

Institution: University of Roehampton		
Unit of Assessment: 23 - Education		
Title of case study: The <i>Sounds of Intent</i> Project: Employing a New Model of Children's Musical Development to Inform Curriculum Design, Teaching Strategies and Assessment		
Period when the underpinning research was undertaken: 2000–present		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Adam Ockelford	Role(s) (e.g. job title): Professor of Music	Period(s) employed by submitting HEI: October 2007 – present
Period when the claimed impact occurred: August 2013-2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words)		
<p>Pioneering research by Professor Adam Ockelford into the musical development of children across the spectrum of neurodiversity has enriched the educational experiences and progress of children with special educational needs around the world. Ockelford's research led to the development of the <i>Sounds of Intent</i> framework, which has been used to create, disseminate and embed new music curricula, resources, teaching strategies, qualifications and assessment protocols in a wide range of educational contexts. Through the implementation of the framework in special schools and in projects developed by voluntary organisations, <i>Sounds of Intent</i> has transformed the lives of children through the power of research-informed music education.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>Adam Ockelford's research identified a dearth of educational research into how children with severe, or profound and multiple learning difficulties (together known as 'complex needs') develop musically, how they learn and, therefore, how they may most effectively be taught. This led him to develop the <i>Sounds of Intent (Sol)</i> framework. The <i>Sol</i> framework sets out a model of how our capacities to understand, produce and interact through music develop in childhood. The framework is divided into three domains of musical engagement – reactive, proactive and interactive – which are extended over six key phases of development that build on one another (R1, R2). <i>Sol</i> was initially conceptualised in the context of those with severe or profound and multiple learning difficulties. However, it covers the full span of the capacity to engage with music, from the stage at which auditory processing starts (typically in utero), to musical 'maturity', in which there is an appreciation of the emotional, social and cultural aspects of music as an art form.</p> <p>The first four phases of the of the <i>Sol</i> project (2001–2011) encompassed analysis of the initial datasets, creation of the first <i>Sol</i> frameworks of musical development, their consequent updates and assessment of the efficacy of the materials and related teaching strategies from over 20 schools. These were documented in the <i>Sol</i> Impact Case Study submitted by Professor Ockelford to REF2014 (R1, R2). From the outset of the research (R3), it became clear that the systematic observation of children with complex needs can offer unique insights into how musical abilities develop more generally. Consequently, the first models of musical development were contextualised in contemporary thinking on 'neurotypical' musical development and the 'zygonic' conjecture, a term which lies at the core of the new interdisciplinary field pioneered by Ockelford, termed 'Applied Musicology'.</p> <p>The 'zygonic' conjecture is a psychomusicological theory that seeks to explain how humans intuitively make sense of music. Its central contention is that sounds become music when listeners intuitively imbue them with a perceived sense of derivation from one another that arises from imitation (R1, R2). This occurs at three levels: 'events' – the shortest perceived units of sonic activity in a given musical context; 'groups' – sounds that are characteristic enough to be recognised as musical entities in their own right; and 'frameworks' – the mental representation of series of intervals in the domains of pitch and time that are reified according to probabilistically determined models, based on previous listening experience (R2). Events, groups and frameworks make successively greater demands on cognitive processing. <i>Sol</i> takes this conjecture and maps it onto children's musical development, in the belief that the evolution of musical understanding through childhood is likely to reflect this threefold hierarchy of musical structure. This conjecture</p>		

and its mapping onto children's musical development is the core research insight which lies at the heart of the *SoI* framework.

Research into the development of musical abilities through the observation of children across the spectrum of neurodiversity led to the formulation of a new set of questions regarding human potential (**R4**). By observing people who function at the extremes of natural human variation, we can better understand the ordinary, everyday, musical experiences that are characteristic of us all, potentially revealing the individual musicality of each person. Having established that all humans are musical by design, **R4** shows that most of our musical abilities are acquired without conscious thought or effort when we are still in our early years. This characterises a further iteration of the *SoI* framework, '*Sounds of Intent* in the Early Years' (*SoI-EY*), the principal development from a research point of view since 2014, which sets out how *all* children develop musically (**R5**).

3. References to the research (indicative maximum of six references)

R1 Ockelford, A. (2008) *Music for Children and Young People with Complex Needs*. Oxford: Oxford University Press. ISBN: 9780193223011. Available on request.

R2 Ockelford, A. *et al.* (2011) *Sounds of Intent*, Phase 2: approaches to the quantification of music-developmental data pertaining to children with complex needs, *European Journal of Special Needs Education*, 26(2), 177–199. <https://doi.org/10.1080/08856257.2011.563606>.

R3 Ockelford, A. (2012) *Applied Musicology: Using Zygonic Theory to Inform Music Education, Therapy, and Psychology Research*. New York: Oxford University Press. ISBN: 9780199607631. Available on request.

R4 Ockelford, A. (2017) *Comparing Notes: How We Make Sense of Music*. London: Profile Books. ISBN: 9781781256039. Listed in REF2.

R5 Ockelford, A. and Voyajolu, A. (2020) 'The development of music-structural cognition in the early years: A perspective from the *Sounds of Intent* model', (in) *Essays in Applied Musicology: A Common Framework for Music Education and Music Psychology Research*, Ockelford A., Welch, G. (eds), London: Routledge, pp. 13–63. ISBN: 9781472473585. Available on request.

4. Details of the impact (indicative maximum 750 words)

SoI-based initiatives since 2014 have transformed the lives of children across the spectrum of neurodiversity through the power of research-informed music education, enhanced the capacity of their parents to engage them through accessible musical activities and supported the professional development of music educators, both in the UK and overseas. *SoI* informs music curricula in the great majority of special schools for children with learning difficulties in the UK, as well as programmes, activities and campaigns by voluntary sector organisations reaching and benefiting children with special needs.

In July 2013, 350 users were registered on the *SoI* website, with 100 schools actively entering data. The target stipulated at the time was to have 80% of special schools for children with learning difficulties signed up by 2015. There are currently 870 registered practitioners on the website – an increase of 149% since 2013 – representing more than 370 schools in the UK and overseas with 7,786 individual pupils assessed using the framework (**IMP1 p. A1**). The *SoI* framework is widely used in special schools across the UK with the framework being actively used in at least 25% of all special schools, and around 80% of the UK's special schools for children with complex needs (**IMP1 p. 4**). Schools have designed new music curricula based on the *SoI* framework (**R1, R2**), and its implementation has been highly beneficial for children and educators alike (**IMP1, pp. 12–14**). Since its launch in 2012, the *SoI* website has had 11,300,000 unique visitors and there have been 3,262,528 individual downloads of the support materials made available on the website.

The curricula based on *SoI* have been implemented in the UK and overseas, informing the pedagogical approach to music learning in those institutions, and consequently transforming the lives of the pupils and their families as well as the teaching of their educators. In the Children's Trust School in Tadworth, for children and young people aged 2–19 years with acquired brain injury, *SoI* is used to support the *general* curriculum. During the 2017/2018 academic year, with the aid of a music practitioner employed by the *SoI* charity, a set of music activity cards based on

Sol was developed (**R1**) and have since been used by teachers and parents to engage children and young people with music both at school and at home (**IMP1, p. 37**). A new music curriculum based on *Sol* has also been implemented at Kingfisher School, having been incorporated into the assessment framework. The *Sol* approach and consequent benefits to the educators and children have been summed up by Kingfisher's music teacher in the following terms: '*Sol informs my thinking and decisions [...]. It helps me to identify occasions where I might be able to scaffold a child's response to encourage them into a more sophisticated interaction. As an assessment tool, it offers a consistent and rigorous means of data collection, and the website allows me to view and interpret data collected over time graphically – which is really helpful for reflecting on a child's development*' (**IMP2**). From 2017 to 2019, six special education centres for children with disabilities in Gujrat City, Pakistan, implemented a curriculum based on *Sol*, directly benefiting 682 children. On the application of *Sol* and its benefits to the children and educators involved, one trainer stated that '*How a student varies the complexity of their interaction and responses to music and the instruction setting can be categorised and charted for growth over time. I believe this approach solves the primary issue music educators in Pakistan have [...] understanding the student responses to music and incorporating the inclusion of [the] participants' profound disabilities in music education*' (**IMP3, p.10**). In October 2020, it was announced that the Malta Trust Foundation will fund a school for children with special needs, after being awarded €1,000,000 from its international partners and 15 Maltese entrepreneurs. The school will focus on providing high quality music education whose design is underpinned by *Sol* for all pupils with different abilities, from children with Down Syndrome, to those on the autism spectrum and children who are visually impaired (**IMP4**).

Several charities across the country – many of them already collaborating with special schools – have also implemented *Sol* into their projects since 2014, to the benefit of hundreds of children and their families, including some of the most disadvantaged in the country. In 2016, Live Music Now (LMN), an organisation that works across the UK to deliver music programmes in special schools, launched a training scheme which embeds *Sol* principles. This was for musicians working in special schools, and it enabled these practitioners to devise and deliver music-educational activities targeted precisely at children's music-developmental levels (**R2, R3**). In 2017, LMN estimated that around 15 of those schools in which they ran projects used the *Sol* framework (**IMP1, p. 28**). *Sol*'s importance was recognised by LMN's Strategic Director who stated that using the framework '*has not only added a level of rigour and depth to our work in special schools, but [has] also helped us to attract additional funding to offer more musical opportunities to some of the most disadvantaged children in the UK*' (**IMP5**).

The charity Soundabout has used the *Sol* framework in its support for people who have complex needs to interact through music and sound, working with Music Education Hubs and special schools across the UK. Through their network of music specialists, Soundabout has provided training in the use of *Sol* to over 120 special schools (**IMP1, p. 8**). From 2015 to 2018, they implemented a 10-week inclusive music programme, the first of its type to be designed using children's varying levels of musical development, which were identified in the *Sol-EY* framework (**R2, R4**). This programme reached over 200 young children in 27 Children's Centres in England over three years. The results are a testament to the benefit of *Sol* on these young children: there was a clear increase in the children's music-developmental progress, listening and attending skills, self-confidence and self-awareness as well as in feeling and behaviour management. By May 2017, 2,700 resources had been downloaded from the *Sol-EY* website and 2,057 research materials accessed (**IMP6**). The Soundabout CEO states that '*These findings are highly significant for everyone concerned with the education and care of young children who are developmentally delayed and show what we have always suspected – that music can make a real difference to these children's lives. [...] The legacy of this fully inclusive early years project is powerful evidence that every child [...] should have the right to access to music, both for its own sake, and to support their wider development.*' (**IMP7**). This initiative culminated in a report that was presented at the House of Lords in March 2019, where Ockelford was joined by the Children's Commissioner for England and the CEO from Youth Music. In April, the Shadow Minister for the Early Years, Tracy Brabin, raised a question in Parliament about the importance of targeted music making provision in the early years, particularly for children with complex needs, citing the report (**IMP8**).

Another charity, The Amber Trust, supports visually impaired children across the UK to access music with initiatives underpinned by the *Sol* framework. Through several programmes, the Trust provides support to hundreds of families in the UK. They administer the annual Amber Music Awards which consist of funding for music lessons, music therapy sessions and the purchase or music instruments and/or technology. Applications to these awards have to be accompanied by a teacher's report in which the student's development is assessed based on the *Sol* framework, allowing the trustees to measure the progress of their hundreds of beneficiaries, upon which the decision to continue funding is based. Since 2013, a total of 1,566 awards were made, distributing a total of £897,005 (IMP1, A1). In 2017, The Amber Trust launched 'Little Amber', a service for visually impaired children up to the age of five. This service has two components: resources designed to match children's levels of musical development set out in the *Sol-EY* framework (R2, R4, R5), and home visits by specially trained practitioners, who use *Sol-EY* to devise activities and chart children's musical development. To date, 116 families have benefited from the programme (IMP1, A1–A2). Reflecting on the impact that the Little Amber initiative had on her son's life, the mother of a blind three-year-old child stated that *'I think [the sessions with the Little Amber practitioner] has put him out of his shell, because he can express himself quite a lot through music. I think it has given him confidence, and me confidence to try new things with [child's name]'*. (IMP9). In the same video, the chair of Trustees noted that *'there are families who say to us that seeing their children smile when they heard a song, or start singing and joining in, engaging, copying notes on a piano, is the very first positive activity they have seen. It suddenly makes them realise that the child has a life ahead'*.

Another initiative, 'AmberPlus', was launched in September 2018 in partnership with Jessica Kingsley Publishers and funded by the MariaMarina Foundation. AmberPlus is for young people aged between 5 and 18 who are visually impaired and have complex needs, working along similar lines to the Little Amber project. Since 2018, AmberPlus has provided direct support to 71 families. They have each received a set of resources, which have been made freely available to *all* families online (IMP1, A1–A2). These resources were developed using the *Sol* framework. They consist of the ***Tuning In Music Book*** and a deck of *Tuning In Music Activity Cards*, written by Ockelford, containing over 300 musical activities designed to nurture musical engagement, promote wider learning, development and wellbeing. In addition, The Amber Trust also runs group sessions based on *Sol* principles – entitled 'Music Maker's' workshops – in eight schools around the country, reaching 77 children (IMP1, A1–A2).

Martlets Music, a charity based in East Sussex that aims to help young people to develop their musical skills, created the 'Ready 4 School' programme in 2017. The programme consists of music workshops to develop speech and language in rising five-year-olds. The musical development is assessed using *Sol-EY*. Children from six early years centres were chosen to participate in fifteen workshops prior to starting primary school (up to February 2018). The results showed clear benefits both for the children and the music practitioners. Almost every child made at least one *Sol* level of progress, while 56% moved up two or more levels. Seventy-five per cent of the music practitioners and 91% of the early years practitioners and schoolteachers reported that their confidence in leading music activities increased, and 67% of the parents reported an increase in confidence to participate in music activities with their children (IMP10).

The Voices Foundation recently completed a two-year project dedicated to improving the delivery of music for 0–5 year olds in London, involving 22 music practitioners in 70 early years settings. One of their resources is the book, *Inside Music Early Years: 0–5*, which was informed by the music-developmental levels identified in the *Sol-EY* framework (R5). The relevance of *Sol* for this project was recognised by the Voices Foundation CEO in 2017: *'Sol is helping our practitioners to develop a better understanding of what effective progression looks and sounds like in the Early Years. [...] Whenever professionals from different sectors come together, the most important thing is to develop the ability to communicate through a shared language [...] Sol is providing an excellent medium for developing this shared language and thereby is helping us to be more effective in all our work'* (IMP1, p. 33).

The significant increase in the number of schools where curricula based on *Sol* are being integrated demanded more training opportunities for music practitioners and educators. In response to this need, a *Sol* Postgraduate Certificate course was set up and has been run by the University of Roehampton since 2013. It offers students an introduction to the *Sol* framework (**R1, R2**), and provides a unique professional development opportunity to music practitioners who wish to work with children with learning difficulties. Since 2013, 65 students from the UK, Northern Ireland and Pakistan have graduated from the PG Certificate programme (**IMP1, A1**). The relevance of *Sol* in teacher training led LMN to raise money so that three of their musicians could undertake the PG Certificate mentioned previously (**IMP1, p. 28**). In 2018, a survey was conducted to gather information regarding the registered practitioners' opinions on the framework and how it influenced their professional practice. From the 23 replies to the survey, 17 – most relating to work in special schools – indicated that the practitioner concerned would use the framework in their professional lives (**IMP1, pp. 33–34**). One student stated that *'I have found the framework and course have greatly enhanced my approach to teaching music in SEND and dementia settings. I have a much better understanding of the development of musical abilities in SEND children, how do tailor activities to individual pupils, and how I can best support all students' needs simultaneously within classroom settings'* (**IMP1, pp. 33–34**). Another former student stated that *Sol* *'is a much needed and systematic approach for educators to understand the variety of ways in which students with moderate to severe disabilities relate to all of the major areas associated with a music education experience'* (**IMP3, p. 10**).

5. Sources to corroborate the impact (indicative maximum of 10 references)

IMP1 *Sounds of Intent* report 2020. This document includes **A Report on Sounds of Intent and Sounds of Intent in the Early Years** (2018) and the December 2020 Addendum providing updates concerning the usage of the *Sol* website, the latest enrolment numbers for the *Sol* PG Certificate programme and the latest number from the Amber Trust initiatives. 2020.

IMP2 Email detailing the implementation of the new music curriculum based on *Sol* at Kingfisher School. 20/06/2018.

IMP3 *Brief report 2017-2019 of SEMPRES, ISME project Pakistan*. 2019.

IMP4 Article published on *Newsbook*, covering the Malta Trust Foundation project. 05/10/2020. newsbook.com.mt/en/e1m-raised-to-give-birth-to-music-school-for-children-with-different-abilities/

IMP5 Testimonial from the Strategic Director at Live Music Now. 10/07/2017.

IMP6 *Sounds of Intent in the Early Years (Sol-EY): promoting musical development for all children aged 0 to 5* report. 31/05/2017.

IMP7 Testimonial from the CEO of Soundabout provided at the launch of the Sounds of Intent in the Early Years Report. <https://www.soundabout.org.uk/projects/soi-early-years>. 2019.

IMP8 Video evidence showing the Shadow Minister for the Early Years, Tracy Brabin, citing the *Sol-EY* report. The video is available on the Minister's Twitter feed at <https://twitter.com/TracyBrabin/status/1123251915477934080>. 30/04/2019

IMP9 Video developed by The Amber Trust for Little Amber, documenting the impact of the project in one of their subscribers. 21/06/2019 https://www.youtube.com/watch?v=KV1EkZ-tziQ&feature=youtu.be&ab_channel=TheAmberTrust.

IMP10 Summary of findings of the Ready 4 School project. 2018.