there probably" (Amy).

After her break from exam pieces in the first half of the term, Amy was refreshed and ready to engage with music grade books again. "In February it started and I was like 'I want to do my grades'… I thought I'd just pull out my grade book and see if I can remember anything and all of a sudden it all came back and I ended up just playing all the way through my pieces" (Amy).

<u>Stabilisation</u>

Would you say you are a musical sort of person?

"Um, yeah. I would".

At the end of Y7, Amy maintained a strong musical identity. When asked why she thought she was musical, she repeated her rationale from term one. "Well I listen to a lot of music and I play the piano, and I like ... I just like listening to music and doing things to do with music" (Amy).

She reported increased dedication towards her Grade IV exams in comparison to the previous term. "I did start Grade IV in September, then I had a little break because - I don't actually know why I had a little break - and then I started again in... I've been like trying to do it for so long I just decided I'm just going to do it and just get it done with so I can start the next one" (Amy).

This was assisted by her decision to quit the school orchestra. “I just didn’t really want to go any more, ‘cause I didn’t really like it that much… So um... I just sort of quit. And instead of playing in the orchestra I just do piano at home ... because I need to focus on my grades more, because I’ve not got that long left” (Amy).

Her ambitions to become a piano music teacher and to achieve her Grade VIII qualification were still strong. “Once I’ve finished this one, I’ll probably start Grade V. And then go all the way up to Grade VIII. But that’ll be in like years and years” (Amy). “Do you aim to do things in the future that have got something to do with music?” (Interviewer). “I’d like to be like a piano teacher. Um .. I don’t know if I’d want to be like a professional… But I’d definitely like to be a teacher” (Amy).

Comparing Peter and Amy

Both Peter and Amy reported having high aspirations to play music professionally and independent motivation to learn their instruments at the end of Year 6. Both mentioned being introduced to these instruments by adults. Peter was taught djembe in school music class and Amy was introduced to the keyboard by her father when he brought an old machine down from the attic. However the timing of their introduction to these instruments and the social support available to them differed.

Amy began teaching herself the keyboard in Yea 4 and by the end of Year 6 was sitting Grade III on the piano. Her parents provide her with all the resources she needed to learn the instrument. Peter in comparison began learning the djembe at a sensitive time point – immediately before school transition. The change to a new school disrupted the continuity in his learning, and his attempts to increase his learning capacity by playing the djembe at home and getting individual tuition were blocked by his parents. This demonstrates that the difference in timing and support at the end of Y6 was critical to their future musical progression.

Another important factor was that Amy and Peter had different methods of gaining musical self-confidence. Peter often mentioned that he felt he was good at music because *other*

people told him so. Amy in comparison was motivated by attaining musical progression, which became highly structured and visible by taking the Grade system.

When Peter changed schools he was no longer able to generate acclaim from his peers by playing the djembe. His reports of beat boxing (poorly) in class and thereby gaining attention from peers illustrate how his musical confidence became more focused on gaining attention rather than on the display of refined skill. Although Amy mentioned feeling special when first chosen for the school orchestra, she never otherwise connected her social status to playing the piano. In fact her decision to quit the orchestra and focus on practicing at home illustrates her commitment to musical progression, rather than to attaining social acclaim.

In essence, Peter's reports indicate that he used music to gain general confidence, whereas Amy's reports indicated that she was more interested in acquiring musical skill for its own sake with the ultimate goal of teaching piano. Had Peter experienced continued social reward for playing the djembe, and had Amy experienced blockages to her musical learning across transition, their musical development might have been very different.

Chapter 3: Teachers' perceptions of change

Adolescents' music teachers were asked to complete a survey about each child's behaviour in music class at the end of each term. The survey, called 'The Musical Child in Development', gathered information on teachers' memories of the child's behaviour. Therefore we can use it to demonstrate change in teachers' views, and to indicate what changes *might* have occurred in adolescents' actual behaviours.

There are very few studies that report observer ratings of adolescents' behaviour across transition. In general, these studies ask independent observers trained by universities to write about adolescents' general behaviour (ethnographic observation), to rate adolescents' behaviour using a multiple choice format or to mark exact types of behaviour observed at timed intervals (systematic observation). They have found changes across transition in adolescents' friendships and social networks, concentration during lessons, behaviour towards teachers and use of social comparison in class. Of particular interest to English audiences are the studies of Galton, Hargreaves and colleagues[13] which use systematic and ethnographic observation methods. To our knowledge, Changing Key is the first study to make observations of adolescents' musical behaviours across transition.

Participants

The survey was completed once per term. The months of completion, descriptions of teachers and the adolescents whom they rated are given below. At primary school the researcher read the questions aloud to the three primary school music teachers in a structured interview. This changed at secondary school and music teachers were responsible for filling in each survey in return for a £5 book token. This change in administration allowed our researcher to interview the adolescents and deliver the surveys to music teachers in a single day per term.

[13] (1) Galton, M., & Wilcocks, J. (1983). *Moving from the Primary Classroom* (University of Leicester ed.). London: Routledge and Kegan Paul. (2) Hargreaves, L., & Galton, M. (2002). *Transfer from the Primary Classroom: 20 Years On* (University of Cambridge ed.). London: RoutledgeFalmer.

Table 5. Survey participants

	Adolescents being observed				Teachers			
	London	Bolton	Devon	Total	London	Bolton	Devon	Total
Y6 T3 (July, 2010)								
Male	3	3	4	10	1	0	0	1
Female	5	5	5	15	2	3	2	7
Total	8	8	9	25	3	3	2	8
Y7 T1 (September, 2010)								
Male	2	3	3	8	2	0	0	2
Female	3	4	5	12	1	3	2	6
Total	5	7	8	20	3	3	2	8
Y7 T2 (February, 2011)								
Male	2	3	3	8	2	0	0	2
Female	5	4	5	14	1	3	2	6
Total	7	7	8	22	3	3	2	8
Y7 T3 (July, 2011)								
Male	2	3	3	8	2	0	0	2
Female	5	4	5	14	1	3	2	6
Total	7	7	8	22	3	3	2	8

Survey design

Teachers were asked three sets of questions on adolescents' behaviour. The first set was about adolescents' musical accomplishment. Here we asked 19 questions, for example *How well does this child play an instrument?* Next we asked eight questions about social confidence, including *How well does this child express their opinions in class?* Then we asked about the children's mental health. This was covered by two questions on anxious behaviour (e.g. *How anxious do they become when improvising music?*), three questions on depressive behaviour (e.g. *How withdrawn are they in class?*) and three questions on aggressive behaviour (e.g. *How easily angered are they by other children in class?*).

The first questions on musical accomplishment and social confidence were designed by research psychologists for participants to answer about themselves. With permission from the original designers, these questions were adapted so that they could be asked of

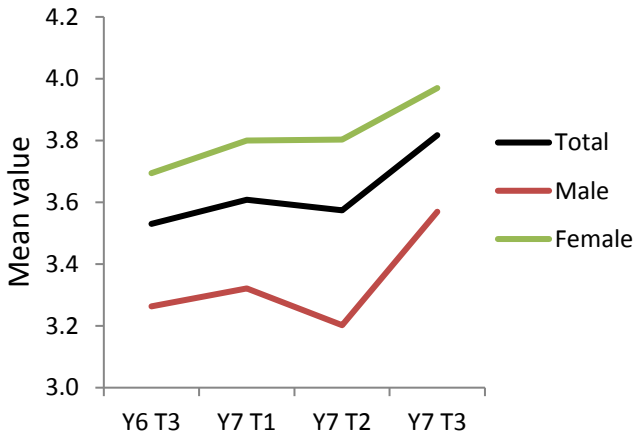
teachers regarding adolescents' behaviour. The questions on mental health were designed specifically for this study, drawing on prior academic research. The list of questions is supplied in the appendix. Also in the appendix, statisticians can find more information about how we formed the scales of musical accomplishment, social confidence and mental health, and about how we tested the results for statistical significance. We report significance levels in parentheses in the text below, for interested readers.

Results

The Musical Child in Development survey aimed to find out how adolescents' behaviours might change across transition, through the eyes of their music teachers. We generated these findings by calculating the average levels of each behaviour for each survey. These are given in tables as mean values (*M*) and as the standard deviation of scores about the mean (SD). The mean values are also displayed as graphs that show the change in each behaviour for all children, boys and girls. Each graph shows particular patterns of change. The numbers of children involved are reported as N (meaning *number of*) in the tables.

Musical accomplishment

Figure 3. Musical accomplishment



Musical accomplishment was observed to increase gradually across Y6 and Y7. This linear growth was significant (t = 1.984, *p* = 0.047). Accomplishment was rated as increasing the

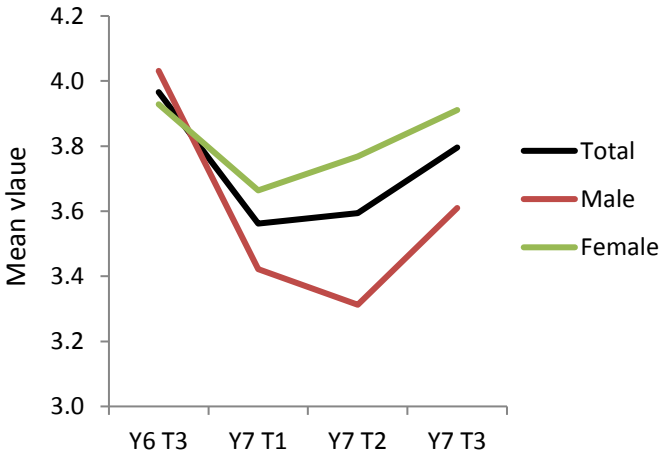
most between the second and third terms of Y7 (t = 2.210, df = 19, *p* = .047). Girls were observed to have greater musical accomplishment than boys at all times. The pattern was strikingly different between regions, with adolescents in London reported to have a clear increase in musical accomplishment, whilst those in Devon and Bolton were rated as being more stable.

Table 7. Musical accomplishment

		Total		Male		Female		Bolton		Devon		London	
	N	*M*	SD	M	SD	*M*	SD	*M*	SD	*M*	SD	*M*	SD
Y6 T3	21	3.5	0.8	3.3	0.6	3.7	0.9	3.3	1.0	4.0	0.5	3.3	0.8
Y7 T1	20	3.6	0.7	3.3	0.7	3.8	0.7	3.2	0.7	4.0	0.3	3.5	0.9
Y7 T2	21	3.6	0.7	3.2	0.8	3.8	0.5	3.2	0.8	3.7	0.5	3.8	0.6
Y7 T3	21	3.8	0.7	3.6	0.6	4.0	0.7	3.5	0.6	3.9	0.7	4.0	0.7

Social confidence

Figure 4. Social confidence



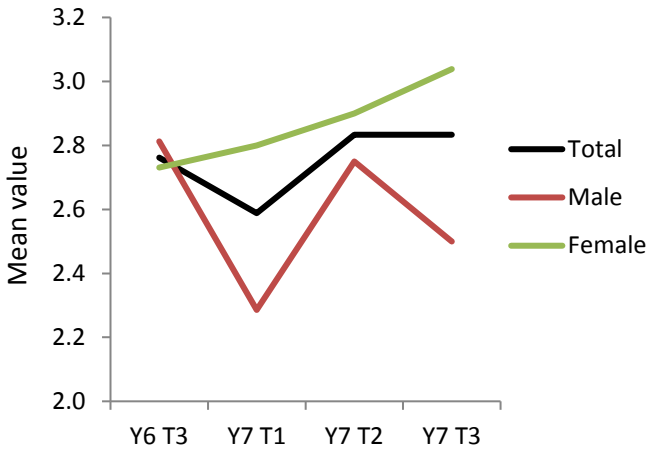
Teachers' ratings of social confidence were much higher in primary school than in secondary school. This appeared as a sharp drop in social confidence at transition (t = -3.125, df = 18, *p* = .006). The drop was steepest in Bolton. Before transition, confidence levels were similar for boys and girls. However after transition girls were observed to be more socially confident than boys. Across Y7, social confidence was reported to increase slightly but never attained levels as high as at primary school.

Table 8. Social confidence

		Total		Male		Female		Bolton		Devon		London	
	N	*M*	SD	M	SD	*M*	SD	*M*	SD	*M*	SD	*M*	SD
Y6 T3	22	4.0	0.7	4.0	0.6	3.9	0.7	4.1	0.8	4.0	0.5	3.8	0.7
Y7 T1	19	3.6	0.6	3.4	0.7	3.7	0.6	3.3	0.8	3.8	0.2	3.6	0.8
Y7 T2	21	3.6	0.8	3.3	0.9	3.8	0.8	3.3	1.0	3.6	0.7	3.9	0.8
Y7 T3	21	3.8	0.7	3.6	1.0	3.9	0.5	3.5	1.0	3.8	0.4	4.1	0.5

Anxious behaviours

Figure 5. Anxious behaviours



Statistical tests showed no significant change in ratings of anxious behaviours across time. This was true when testing separately for boys and girls. Patterns of anxious behaviour reported were inconsistent across locations between genders.

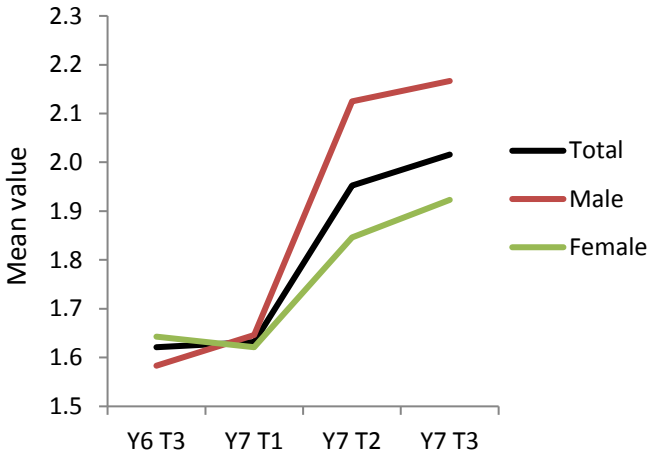
Table 9. Anxious behaviours

		Total		Male		Female		Bolton		Devon		London	
	N	*M*	SD	M	SD	*M*	SD	*M*	SD	*M*	SD	*M*	SD
Y6 T3	21	2.8	0.6	2.8	0.6	2.7	0.6	2.9	0.6	2.9	0.4	2.6	0.7
Y7 T1	17	2.6	0.6	2.3	0.4	2.8	0.7	2.5	0.6	2.7	0.7	2.5	0.7
Y7 T2	18	2.8	0.8	2.8	1.0	2.9	0.6	2.9	0.6	3.3	0.5	1.7	0.6

Y7 T3	21	2.8	0.8	2.5	0.8	3.0	0.7	2.5	0.6	3.3	0.4	2.6	1.1

Depressive behaviours

Figure 6. Depressive behaviours



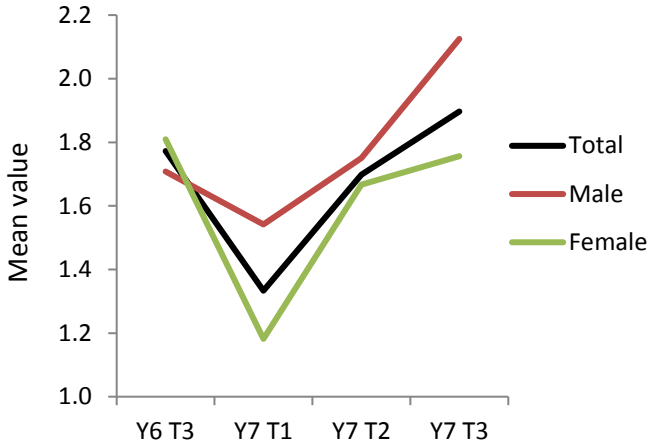
Depressive behaviours were rated as increasing throughout Y7 (t = 3.454, *p* = 0.001). This growth was particularly significant between the second and third terms (t = 2.157, df = 18, *p* = 0.045). There was no significant change in depressive behaviours between primary school and the first term of Y7, however by Y7 T3, depressive behaviours were much higher than at primary school (t = 3.021, df = 20, *p* = 0.007). In contrast to the graph, adolescents in London were rated to increase in depressive behaviours after transition then remain fairly stable throughout the year. However the graphed pattern was consistent between boys and girls, and for adolescents in Bolton and Devon. Therefore it is true for the majority of our sample.

Table 10. Depressive behaviours

		Total		Male		Female		Bolton		Devon		London	
	N	*M*	SD	M	SD	*M*	SD	*M*	SD	*M*	SD	*M*	SD
Y6 T3	22	1.6	0.5	1.6	0.5	1.6	0.6	1.7	0.6	1.6	0.5	1.6	0.6
Y7 T1	19	1.6	0.7	1.6	0.4	1.6	0.8	1.6	0.8	1.5	0.4	1.8	0.9
Y7 T2	21	2.0	0.8	2.1	0.9	1.8	0.8	2.0	0.9	2.1	0.7	1.8	1.0
Y7 T3	21	2.0	0.7	2.2	1.0	1.9	0.4	2.1	1.0	2.0	0.4	1.8	0.5

Aggressive behaviours

Figure 7. Aggressive behaviours



Aggressive behaviours were rated as dipping between Y6 T3 and Y7 T1, then increasing until the end of Y7. The sudden dip and then first wave of growth is significant at the 0.06 level (94% certain that the finding is not due to random chance). The linear growth in aggressive behaviours is 86.5 % reliable when tested statistically (t = 1.496, *p* = 0.135).

Table 11. Aggressive behaviours

		Total		Male		Female		Bolton		Devon		London	
	N	*M*	SD	M	SD	*M*	SD	*M*	SD	*M*	SD	*M*	SD
Y6 T3	22	1.8	0.8	1.7	0.8	1.8	0.8	2.0	1.1	1.5	0.4	1.8	0.8
Y7 T1	19	1.3	0.5	1.5	0.6	1.2	0.3	1.3	0.4	1.4	0.6	1.3	0.5
Y7 T2	21	1.7	0.7	1.8	0.9	1.7	0.7	1.9	1.1	1.7	0.3	1.6	0.8
Y7 T3	21	1.9	0.7	2.1	0.9	1.8	0.6	2.2	1.2	1.9	0.2	1.6	0.4

The relationship between musical accomplishment and mental health

Next we examined whether adolescents who were rated with greater musical accomplishment were also likely to be rated with higher social confidence and better mental health. We tested for association between pairs of behaviours using a test called Spearman's Rho. This test gives a score out of 1 for a perfect relationship or *correlation* between two areas (i.e. musical accomplishment and mental health). When a correlation is negative, this means that having more of one factor is accompanied by having less of the other (for example children who are less anxious are also likely to be more confident). When it is positive, having more of one behaviour is linked to having more of the other.

Table 12. Associations between behaviours

	Y6 T3	Y7 T1	Y7 T2	Y7 T3
Accomplishment and confidence	0.76	0.55	0.65	0.69
Accomplishment and anxiety	-0.27	0.10	0.36	-0.12
Accomplishment and depression	-0.52	-0.65	-0.37	-0.45
Accomplishment and depression	-0.22	-0.43	-0.40	-0.44
Confidence and anxiety	-0.42	-0.30	0.28	0.17
Confidence and depression	-0.81	-0.79	-0.66	0.19
Confidence and aggression	-0.66	-0.49	-0.46	0.35
Anxiety and depression	0.30	0.20	0.29	0.65
Anxiety and aggression	-0.04	0.09	0.38	0.47
Depression and aggression	0.75	0.56	0.35	0.46

The test revealed that musical accomplishment was highly related to social confidence at each time point surveyed. Having greater musical accomplishment was also generally accompanied by lower levels of anxious, depressive and aggressive behaviours. In particular, children rated with greater musical accomplishment were also rated as having lower depressive behaviours. Teachers who gave higher scores for anxious behaviours also tended to give higher scores for aggressive and depressive behaviours, meaning that they tended to rate certain children as being either high or low in all three areas. In particular, depressive and aggressive behaviours were closely related.

Summary

The survey found that teachers' average ratings of all children's musical accomplishment increased steadily across transition and throughout Y7. This fits well with interview reports from adolescents who only had formal musical training in Y6 during music class at school. These adolescents reported significant gains in musical knowledge as a result of the start from scratch process applied in secondary school classrooms. Also many of these adolescents developed musical aspirations in relation to being able to sign up for instrumental learning and extracurricular activities. By the end of the year, these adolescents reported composing and performing more independently and at a higher level than they had been at primary school, and our teachers' ratings concur with this.

Teachers' ratings indicated that social confidence dropped between Year 6, Term 3 and Year 7, Term 1. We did not question adolescents on how socially confident they felt in class. However they did answer questions about how confident they felt when learning and creating music. Many adolescents reported feeling more confident about their musical abilities in the first term of secondary school, which is at odds with the teachers' observations. Our interpretation of these findings is that even though adolescents might have felt more confident, they might have appeared submissive to teachers given that they were adjusting to their first term at a new school. Previous research has observed that adolescents are generally more reluctant to express themselves in front of their teachers and new peers in the first few months of secondary school[14], before they get to know people well.

Interestingly teachers noted that adolescents were becoming generally more unhappy throughout the year. This might relate to adolescents' continued reports of school work pressure during Year 7, which inhibited musical endeavours and structured activities for several in our sample. Another interpretation is that adolescents were becoming less enthusiastic about school work in general. In other studies adolescents report being temporarily excited about the move to specialist teaching and to higher quality learning

[14] See for example: Measor, L., & Woods, P. (1984). *Changing Schools*. Milton Keynes: Open University Press.

resources, but then their attitudes to school and to school work decline when this 'honeymoon' period wears off. Many adolescents in Changing Key had realised that Year 7 was the beginning of a long haul up to GCSE, and several were daunted by this and were unconfident learners.

Finally we observed a dip in aggressive behaviours in the first term of Year 7 then an increase, although these results were more than 5% due to random chance. Like our interpretation for social confidence, this dip might have occurred as adolescents' behaviours were supressed in the presence of strangers in Year 7, Term 1. However, this pattern might also relate to the music curriculum where adolescents progressed from learning basic music theory to more autonomous compositions and performances. The more active nature of tuition in the later terms might have facilitated opportunities for peer conflict in class.

Appendix

Analysis

The majority of Changing Key focuses on trends occurring in musical development across children, schools and localities. This provides information that can be generalised nationally. A subset of information, presented in the identity section, is analysed in order to demonstrate how individual children develop differently. The two types of data (interview and survey) are analysed separately, and their findings are discussed in relation to each other at the end of the Chapter 3. In research terms, Changing Key is a mixed methods study.

The project team met several times at the start of the project to discuss how to analyse the interview data. We decided to create an initial set of categories (codes) based on the topics of the interview questions (e.g. family, friends, school music, learning an instrument) and on our prior knowledge of common changes in psychology at school transition (e.g. confidence, identity). The first set of interview data were coded into these categories using a freeware program for qualitative data analysis: Weft QDA.

At first we had over 30 categories in our coding system. These were reconfigured as we coded the data. After coding the second set of interview data we chose to focus on the types of musical activity most frequently discussed by the adolescents. It was apparent that the most salient changes in adolescents' psychology took place within, and in relation to these activity 'settings'. However, specific psychological phenomena, such as identity change and musical self- confidence[15], developed across these different activities. This distinction informed our choice to report adolescents' musical activities and identity development separately.

We paid special attention to the identity section by analysing adolescents' answers to the question *do you think you are a musical type of person* by using thematic and numeric

[15] In developmental psychology, self-confidence in a particular subject area is referred to as 'self-concept'. This is distinct from self-esteem which refers more to one's general self-evaluation.

methods. First we counted the number of positive, undecided and negative responses and displayed these using charts and figures. We presented the general trend in number of reports across time, then focused on individual patterns of identity change. Next we categorised the main reasons given by adolescents for why they were musical or not. We analysed these in relation to whether adolescents' musical identities were stable or changed across transition.

Next, six case studies were chosen to represent contrasting stories of musical development. We selected the cases so that we had an equal spread of gender, musical experience and barriers/facilitation to musical development in the adolescents' environment. Of these six, two were chosen for the final report. These two demonstrate how adolescents' musical progression can be similar in Year 6 then diverge after transition as a result of differing access and exposure to musical resources and different psychological approaches to identity development.

Finally, we analysed the survey data using the IBM computer program SSPS. More information on the quantitative analysis can be found in section 4. In summary, the average changes in musical behaviour, social confidence and mental health were compared across time.

Interview schedule

Primary school

1) Musical identity

1. What music do you normally **listen** to?

2. How do you normally go about listening to music?
   e.g. MP3 player, internet, television, radio
   e.g. as background music for homework, with friends etc.
   - How long have you been like this?

3. If you do any **practical music** what do you do?
   e.g. playing an instrument, voice, composing, musical acting
   - How long have you been like this?

4. Do you aim to do **things in the future** that have something to do with music?

5. Would you say you are a **musical sort of person**?
   - (if answers yes/no) Can you tell me a bit about that?

6. How much does **music matter** to you?

7. Thinking back on the questions that I've just asked you, what do you think this will be like **once you've changed schools**?

8. Thinking back on the questions that I've just asked you, does any of this make you feel particularly **good**, or particularly **bad**?

2) Musical relationships and out of school experiences

These questions are about you and how you feel as a person.

9. Thinking about you and music, tell me about your **family** and music.
   - What do you think this will be like once you've changed schools?

10. Thinking about you and music, tell me about music in the **area where you live**.
    - What do you think this will be like once you've changed schools?

11. Thinking about you and music, tell me about your **friends** and music.
    - What do you think this will be like once you've changed schools?

12. Do you learn an instrument or voice in **special lessons** just for you?

- What do you think this will be like once you've changed schools?

13. Thinking back on the questions that I've just asked you, does any of this make you feel particularly **good**, or particularly **bad**?

3) School music education

Now let's talk about music in school.

14. Tell me about the **things you learn** in music lessons at school
    - And what do you expect this will be like in your next school?

15. Tell me about **what sort of things your music teacher does** when they teach you music.
    - And what do you expect this will be like in your next school?

16. Now tell me about **your personal way of learning music.**
    - Do you think there's a difference between your school teacher's approach and yours?
    - And what do you expect this will be like in your next school?

17. Tell me about any other **musical activities** that you're involved in at school that we've not talked about already.
    - And what do you expect this will be like in your next school?

18. Thinking back on the questions that I've just asked you, does any of this make you feel particularly **good**, or particularly **bad**?

Secondary school

1) Musical identity

19. What music do you normally **listen** to now that you've changed schools?

20. How do you normally go about listening to music now that you've changed schools?
    e.g. MP3 player, internet, television, radio
    e.g. as background music for homework, with friends etc.
    - How long have you been like this?

21. If you do any **practical music** what do you do, now that you've changed schools?
    e.g. playing an instrument, voice, composing, musical acting
    - How long have you been like this?

22. Do you aim to do **things in the future** that have something to do with music, now that you've changed schools?

23. Would you say you are a **musical sort of person** now that you've changed schools?
    - (if answers yes/no) Can you tell me a bit about that?

24. How much does **music matter** to you now that you've changed schools?

25. Thinking back on the questions that I've just asked you, does any of this make you feel particularly **good**, or particularly **bad**?

2) Musical relationships and out of school experiences

These questions are about you and how you feel as a person.

26. Thinking about you and music, tell me about your **family** and music now that you've changed schools.

27. Thinking about you and music, tell me about music in **the area where you live** now that you've changed schools.

28. Thinking about you and music, tell me about your **friends** and music now that you've changed schools.

29. Do you learn an instrument or voice in **special lessons** just for you after having changed schools?

30. Thinking back on the questions that I've just asked you, does any of this make you feel particularly **good**, or particularly **bad**?

3) School music education

Now let's talk about music in school.

31. Tell me about the **things you learn** in music lessons at school.
    - Is this any different to primary school?

32. Tell me about **what sort of things your new music teacher does** when they teach you music.
    - Is this any different to primary school?

33. Now tell me about **your personal way of learning music.**
    - Do you think there's a difference between your new music teacher's approach and yours?
    - Is this any different to primary school?

34. Tell me about any other **musical activities** that you're involved in at school that we've not talked about already.
    - Is this any different to primary school?

35. Thinking back on the questions that I've just asked you, does any of this make you feel particularly **good**, or particularly **bad**?

Survey questions

The Musical Child in Development Survey

Musical Accomplishment

How well does this child…

9 Understand music notation
10 Sing
11 Concentrate when doing music
12 Understand rhythm and beats
13 Play an instrument
14 Learn from other people when doing music
15 Be confident when playing music
16 Know things about music
17 Use computers to do music
18 Improvise music
19 Join in and participate in music
20 Talk about music
21 Keep in time
22 Be tolerant of other people's views about music
23 Write songs or make up music
24 Practice music
25 Listen to music
26 Pass music exams
27 Teach other people to do music

1 = not at all, 5 = very well

Social Self-Efficacy

How well does this child…

1 Express their opinions when other classmates disagree with them?
2 Become friends with other children?
3 Handle talking with an unfamiliar classmate?
4 Work in harmony with other children?
5 Tell other children that they are doing something that they don't like?
6 Impart their sense of humour in a healthy manner?
7 Succeed in staying friends with other children?
8 Succeed in preventing quarrels with other children?

1 = not at all, 5 = very well

Mental Health

Now thinking about their emotional behaviour…

28 How nervous do they become when performing music that they have practiced?
29 How cheerful are they generally in class?*
30 How anxious do they become when improvising music?
31 How verbally and/or physically annoyed do they become when they don't get their own way?
32 How much do you think they are supported emotionally by their friends in class?
33 How worried do you think they get about sitting tests or meeting deadlines?
34 How easily angered are they by other children in class?
35 How withdrawn are they normally in class?
36 How much do you think they are supported emotionally by their family/guardians?
37 How aggressive are they with other children in class?
38 How unhappy do you feel this child is generally?
39 How much do you think they are supported emotionally by their teachers at this school?

1 = not at all, 5 = very

***** Reverse coded

Internal consistency

As displayed above, the multiple choice answers were numbered one to five for each question. Scoring one meant that the teacher observed a low amount of a particular behaviour in that child (e.g. *not at all anxious*), whilst five constituted a high amount of that behaviour (e.g. *very anxious*). In quantitative research if each respondent consistently ticks similar numbers (e.g. one or two) within a set of questions, even if the numbers chosen differ between respondents, then the set of questions are thought to have good internal consistency. If the internal consistency is 60% or above, then the questions are thought to represent the same thing (e.g. social confidence). In Changing Key, all our sets of questions had good internal consistency. Therefore we averaged each child's scores within those sets to give an overall 'measure'.

Internal consistency (out of 1)[16]

	Y6 T3	Y7 T1	Y7 T2	Y7 T3

[16] The numbers of measurement are generated using a statistical technique called Chronbach's Alpha

Musical accomplishment	0.96	0.83	0.98	0.97
Social confidence	0.86	0.86	0.96	0.94
Anxious behaviour	0.71	0.63	0.87	0.74
Depressive behaviour	0.66	0.90	0.77	0.62
Aggressive behaviour	0.96	0.61	0.92	0.82

Significance testing

In statistics, patterns of change are not deemed to be reliable unless they pass a significance test. A significance test gives a probability value (*p*) which is a number out of one (e.g. .05) that indicates the extent to which findings are there due to random chance. By random chance we mean the likelihood that the patterns were caused by teachers ticking every answer in a meaningless way. We test the reliability of two types of patterns in this analysis, by using the t-test (t).

First we test whether the shape of the line for all children on each graph is reliable. Here we use a technique called linear growth modelling[17] which generates a statistic for the line and evaluates it using a t-test. Then we test for differences between each pair of survey results in time (e.g. Year 6, Term 3 compared to Year 7, Term 1) using a paired samples t-test. This essentially breaks the line on each graph into four parts. This test has an additional value 'df' which means degrees of freedom. Significance tests that are above .05 are reported in the text.

[17] For statisticians reading this report, we calculated linear growth curves in the Mplus statistical software package. Each term's measurement was set according to the month of study, being zero (Y6, July), two (Y7 September), seven (Y7 February) and ten (Y7 July). We report the t-tests for each slope generated.