

assessing, recording and promoting
musical development in children
with profound and multiple
learning difficulties



research
project
outcomes



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Introduction and Context

The *Sounds of Intent* research project was set up to investigate how children and young people with profound and multiple learning difficulties (PMLD) and severe learning difficulties (SLD) engage with music, and how their musical abilities, interests and preferences may evolve over time.

We hope that the research findings will be of relevance to the wide range of practitioners who offer education, therapy and care to those with SLD or PMLD – both music specialists and non-specialists alike. Indeed, the framework of musical development that is set out below potentially offers a common platform for the exchange of ideas about communication and interaction through sound in what is an increasingly interdisciplinary field of endeavour.

Since the late 1990s, core members of the *Sounds of Intent* research team have been exploring the nature and significance of music in the lives of children and young people with learning difficulties. Their first task was to survey the provision of music in special schools in England that catered for pupils with SLD or PMLD. This resulted in the *PROMISE* report, which was promoted at a national conference in London and circulated to schools. Subsequently, the research team held regular meetings with a panel of practitioners, many of whom had attended the conference, and had expressed a wish to become involved in further research.

The schools' data from the *PROMISE* survey suggested that significant *non-musical*

benefits appeared to accrue from pupils' participation in musical activity. These include reports of heightened communication skills, more focused, attentive behaviour, and emotional regulation. Nevertheless, in terms of education and development *in* music (as opposed to education and development *through* music), although headteachers were generally very positive about the benefits of their pupils engaging in music activities, until relatively recently, there was no nationally agreed music curriculum for those with SLD or PMLD. This may have contributed to practitioners' frequent failure to draw a distinction between *attainment* and *progress* for those in the earliest stages of musical development. This situation appear to have continued, notwithstanding the publication by the Qualifications and Curriculum Authority of 'Planning, teaching and assessing the curriculum for pupils with learning difficulties' – the so-called 'P'-Levels for music. An analysis of this document revealed serious weaknesses in the performance descriptions that were set out. A major difficulty is that the 'P'-levels were not rooted in the music-developmental research of children with SLD or PMD, since none existed, a problem that has been acknowledged by the QCA themselves in subsequent discussions with us. The QCA and OfSTED indicated that they would welcome evidence-based input into a reformulation of what reasonable expectations for the musical engagement, skills and interests of pupils with PMLD and SLD would be.

Accordingly, the *Esmée Fairbairn Foundation* was approached, and they agreed to provide funding from 2005 to 2007 for a two-year research project designed to explore the musical abilities

and developmental needs of children and young people – particularly those with the most profound disabilities.

The Sounds of Intent Project outcomes

The main aims of the *Sounds of Intent* project were:

- ❖ to evaluate and (if necessary) refine a preliminary framework of musical development for children and young people with PMLD that had previously been advanced;
- ❖ to investigate intervention strategies intended to promote musical engagement and development according to the ideas set out in the evolving framework;
- ❖ to make suggestions for the design of music curricula to ensure that these are aligned with differentiated developmental needs; and
- ❖ to design a web-based resource that could be used by practitioners to support effective intervention in and through music for those in the early stages of development.

The first three of these aims have been met in full and the last has been achieved in a basic web design that is now subject to ongoing refinement (see www.soundsofintent.org). A wide range of public outputs has resulted from the research activity (see *Related Project Publications* below).

In the first year of the project, the preliminary *Sounds of Intent* framework was used for the collection and analysis of individual pupil case-study data. Five schools were visited and information collected on 68 children and young people (through 630 observations). In the second year, 16 individuals were observed over a more sustained period: eight pupils in an inner-city school for 22 weeks, and eight pupils in a suburban school for seven weeks. In addition, the visits to schools (particularly in Year 2) allowed the researchers to discuss with participants how they used music and how this might be conceptualised using the *Sounds of Intent* framework.

The findings enabled the team to refine the framework and create a version that took account of the musical interests and abilities of children and young people with SLD as well as PMLD – see Figure 1.

Reactive, Proactive, Interactive

Extensive fieldwork and discussion with practitioners had suggested that musical behaviours can usefully be classified under three main headings: *Reactive*, *Proactive* and *Interactive*.

Examples of 'reactive' musical engagement (i.e. responding to musical stimuli) include:

- ❖ A's teacher notices that he often turns his head towards her when she sings to him, but she has never noticed him turn towards other sounds. [R.2.B (possible interpretation using the

Sounds of Intent framework – see Figures 1 and 2]]

- ❖ D cries whenever she hears the 'goodbye' song. It only takes the first two or three notes to be played on the keyboard for her to experience a strong emotional reaction. [R.5.D]
- ❖ F gets very excited when he hears a regular beat on the school's drum machine. [R.3.B]
- ❖ J's eye movements intensify when he hears the big band play. [R.2.A]

Examples of 'proactive' musical engagement (i.e. creating, causing or controlling music and musical sounds) include:

- ❖ M brushes her left hand against the strings of guitar that someone is holding near to her. There is a pause and then she raises her hand and brushes the strings again, and then for a third time. [P.2.A]
- ❖ P waves her hand more and more vigorously through an ultrasonic beam, creating an ever-wider range of swirling sounds. [P.3.C]
- ❖ R has been able to make a wide range of vocal sounds ever since he started school, but recently he has begun to make more melodious vowel sounds, which he repeats in short sequences. [P.3.A]
- ❖ S hums distinct patterns of notes and repeats them. Her favourite pattern sounds rather like a playground chant, and her music teacher notices that she repeats it from one day to the next, though not always starting on the same note. [P.4.A]

Examples of 'interactive' musical engagement (that occurs in the context of potential or actual communication) include:

- ❖ T's short, sharp vocalisations are interpreted by his teachers and carers to mean that he wants someone to vocalise back to him. [I.2.B]
- ❖ U loves 'call and response' games and joins in by making his own sounds. [I.2.A]
- ❖ W copies simple patterns of vocalisation – imitating the ups and downs of her Speech and Language Therapist's voice. [I.3.C]
- ❖ X flaps his hands with delight when his music therapist copies the rhythms he makes on a tambourine. [I.3.D]

The Sounds of Intent Framework

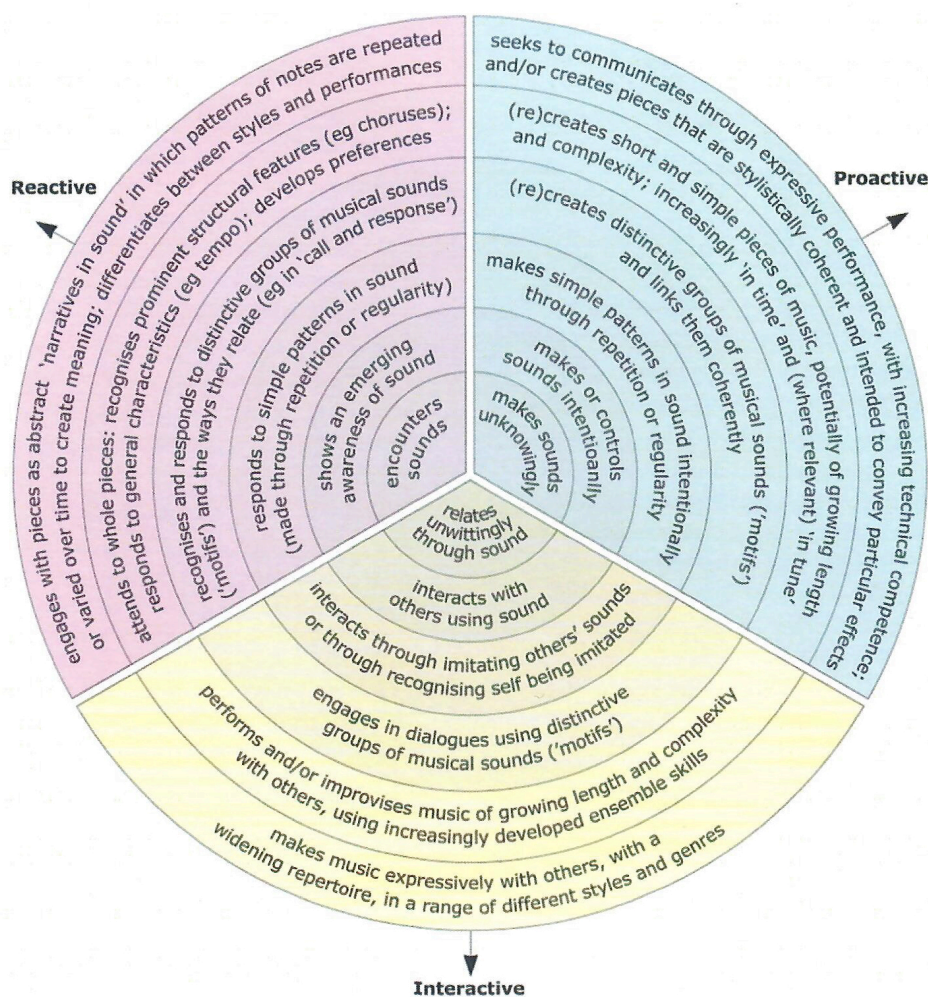


Figure 1 The revised *Sounds of Intent* framework

By combining many hundreds of observations such as these with the findings of 'mainstream' developmental music psychology (for example: Lecanuet, 1996; Papoušek, 1996; McPherson, 2006) and a music-psychological theory of how music makes sense to us all (Ockelford, 2005) –

the new *Sounds of Intent* framework was formulated. This took the three domains of engagement with music ('reactive', 'proactive' and 'interactive') and expressed them over six levels. These were represented as a set of concentric circles, in which progression is shown metaphorically

by moving from the inner ring outwards. Of course, the research team do not mean to suggest that musical development can really be segmented in this way, into hard and fast steps that a child or young person may or may not attain. All development is fuzzy and complex and contextually bound. The new framework is designed to be *indicative* – to show possible *locations* and subsequent *trends* – that may potentially be useful to practitioners as they consider how best to support their pupils' and clients' engagement with music over time.

For greater precision, each segment can be defined in terms of four *elements* as follows (see Figure 2). For example, the second segment in the reactive domain [R.2] – 'shows an emerging awareness of sound' – has four associated descriptors:

R.2.A 'shows an awareness of sounds – potentially an increasing variety';

R.2.B 'makes differentiated responses to the qualities of sounds that differ (eg, loud/quiet) and/or change (eg, get louder)';

R.2.C 'responds to musical sounds increasingly independently of context';

R.2.D 'responds to musical sounds linked to other sensory input'.

The majority of the 72 elements pertain *purely to sound and music* and these are shown in the shaded areas that appear directly beneath the segment headings. Some elements pertain to *sound and music being perceived or produced in other sensory contexts, or related to other things*; these are shown in the lower shaded areas. Two elements (P.5.D and P.6.C) refer to a young person's *developing technical capacity to perform music*.

Children and young people may be assessed by seeking to match observations of their engagement with music against the descriptors set out in Figure 2. Practitioners should expect profiles of ability and interest to vary in different contexts: it is the long-term trends that are likely to be most valuable in planning appropriate future provision.

	Level 1			Level 2			Level 3		
Segments	R.1 encounters sounds	P.1 makes sounds unknowingly	I.1 relates unwittingly through sound	R.2 shows an emerging awareness of sound	P.2 makes or controls sounds intentionally	I.2 interacts with others using sound	R.3 responds to simple patterns in sound (made through repetition or regularity)	P.3 makes simple patterns in sound intentionally, through repetition or regularity	I.3 interacts through others' sounds or through recognising self being imitated
Elements A	R.1.A is exposed to a rich variety of sounds	P.1.A the sounds made by life-processes are enhanced and/or involuntary movements are used to make or control sounds	I.1.A co-workers seek to stimulate interaction by prompting with sounds and responding empathetically to any sounds that are made	R.2.A shows an awareness of sounds - potentially of an increasing variety	P.2.A makes sounds intentionally, potentially through an increasing variety of means and with greater range and control	I.2.A sounds made by another stimulate a response in sound	R.3.A recognises and responds to the repetition of sounds	P.3.A intentionally makes simple patterns through repetition	I.3.A imitates the sounds made by another
Elements B	R.1.B is exposed to a wide range of music	P.1.B sounds are made or controlled through co-active movements	I.1.B co-workers model interaction through sound	R.2.B makes differentiated responses to the qualities of sounds that differ (eg loud/quiet), and/or change (eg get louder)	P.2.B expresses feelings through sound	I.2.B sounds are made to stimulate a response in sound by another	R.3.B recognises and responds to a regular beat	P.3.B intentionally makes simple patterns through a regular beat	I.3.B shows awareness of own sounds being imitated
Elements C	R.1.C is exposed to music in different contexts	P.1.C activities to promote sound production and/or control occur in a range of contexts	I.1.C activity to promote interaction through sound occurs in a range of contexts	R.2.C responds to musical sounds increasingly independently of context	P.2.C produces sounds intentionally in a range of contexts	I.2.C interactions occur increasingly independently of context	R.3.C recognises and responds to simple patterns formed through regular change	P.3.C intentionally makes simple patterns through regular change	I.3.C imitates simple patterns in sound made by another (through repetition, regularity and/or regular change)
Elements D	R.1.D is exposed to music and musical sounds that are systematically linked to other sensory input	P.1.D some activities to promote sound production and/or control are multi-sensory in nature	I.1.D some activities to promote interaction through sound are multisensory in nature	R.2.D responds to musical sounds linked to other sensory input	P.2.D produces sounds as part of multi-sensory activity	I.2.D interaction through sound involves activity that engages the other senses too	R.3.D responds to musical sounds used to symbolise other things	P.3.D uses sound to symbolise other things	I.3.D recognises own patterns in sound being imitated

reactive

proactive

interactive

segments

text-boxes

Level 4

R.4	P.4	I.4
recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')	(re)creates distinctive groups of musical sounds ('motifs') and links them coherently	engages in dialogues using distinctive groups of musical sounds ('motifs')

R.4.A	P.4.A	I.4.A
recognises and responds to distinctive groups of musical sounds - 'motifs'	(re)creates distinctive groups of musical sounds ('motifs')	imitates distinctive groups of musical sounds - 'motifs' - made by others (as in 'call and response')

R.4.B	P.4.B	I.4.B
recognises and responds to musical motifs being repeated or varied	links musical motifs by repeating or varying them	responds to others by using different musical motifs coherently (as in 'question and answer')

R.4.C	P.4.C	I.4.C
recognises the coherent juxtaposition of different musical motifs	juxtaposes different musical motifs coherently	produces musical motifs in the expectation that they will stimulate a coherent response

R.4.D	P.4.D	I.4.D
responds to musical motifs being used to symbolise things	uses musical motifs to symbolise things (eg in 'sound stories')	interactions form coherent patterns of turn-taking, with the possibility of some simultaneity

Level 5

R.5	P.5	I.5
attends to whole pieces; recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences	(re)creates short and simple pieces of music, potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'	performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

R.5.A	P.5.A	I.5.A
attends to whole pieces of music, becoming familiar with an increasing number and developing preferences	performs short and simple pieces of music, potentially of growing length and complexity, and increasingly 'in time' and (where relevant) 'in tune'	performs simple pieces simultaneously with others, sharing a common part

R.5.B	P.5.B	I.5.B
recognises prominent structural features (such as the choruses of songs)	improvises on familiar pieces of music, varying the original material in simple ways	performs with others, using increasingly developed ensemble skills and maintaining an independent part

R.5.C	P.5.C	I.5.C
responds to general characteristics of pieces (such as mode, tempo and texture)	creates short and simple pieces of music, potentially of increasing length, complexity and coherence, whose general characteristics may be intended to convey particular moods or feelings, and which may be linked to external associations	improvises with others, repeating, varying and/or building on the material that is offered in simple ways

R.5.D	P.5.D	I.5.D
responds to pieces through connotations brought about by their association with objects, people or events in the external world	has the physical capacity to produce short and simple pieces of music, potentially evolving to meet the needs of material of growing complexity and length	improvises with others, consciously offering material for them to use

Level 6

R.6	P.6	I.6
engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances	seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects	makes music expressively with others, with a widening repertoire, in a range of different styles and genres

R.6.A	P.6.A	I.6.A
develops a mature response to music, engaging with pieces as abstract 'narratives in sound'	plays or sings expressively using familiar conventions of performance, at the highest level producing original interpretations	is aware of, and emulates the expressivity of others' playing or singing in ensemble performance

R.6.B	P.6.B	I.6.B
becomes familiar with an increasing number of styles and genres and develops preferences	improvises on music in a familiar style or styles to convey desired effects, at the highest level producing original versions of existing pieces (as in 'jazz standards')	contributes own expressivity in ensemble playing to influence co-performers

R.6.C	P.6.C	I.6.C
becomes familiar with different performances of pieces and styles of performance and develops preferences	composes pieces in a familiar style or styles to convey desired effects, at the highest level producing original material judged to be of intrinsic musical value	improvises with others with stylistic coherence, sharing and developing material in increasingly sophisticated ways

R.6.D	P.6.D	I.6.D
becomes aware of how music as an abstract narrative in sound relates to other media (words, movement, etc) to create multimodal meaning)	technical proficiency develops to meet the demands of a widening repertoire	develops increasingly advanced ensemble skills, managing material of growing technical and musical complexity as part of a group

pure sound and music

sound and music related to other things

technical elements

The value of music

Without exception, all staff in the schools that participated in the research were enthusiastic about the benefits of music. A synthesis of the fieldwork observations and semi-structured interview comments with participants indicates that music offers a wide range of benefits that are musical and extra-musical (e.g. social, emotional, physical and intellectual). In particular, staff report that engaging in musical activities:

- ❖ provides motivation and stimulation, for example, 'promotes enthusiasm', 'inspires', 'raises interest', 'can be relaxing or exciting', 'is fun', 'supports positive change', 'provides focus and aids concentration' and 'creates a safe environment in which to explore';
- ❖ promotes emotional development, for example, 'allows experience of, and exploration into, a wider range of emotions', 'aids emotional growth', 'changes mood', 'conveys atmosphere' and 'reduces challenging behaviour';
- ❖ fosters intellectual development, for example, 'supports intellectual development towards the next stage', 'scaffolds learning', 'serves as an aid to memory' and 'enables skill transfer';
- ❖ enables physical development; for example, 'promotes body awareness and motor control', 'links an awareness of the wider environment to physical movement';

- ❖ supports social development; for example, 'encourages turn-taking and sharing', 'builds group bonding', 'helps develop group identity', 'assists in learning to be patient'; and
- ❖ promotes communication development; for example, 'develops verbal and non-verbal communication skills', 'promotes eye-contact, listening and interaction', 'supports speech and language development, as well as creativity', 'reduces frustration over limited communication skills', 'communicates emotion'.

This is an impressive response from practitioners and suggests that their value for music in schools is grounded in professional awareness of its diverse benefits. Their particular 'craft knowledge' is also echoed in many recent findings from the world of neuroscience and music. This emerging research field (e.g. Zatorre and Peretz, 2001; Peretz and Zatorre, 2003; Avanzini *et al*, 2003; 2005) reports evidence of the multi-faceted nature of music being represented in sites across the brain.



Activities and Resources

Taken together, the development of the new *Sounds of Intent* framework allied to the range of activities and resources suggested by teachers and therapists, provide evidence that it is possible to align music curricula with an evidence-based framework for mapping the musicality of children and young people with SLD and PMLD. There are some excellent music resources becoming available for this group and we believe that the *Sounds of Intent* framework will enable teachers and therapists to identify how best to use these to foster particular types of musical engagement and development. For example, the framework can be used with singing activities to engage pupils musically, emotionally and socially in line with the principles of the Government's flagship *Sing Up* programme.

Useful resources

Corke, M. (2002). *Approaches to Communication through Music*. London: David Fulton.

Lloyd, P. (2007). *Let's All Listen*. London: Jessica Kingsley.

Ockelford, A. (1996). *All join in!* London: RNIB.

Useful websites

www.ambertrust.org
www.experia-innovations.co.uk
www.handsfortalking.com
www.intensiveinteraction.co.uk
www.knockonwood.co.uk
www.qca.org.uk
www.singup.org
www.soundabout.org.uk
www.soundbeam.co.uk
www.tacpac.co.uk



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www.soundsofintent.org