

Music in early education and care settings for communication and language support¹

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Abstract

Musical activities are often an integral part of the home life of young children and their caregivers. Activities include songs and rhymes that coordinate the daily routine, as well as opportunities for learning and engagement in a wider world. Music groups for caregivers and young children are also included within programmes of activities for families in early education and care settings. Additionally, such settings may have specific targets and outcomes that seek to improve the life chances of young children in disadvantaged circumstances; one key target may be the development of young children's communication skills. There is the suggestion, based on evidence from large-scale studies, that young children from disadvantaged backgrounds lag behind their more advantaged peers in language skills. Music can help children develop language and the associated skills necessary to be ready for school. In the early education and care setting context, it can be seen that music group sessions may serve various non-music targets and outcomes. This chapter overviews the evidence that appropriate musical activities are beneficial to learning and language development, challenging a view that words are the best starting point for communication. It seeks to offer a model of an effective musical pedagogical approach, developed through action research with an interdisciplinary team of early childhood music-arts practitioners and speech and language therapists for caregivers and young children in early care settings. The chapter aids reflection on children's emerging communication through musical activities, as well as some practical ideas for working with children with communication difficulties. Finally, the main findings from two projects are presented as practical implications, seeking to contribute new knowledge about working with children and their caregivers through music in early education and care settings.

¹ Pitt, J., & Welch, G.F. (forthcoming), Music in early care settings for communication and language support, in M. Barrett, & G.F. Welch (eds.), *The Oxford Handbook of Early Childhood Music Learning and Development*, Oxford University Press.

Keywords: early childhood music, speech, language and communication needs, early childhood education and care, communication, interaction, musical play

Introduction: Early Education and Care Settings

Early education and care settings provide an environment for practitioners from different disciplines and backgrounds to work together with parents/caregivers and their young children, in the understanding that an enriched home environment is significant in the learning and development of young children (e.g., Waldfogel & Washbrook, 2010; Local Government Association (LGA), 2018; Del Bono et al, 2016). In addition, the relationship between early socio-economic and childhood development factors may be positively affected—cognitively, physically, linguistically, socially and emotionally—by engaging young children with the arts (APPGHAW, 2017; Clift, Mackenzie, & Bushell, 2007; Williams et al, 2015).

Early education and care settings are likely to be designed to meet the needs of the communities in which they are placed, although Rogoff (2003) argues that ‘experts’ may claim the right to determine child rearing practices, e.g., a health professional may advise on certain feeding/sleeping routines for an infant, which may lead families to question the validity of their own parenting practices. A universal, one-size notion of being a parent may be an unspoken discourse in these settings, with other versions of parenting that detract from such a conception being viewed as negative and deficient. In terms of musical practices, for instance, a universal, one-size notion of parenting may assume a particular appropriate repertoire and format (Pitt & Hargreaves, 2017a), e.g., everybody sits in a circle and the leader directs the session using songs and rhymes from the Western canon of

children's music. However, this may not accord with every family's idea about parenting, nor the language of the songs and their melodies, nor the instruments offered. Also, the related actions suggested may be completely alien (Young, 2018, p.109). The music making practices could inadvertently exclude some families as much as they include others. As a contrast, for a range of effective approaches, see [inspire-music](https://www.inspire-music.org/tags/early-years) <https://www.inspire-music.org/tags/early-years>, which is an online, evidence-based resource created by a National Working Group of experienced music educators, including researchers, in England.

Although early childhood and care educators are likely to value music and its place in the education of young children, Australian research into day-care centres suggests that staff are unlikely to be qualified musicians (Barrett et al., 2019). Similarly, in a more detailed case study of one ethnically diverse centre, Barrett and her team reported (2018) that, although music was valued, there was a lack of music activity written into policy, which meant that it was difficult to integrate music within every aspect of the school day, despite the staff team's enthusiasm. The case study identified some gaps in knowledge and skills amongst the early childhood educator workforce that made implementing a music curriculum challenging. The staff benefitted from “...*a cascade model of professional development in which one team member undertakes the formal Kodaly training and then mentors colleagues in the methods and techniques that she has learned*” (Barrett et al., 2018, p.234).

Music was seen as helpful to other areas of the curriculum and also as a useful tool for signalling elements of the school routine. Nevertheless, one of the challenges for staff was the perceived lack of experience or valuing of music in the home environment; children arrived reluctant to join in with the Kodály informed, nursery rhyme-based song repertoire. It could be that the home music culture was different, and the children experienced discontinuity between home and setting music cultures.

Nevertheless, parents seemed to value having a musical focus as part of an early childhood education and care setting in Australia, with 53% paying for additional music input each week (Barrett et al., 2018).

Groups of caregivers' (usually mothers') singing and making music with their young children appears to be a natural community activity. Trehub and Gudmundsdottir (2019) suggest that mothers are infants' natural musical-mentors by introducing them to singing experiences that nurture the bond between mother and child. A recent study that compared the perceptions of parents with those of practitioners found that parents perceived the emotional benefits of attending music groups with their young children most highly, whereas the practitioners prioritised the learning and development benefits (Pitt & Hargreaves, 2017b). This suggests perhaps that the motivations of professionals in offering music activities may not necessarily be aligned with the benefits derived by the participants. Nevertheless, the provision of family-focused music enrichment programmes in the local community can enhance child development. In the UK, for example, a fifteen-month initiative on the Isle of Wight—the *MusicStart* project—sought to integrate music making and singing as part of the everyday creative life of each island family with children aged under 5 years. Community health visitors distributed a specially designed music pack to families with children aged 0-2 years, supported by staff development for early years practitioners and music inputs for mother and baby groups. As a result, there was more singing and music in the family settings, music making was seen as a fun activity and parents reported that their children's language development was enhanced (Clift, Mackenzie and Bushell, 2007). Similarly, *Sing and Grow* – an Australian music therapy programme – was designed to strengthen family bonding and parenting skills through interaction using music (Abad & Edwards, 2004; Nicholson, Berthelsen, Abad, Williams, & Bradley, 2008). Various agencies referred families to the programme, including families facing socio-economic disadvantage, young parents and parents of children with a disability. Non-musical improvements

over time were noted for levels of parental irritability, activities with the child, parental mental health, child communication skills and child social play skills (Nicolson et al., 2008, p. 232).

The OECD² (2015) argues for high quality, play-based programmes to promote children's wellbeing, and acknowledge the family as being hugely influential on young children's learning and development. It recommends involving parents/caregivers in these activities. The suggestion is that investing early in the lives of children will yield significant rewards over time (OECD, 2015). The *Engaging Children Report* OECD (2018) emphasises the importance of positive staff-child interactions with high quality, developmentally appropriate activities, whilst also acknowledging the importance of involved parents in children's learning. Furthermore, skills required for the 21st century are argued to include creativity, critical thinking, communication and collaboration (UNDP, 2016, p.13) – all found in quality early childhood music education as described in the characteristics of effective learning in the early years foundation stage framework (DfE, 2017, p.10). However, access to quality music education for every young child is not universally available, even in a rich country such as England. Government policy can impact on children's rights to quality education and care. For example, in England, a policy of 30 hours free childcare for three to four-year olds was launched in 2017 to help mothers get back to work. Unfortunately, the cost per child for the best nursery schools who employ qualified teachers exceeds the amount paid by the Government through the scheme. The result has been the closure of many high-quality nursery schools (PSLA, 2017; NAHT, 2018). Working in early childhood education and care remains low paid (close to the minimum wage per hour) and low status, with those gaining qualified teacher status frequently leaving the sector to work in better paid areas of education, such as in the statutory sector for children from the age of 5 years. This means that the youngest children, in what can be argued is the most formative phase of life, may spend large parts of their day with the lowest paid and the lowest

² Organisation for Economic Cooperation and Development

qualified practitioners in the education sector. These practitioners may lack confidence in their abilities to engage in musical activities with the children in their care (Hennessey, 2000; Holden & Button, 2006), which can lead to reduced opportunities for children to engage in musical play.

Early childhood music educators have an important role in enabling their community-based music groups to be characterised by positive caregiver-child interactions, for both families and professionals, through musically playful approaches, promoting music's learning and developmental properties. In a music activity, young children can find their voice and exercise autonomy through developing their creative and critical thinking skills in collaboration with peers and adults. As reported above, successful engagement in music can enhance communication (*cf* Clift et al, 2007) and enable us to learn some universal truths about being human, together. This discourse about the learning potential of music groups is supported by research from several disciplines. These indicate overlaps, benefits and transfers (both near and far) between music and language, which have led to a growing body of evidence that musical interventions are beneficial in helping young children acquire language and communication skills, vitally important in preparation for schooling. The following sections explore these ideas further with an overview of relevant literature.

Music and language

Music and language: brain connections

The information conveyed by speech and music is very different, yet they are both organised temporally. At the neural level in the brain, overlaps have been identified (see Peretz, Vuhan, Lagrois & Armory, 2015) and the responses in the brain are similar in their processes of structural integration for both music and language (Patel, Gibson, Ratner, Besson & Holcomb, 1998). Hickok, Buchsbaum, Humphries and Muftuler (2003) found that the same area in the brain (the Sylvian

Fissure) was activated by both music stimuli and spoken stimuli, suggesting that an auditory-motor interface is necessary for both (see Patel, 2008, 2014).

The two domains both have form and structure (Lerdahl & Jackendoff, 1983), with increasing evidence to argue that the two domains are both distinctive and yet collaborative (Bidelman, Hutka & Moreno, 2013; Patel, 2014; Strait & Kraus, 2011). For example, music pathways in the brain have been found to help individuals regain the tonal and rhythmic aspects of spoken language when the speech area of the brain has been injured through stroke (Thompson & Schlaug, 2015). Bidirectionality between the domains of music and language has been illustrated amongst both tonal language speakers (Cantonese) and musicians, with each group demonstrating improved auditory perception, fluid intelligence and working memory compared to non-musician English-speaking control participants (Bidelman, Hutka & Moreno, 2013).

Music and language: evolutionary perspectives

It has been suggested that there was a divergence between language and music in modern humans; language emerged as a means to communicate thoughts immediately, and music to develop and sustain social interaction whilst integrating ideas across domains of experience, e.g., social, cultural, and emotional. Arguably, this diversity of expression allowed humans to acquire social and individual cognitive flexibility (Cross, 2001; Cross & Morley, 2010). Dissanayake (2000, 2010) has indicated that music is of fundamental importance in emotional bonding between parent and infant. Freeman (1997) also points to the use of music by our ancestors for bonding beyond the nuclear family. Language and music support social interactions in different ways; group music making seems to have its origins in our ancestry and its value may be emotional as well as social.

Infant Musicality

Hearing is a sense that develops early in the womb, with the foetus able to hear from 30-35 weeks in utero (Lecanuet, 1996, Lecanuet & Schaal, 2002). Pitch and timbre perception also start in the womb (Parncutt, 2009; Särkämö, Tervaniemi & Huotilainen, 2013). Infants prefer the human voice to other sounds (Fernald, 1992). Given this development, it is not surprising that infants in the first year of life reveal musical preferences (e.g., Nakata & Trehub, 2004; Ilari & Sundara, 2009; Corbeil, Trehub & Peretz, 2013), as well as an ability to discriminate between subtle pitch changes (e.g., Plantinga & Trainor, 2009; He, Hotson & Trainor, 2009). We know that infants prefer their mother's speech when it has a raised intonation and sing-song quality (Fernald, 1992). Additionally, infants influence the manner in which their parent sings to them (Nakata & Trehub, 2011; Takayuki Nakata & Trehub, 2004). Parents raise their pitch and slow their tempo when singing a lullaby to their child compared to when they sing the lullaby away from their child (Trehub & Trainor, 1998; Trehub et al., 1997b; Unyk et al., 1992). Infants have demonstrated early abilities to differentiate the rhythms and pitch contours of different language speech patterns (Nazzi, Bertoncini, & Mehler, 1998).

During musical play, infants and mothers have been found to adjust their interactions to the metrical structure of songs (Shifres & Español, 2004), and Van Puyvelde and colleagues (2010) found tonal synchrony between mothers and three-month-old infants. Over five hundred individual vocal exchanges were analysed to reveal that 84% reflected harmonic or pentatonic series around the major triad, and a further 10% were absolute or relative pitch imitations (Van Puyvelde et al., 2010). The finding that caregivers accurately repeat melodies (lullabies) time and again at the same pitch when interacting with their infant (Bergeson & Trehub, 2002) shows us how innately attuned we are expressing our musicality in early interactions with infants, as well as our own musical habits. This was demonstrated in seminal research around the theoretical notion of 'Communicative Musicality', posited as an innate human ability to appreciate and also to produce musically co-ordinated

‘narratives’ of expression and emotion (Trevarthen & Malloch, 2000; Malloch & Trevarthen, 2010, p. 4). These were conceptualised as occurring within infant-caregiver ‘protoconversations’ and allow for sustained shared empathetic meaning which follows a ‘musical-type’ structure of introduction, development, climax and resolution. Nevertheless, Young (2018) cautions us to remember that Trevarthen and Malloch’s theoretical idea has come to represent a particular ideological view of being a parent. We should remember that both parents and infants have a wide, flexible repertoire and way of interacting that is culturally situated, as well as based on the loving bonds they share (Young, 2018).

Music and language development

Communication skills are an important focus in early childhood; musical activities are understood to be a useful and effective way to help children speak and prepare them for reading and writing tasks when they get to school, not least because of the reported links between rhythm and pitch in children’s music making with temporal and spectral processing, and developing mastery in phonological development, reading and spelling (Anvari et al, 2002; Tierney & Kraus, 2011; Steinbrink, Knigge, Mannhaupt, Sallat, & Werkle, 2019). Music and speech both combine a series of individual elements: phonemes, pitches with established rules (grammar in speech, or music theoretical ideas) to generate meaningful utterances (see Jackendoff & Lerdahl, 1982; Anvari, Trainor, Woodside & Levy, 2002; Ockelford, 2017). Prosodic cues may help to understand the shape of phrases in both spoken and sung domains; the ends of clauses in speech tend to drop in pitch and syllables lengthen (McMullen and Saffran, 2004) and the prosodic aspects of speech (rhythm, tone, contour, pauses) and music perception are found to be equally affected in children with speech and language impairment (Sallat & Jentschke, 2015). Musical/rhythm-based interventions have been found to help the abnormal rhythmic entrainment to syllable patterns in speech found in those with dyslexia (Leong & Goswami, 2014, p.156-158).

Anvari, Trainor, Woodside and Levy (2002) found correlations between musical skills, phonological awareness and reading ability in four and five-year-old children. Putkinen, Tervaneimi and Huotilainen (2012) found that musical play at home, with parents singing with their children, correlated significantly with enhanced development of auditory abilities in early childhood. Nursery rhymes help with phonological awareness (see Harper, 2011) and a review of music education and literacy studies with young children (Bolduc, 2008) concluded that auditory perception, phonological memory, and metacognitive knowledge are all enhanced by musical activities. Because of its rhythmic characteristics, music may help young children to segment, rhyme and blend sounds (Degé & Schwarzer, 2011). Songs often have a repeated chorus where words can be rehearsed and practised many times as part of the song. Words of more than one syllable are broken down into their discrete syllable-units as they are sung. e.g., from ‘Row, row your boat’: “mer-ri-ly, mer-ri-ly, mer-ri-ly, mer-ri-ly, life is but a dream.” The complex three syllable word (merrily) is repeated four times and split into its constituent syllables. Music is also reported to benefit verbal intelligence, pre-reading skills and social-cultural (Gerry, Unrau & Trainor, 2012) and emotional behaviours (Kirschner & Tomasello, 2009, 2010; Rabinowitch, Cross & Burnard, 2013). It would seem that the skills necessary to identify language are musical in nature (including pitch and rhythm). Language, however, dominates in the early years and singing development has been thought to develop more slowly, at least in Western cultures, unless singing is integral to the child’s maternal culture (Tafari, 2008; Welch, 2016, 2019). Accurately producing words and melody together can be more challenging for significant numbers of young children than pitching the melody without words unless the culture supports such vocal behaviour. This contextual influence is reflected in toddlers singing in a home environment, where they have been found to have a wider melodic range than generally had been previously identified (Trehub & Gudmundsdottir, 2019). Some toddlers show a words-first

pattern and others a melody-first pattern in their song learning and some focus on words in some contexts and melody in others.

Music and acquiring language

In the realm of speech perception and language acquisition, specifically in the perception, comprehension and imitation of sound segments within speech, music has been found to have a positive influence. Longitudinal studies with young children aged eight years showed that those that attended music training were significantly better able to identify speech segments than those who attended a painting group (Chobert, François, Velay, & Besson, 2014; Francois & Schön, 2011; François, Chobert, Besson, & Schön, 2012). Gromko (2005) found that music instruction over four months improved phonemic segmentation fluency (i.e., the ability to break words down into individual sound components) in a group of kindergarten children as compared to a control group. Music training was found to improve auditory processing for specific tasks – as was second language training (Moreno & Lee, 2015). Musical perception skills were found to be advantageous for developing reading ability in pre-school children and also beneficial for early word use and social and emotional development (Anvari, Trainor, Woodside, & Levy, 2002; Bolduc, 2008, see also Williams et al, 2015).

A note of caution

We must be cautious about the claims we make when translating results from neuroscience to music education. Popular advocacy websites may not be the best source for nuanced reporting of results from basic research studies. Odendaal, Levänen and Westerlund's (2018) thematic analysis of 76 review articles on the topic of music and the brain has important messages for music education research. Their analysis found that music, although used as a *stimulus* for the majority of the studies that were reviewed, did not lead to claims about music or benefits of music training in the reporting

of the results. Brain imaging research will, as a general rule, average its findings across participants (not taking account of individual differences). These authors also suggest that pressures to report only positive results can lead to a distorted narrative about music and the brain. Participant numbers can be small because of required complex experimental procedures. In addition, the sound stimuli used in brain research are referred to as music, but should not be taken to speak for all styles and genres, nor for the potential benefits or impacts experienced by individuals. The article compared the communication of research and popular advocacy in order to understand the ways that findings from research can become simplified into ‘popular representations’ (2018, p.7). Nevertheless, in the field of cultural neuroscience, Hodges (2018) reminds us that ‘musical practices of any given culture must adapt to neural constraints and, contrarily, the brain adapts to cultural practices’, implying that if we can understand the drivers for why some children are more advanced in their language knowledge, skills and understanding, we may be able to apply such knowledge in enriching the development of those less advanced.

[A musical view of communication](#)

In some parts of the UK, it is reported that around fifty percent of children start school with poor language and communication skills (Bercow, 2018; Hartshorne, 2009). Ten percent of all children have a persistent speech, language, communication need, e.g., children with autism spectrum condition (ASC), hearing impairment, general learning difficulties (Hartshorne, 2009). Studies of large cohorts of children (Waldfoegel & Washbrook, 2010) found that—by the age of four-five years—children in the lowest income band in UK were about 11 months behind their peers in the middle-income band in terms of expressive vocabulary. Parenting and the home environment were suggested by the researchers as possible contributory factors. This approach to childhood puts responsibility for a child’s linguistic capacities and future difficulties in life on parents and the home, rather than looking at any prevailing social and economic injustices (Blum, 2017; Burman, 2017).

Burman (2017) suggests that the obsession with getting children to talk as quickly as possible is not substantiated by theory. She points out that while adults are supposed to ‘bathe children in language’ (Bullock, 1974, p.58), there is no clear rationale to explain how this actually helps children to talk; nor what specific features of child-directed speech (adults directing their speech at children) help children’s language. Research is too limited in its methodological and interpretational scope to understand truly the complexities of the linguistic process in early childhood and, therefore, it is likely that existing research oversimplifies it.

The word-gap, attainment and school readiness agendas focus on words and their acquisition as the most important achievement point in the early years, with the job of parents viewed as increasing the number of words that their child can use. The dominant discourse of ‘Wordism’ (Blum, 2015, p.74; 2017, p.6) conceives of *words* as the size of the units to signify language. A perception that language is words – and that more words are better – can lead to parental anxiety, a sense of pressure and sometimes blame felt by those families whose children do not (yet) have the words that they feel they should have.

These discourses can pervade early education and care settings which seek to intervene early in children’s lives to address what society considers to be the disadvantages of poverty and social exclusion. Centrally-funded government initiatives have been devised, such as Head Start (USA) and Sure Start Local Programmes (UK), with evidence-based programmes as a central feature of the multi-professional interventions that they include (Zigler & Valentine, 1979; Glass, 1999; Lewis, 2011). The ‘social exclusion agenda’ – a term used by the New Labour Government (UK) (Social Exclusion Unit, 1997), attempted to make certain values, attitudes and behaviours universally acceptable and, as Gewirtz (2001) suggests, this characterised an ambitious programme of

eradicating class differences by also seeking to transform parenting behaviours of ‘working class’ families into those of the ‘middle class’.

In an effort to challenge the established ‘wordism’ discourse, we argue that this is just one way of thinking about language. By focusing on other modes of communication, children can be seen as competent with a varied interaction palette. Blum (2016, p.8) tells of linguistic anthropologists’ understanding from non-Western cultures that the first unit of language is *interaction*, being manifest through sound in various patterns. Perhaps this might be a more helpful way to conceive of communication. Thus, musical play can be seen as offering a sound-rich, talk-poor, environment where social interaction and expression can be explored. The sense of pressure to talk can be less dominant in this space and the focus can be turned towards *inter-action* between child and objects, parent and child, peer-peer, child and practitioner.

The theoretical framework of learning best suited to this context is learning in a social, cultural context (Rogoff, 1991, 2003), with the role of the more expert peer or adult guiding and scaffolding (Wood, Bruner & Ross, 1976) a child’s learning in a zone of proximal development (Vygotsky, 1978). Vygotsky (1978) suggests that every function of development happens at the inter-psychological (social) level first and then the intra-psychological (individual). The inter-psychological level is not dependent on language; non-verbal forms of interaction are also involved in the intersubjectivity of the experience (Trevvarthen & Malloch, 2010; Krichevets, 2014).

The pedagogical approaches that have been found to be most effective in this context are social constructivist in nature. The setting can be seen as a socio-cultural learning environment for both parents and their children.

Young (2003) talks about the creative process, with interaction in-the-moment, as the key aspect. This implies an approach with music that has key features of being improvisatory, child-led and with the adult role seen as either ‘guide’ or play partner in the process. The integration of multi-modal activities that incorporate movement and sensory materials with the sound play is fundamental. An attitudes of enhancing play (Berger & Cooper, 2003), of giving children time, valuing their activities and offering opportunities to extend their playfulness, was found to be the most effective approach for caregivers to adopt with young children. Taggart (2000) recommends immersive musical play spaces, and Valerio, Seaman, Yap, Santucci and Tu (2006) report that adults who interacted musically with their voices, including silence as part of the rise and fall of the vocal patterns, helped young children vocalise more themselves.

In summary:

- Early care settings offer opportunities for promoting and encouraging insightful parenting practices.
- Music and language behaviours share connectivity at a neural level in our brains, not least because they unfold over time and involve processing structural systems.
- Infants and caregivers are natural musical communicators.
- There may be a correlation between levels of deprivation and poor communication skills in young children, many of whom are reported to be behind their more affluent peers in language skills when they start school.
- Parental anxiety is likely to be high when their children have communication difficulties.
- Rethinking the first unit of communication as *inter-action* is a good starting point for musical activities.

- Early care settings are socio-cultural learning environments where improvisatory, child-led, in-the-moment musical activities will support young children’s socio-linguistic and socio-musical development.

One key implication of this evidential summary is the question – *How can we best support young children and their parents / caregivers at home and in early education and care settings to exploit music’s potential to nurture children’s language and communication?*

Effective Music Practice

We now draw on two recent projects to focus on approaches that have been found to be successful in supporting families with young children with communication difficulties using music-based approaches in early education and care settings.

In London, the ‘Music for Change’ project set out to explore the impact of a specially devised programme of weekly music sessions on the all-round development of pre-school children in northwest Westminster, an area of multiple deprivation (Knight, et al, 2018). The project was devised by the London-based charity ‘Creative Futures’ with the aims of improving children’s school readiness and supporting the development of above average numbers of children with speech, language and communication needs. In this part of London, almost a third of children are registered as having some form of special educational need or disability (SEND) and an estimated 50% of children have some form of speech and language delay. More than 60% have English as an Additional Language (EAL) and, in some schools, this rises to almost 100%.

Accordingly, ‘Music for Change’ brought together a speech and language therapist (SLT), funded by the local National Health Service (NHS), and a specialist early years musician to work collaboratively alongside each other in local community nursery settings, primarily for a period of ten weeks. The two specialists led a one morning a week, action research cycle that enabled them to support the resident nursery practitioners in musical activities that shared language and communication foci. Over the ten weeks, the nursery staff initially observed the specialists working together with their children in order for the staff gradually to take more and more responsibility for leading the hour-long music sessions (with additional time before the session for shared preparation and time after for review). Practice was based on vocal play, singing, using sound-making objects, musical games, listening and aural discrimination, movement, and songs and stories. The inclusion of free musical play activities, led by the children, allowed for the emergence of improvised songs from the children. Also, the narration of children’s play in song form was found to be helpful for introducing language and for enhancing the adult-child interactions by supporting adult reflection on what children were doing.

Across the two years (2015-2017), the project involved work in 11 different nursery settings with n=1,320 children aged 0-4 years and included n=871 workshop sessions. Amongst the impact findings were empirically-based evidence of children’s development *in* music, as well as *through* music – including personal, social and emotional development, and increased listening, attention and communication skills. In addition, there were positive impacts on the professional development and behaviours of nursery staff, both in terms of confidence and competence in using musical activities to support children’s speech and language development (Knight et al, 2018). Furthermore, the pedagogical scaffolding of activities by the visiting experts, in which there were opportunities for children and nursery staff to lead at different moments, empowered and enabled both children and

staff to have a sense of agency and ownership within and of the programme (Welch & Bowmer, 2017).

To the east of London, the Norfolk-based ‘SALTmusic’ was an action research project that brought together speech and language therapists and early childhood music practitioners to develop new pedagogical approaches to working with families with children (24-36 months) with communication difficulties. The collaborative action research project came about through an established early childhood music-arts practice that was based in an early education and care setting and a community health trust speech and language therapy (SLT) service. The approach was developed, as in ‘Music for Change’, through inter-disciplinary collaborative working to create a new music-communication pedagogy, combining the practices of the two disciplines through action research and using comprehensive and robust data collection methods that offered strong triangulation of the data and findings (see Pitt, 2019). The emergent pedagogical approach has been replicated subsequently in different contexts and found to be effective in offering a model of reflective practice that deepens thinking and understanding about children’s musicality and raises the quality of practice as a result. The music sessions were developed for parents/caregivers and their children aged between 24-36 months with a speech and language therapy referral (Pitt & Arculus, 2018). Attendance for an academic year was recommended, but 12 weeks was found to be a minimum optimum duration for changes in communication to be noticeable.

The ethos that underpinned the SALTmusic pedagogical approach was:

- Understanding that children are competent, creative, social and affected by things in the world;
- Understanding that adults are competent, creative, social and affected by things in the world;

- An increasing overwhelming realisation that children’s communication is related to, and often dependent, on parents’ / caregivers’ actions; and
- Early Years arts practice, developed over many years of working with young children and caregivers in early childcare settings. The practice is based on multi-modal opportunities for expression, playfulness and laughter (see Arculus, 2011), with an understanding that children integrate their learning and development across modes (Young, 2003, p.53; Tomlinson, 2013; 2015).

The Speech and Language Therapy (SLT) practice was based on three key theoretical ideas:

- *The Communication Pyramid* – Morgan and Dippler (2018) suggest there is no single source from speech and language therapy nor language development literature for the pyramid which is in common usage in UK.
- *Observe, Wait and Listen* (OWL) (Girolametto, Greenberg & Manolson, 1986),
- Approaches influenced by *Intensive Interaction* (Nind & Hewett, 1994; Nind, 1996), i.e., ‘See the offer; Copy the offer; and Celebrate the offer.’

Four elements of SALTmusic

Four elements are presented below as cornerstones to the music practice found to be most effective when working with children with communication difficulties and their caregivers. These elements follow on from each other in the course of the music session. There is no specific timing to any of the sections, a pedagogical sensitivity (Huhtinen-Hildén & Pitt, 2018, p.43) in-the-moment is needed to feel when it seems appropriate to move from one section to the next. The music practice begins with preparing the space for musical play prior to the children’s and caregivers’ arrival, followed by

musical freeplay with participants, and – when the time is right, the transition section of ‘tidy-time’, leading to the informal group music making that concludes the session.

1. Preparation – creating an immersive sound-play space

Prepared in advance, an environment is created to encourage children and parents to play together with instruments, e.g., xylophones, individual chime bars, child-friendly hand-bells, shaky eggs, gathering drum, small drums and keyword³ objects for play are laid out to create an inviting play space. Fabric is hung across the room to create different spaces to play in and act as backdrops for the projection of images, which further enhances the environment and creates a different atmosphere. Recycled materials, such as empty plastic yarn cones in various colours, are used to create towers with egg shakers added to the top. Piles of large sponges are artfully constructed and a pile of emergency foil blankets with hidden egg shakers is placed in a corner. Large plastic teapots make containers for shakers and large plastic animals or tea sets (keyword objects) are laid out on drums or xylophones for play possibilities. Quiet background music creates a sonic environment that is calm and welcoming. Essential oil fragrances can be sprayed in the room to add to the sensory experience.⁴

³ Keywords e.g., For Transport: car, train, bus, boat; For Home: bed, chair, table, cup etc.

⁴ Always consult caregivers before spraying oils in case of allergies.

-----INSERT Image 1 about here-----



2. Musical Freeplay

The instructions given at the start are to follow the child, copy in response and to keep talk to a minimum. Practitioners model non-spoken interaction, allowing and encouraging the children to lead the play and then following. Many parents will quickly copy this approach, although sometimes guidance may be needed to support them to speak less. Laughter from the children during this freeplay time is a prime objective, with emphases on fun, experimentation, exploration, curiosity, using voices and bodies with no pre-determined outcome in mind.

The practice draws from Dramaturge John Wright's notion of 'Finding The Game' (2006):

- Find the Game;
- Play the Game;
- Recognise when the game is over; and
- Find a new game.

Practitioners follow children's initiatives, adding and scaffolding by mimicking and elaborating gestures, sounds, actions from the children. This musical freeplay time lasts a flexible 20 minutes. Transition to the next phase of the session is guided by the leader when they feel that the time is right.

3. Tidy-time

Moving from the freeplay part of the session to a group activity requires careful thought and sensitive leading. An upbeat recorded tune such as 'Blackpool Roll' (Mr Scruff, 1999) indicates the start of tidy-time; everyone gathers up the objects, instruments and toys to clear a space for a short dance/movement activity with 'tickly sticks' (fabric covered sticks with some ribbons attached at one end) that leads into the group time. Choosing instead to sing the same tidy-up song every session can also be fruitful. Transitions from one activity to another can be stressful for some children (and adults). The use of this section makes a bridge between one activity and another. It forms part of the structure and, therefore, feels less like a transition. Enabling a smooth move from freeplay to a more structured activity helps to keep children's attention and engagement in the group session.

4. Informal group time

This part of the session offers a chance to rehearse and repeat many of the songs, rhymes and activities that the group have enjoyed during the sessions. The items from the repertoire are selected according to the particular children in the group and what they most enjoyed. These then become the particular group's rituals.

1. Breathe out - Breathing out with a long, vocal sigh many times at the start of this session is valuable to settle everyone to the activity. The music practitioners in the project incorporated clowning techniques of overemphasising and laughing as they held an in-breath before

breathing out. The children picked this up quickly and began vocalising as they enjoyed the game. This was one of many rituals that were adopted as part of the practice.

2. Hello songs - These can include ukulele accompaniment; the children can join in if you have enough ukuleles for each child to play. This is ‘play’ in its truest sense as the children are not instructed how to play the instrument ‘correctly’; they explore and experiment.
3. Movement games – Marching to the drum, Lycra games
4. Choices – Each child is invited to make a choice between two favourite items. e.g., Bubbles or Boing/Bang (drum)?
5. Stories, e.g., “Going on a Bear Hunt”
6. Anticipation games – based on micro songs (see below) – using scarves, balls and lycra
7. Visiting instrumentalists – On occasions a visiting instrumentalist would augment the activities by improvising, led by children’s play, during the musical freeplay time and adding the richness of their instrumental playing to the informal group-time.
8. Goodbye song

Examples of a new pedagogical approach

Micro songs

Arculus and the team developed the term and concept of the ‘micro song’ to describe short, vocal pieces that became an integral part of SALTmusic practice and beyond. These micro songs often have what Cross (citing his previous work) describes as a “floating intentionality” (1999, cited in 2010, p.68), a fairly abstract, but widely applicable meaning such as anticipation and release (of scarves, of our bodies, of time, of movement). They consist of two or three notes, frequently with a glissando upwards to a pause and then a release downward glissando or staccato word such as ‘ping!’

Pitt (2014) found that smiles and laughter of caregivers and children occurred at the end of songs where there had been movement, jumping or lifting-up with a *rallentando* or *rubato* over a dominant chord, building a feeling of suspense with a resolution to the tonic and a release of tension, after which the smiles seemed to occur. Micro-songs are built around a build-up and release (the cadence). Huron (2006) describes ‘feelings of anticipation’ as having their origin in understanding that some events have a “very strong tendency to be followed by other events” (2006, p.306), the expectation of this happening can cause a feeling of tension. The device employed in the micro-song is, therefore, helpful in eliciting a response from even the most reluctant communicator, who desires the tension they feel in the build-up to be released. Custodero (2005) suggests in her research on young children’s musical flow experiences that anticipation has its roots in parent-infant attuned interaction and that by being completely immersed in the flow moment children are able to anticipate another’s gestures, sounds or words without self-consciousness.

This extract from Paul’s case study describes the power of the micro song:

“Paul’s eyes would light up when the balls were brought out of the cupboard. He delighted in the anticipation, pause and release activity from the very beginning. His parents advised that he likes to repeat the ritual daily at home. He makes strong eye contact and will vocalise and show clear signs of joy with the release of the balls in time with the other children and parents in the circle. He seemed to recognise and enjoy the anticipation-pause-release similarities in the scarf play with the blow... blow... blow it... down song.”

Laughter

Arculus coined the term ‘communicative musical funniness’ (2011, p.34), a phenomenon she observed between two-year-olds as they played. She found in her work in early childhood music that her comedic skills were more useful than playing an instrument. Physical funniness helps develop playfulness (Arculus, 2011). ‘Funniness’ is both emotional and communicative (Reddy, 2010). Laughter has not been considered an integral part of linguistic processes, the meaning implied

through laughter can be varied, and it does not have the same constraints as the rules of speech. However, it is thought to be an important component to social interaction (Nwokah & Fogel, 1993). It is a vocalisation – a sound, and utterance. It is something that we elicit and value from babies as a fundamental communicative interaction. Funniness has rhythm, turn taking and can be framed as musical. Arculus suggests that laughter is a building block to communication (2011).

Singing – hold the space and allow for silence

There were instances where children sang their own spontaneously invented songs. One such occurred when the group had gathered around a piece of lycra, as part of the informal group time. The music practitioner held the space, allowing the silence and expecting something to happen. The child in this example could not speak more than single words, but he sang a beautiful melody with the words, “boats on the sea, boats are in the sea.”

In this example, *linguistic primacy* suggested by several developmental theorists (see Stadler Elmer, 2012, p.14), where words appear before the melody in song development, does not seem to be the case. Stadler Elmer (2012) suggests that there may be specific intentions in singing-like vocalizations that are expressions of playful, ritualized feelings, especially if one pays attention to the child’s body movements whilst singing as these offer supporting clues to the communicative intention. She argues that an invented song is based on the individual organising the rules and structure for themselves as they sing, the choice of whether to sing or speak is a process of differentiation between modes (2012, p.19). Gudmundsdottir suggests that invented songs are a product of spontaneous playfulness and that proficient singing may be more common than previously thought amongst young children (2018). In the example above, the music practitioner provided the space for children’s playful inventiveness to find artistic place in group music activities. Barrett (2006) found that young children’s invented songs showed examples of belonging, finding and

making meaning, and developing competence and elaboration. Bjørkvold (1992) suggests that spontaneous singing may be linked to the development of language and a desire to express thoughts, feelings and a sense of self. The songs were often quite complex in their melodic contour, as Nettl (2000) argues, early human music may have moved around a glissando-like vocal range which he describes as ‘like emotional speech’ (2000, p.471).

Rhythmic activity

This was one of the most commonly observed activities. Children would move or play with objects in a rhythmic fashion, sometimes before any other form of expression was observed.

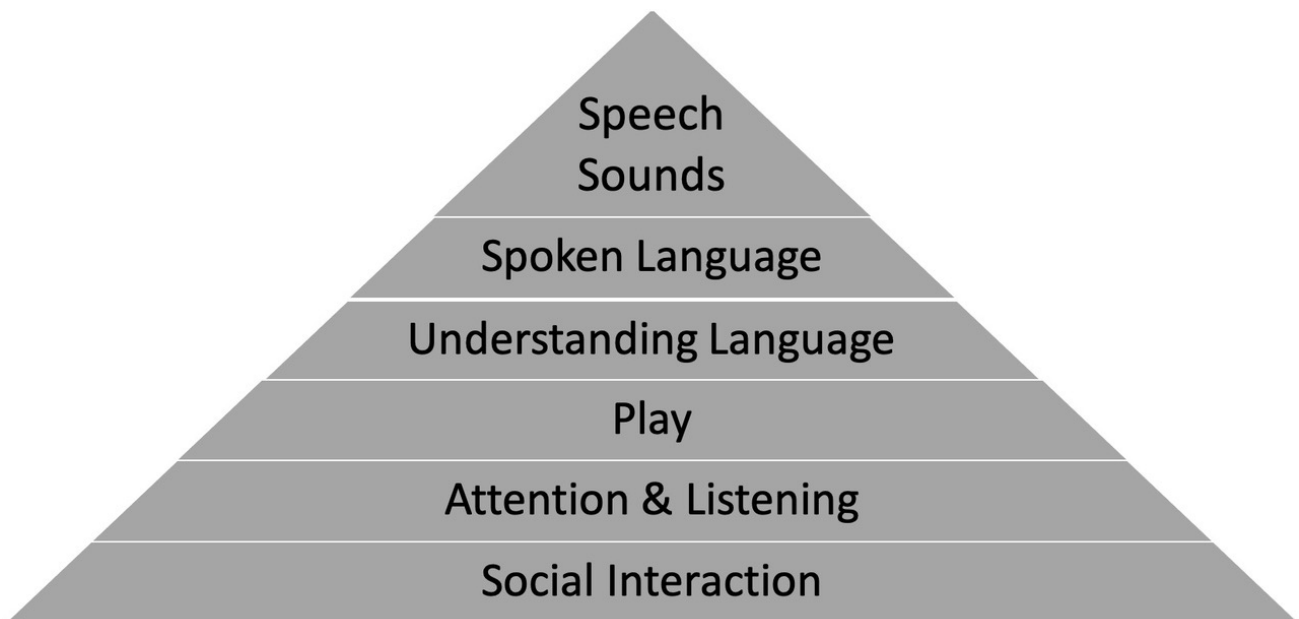
Actions to songs

When children joined-in with performing known actions to songs (e.g., wiggling fingers at the start of ‘Twinkle, twinkle little star’) they demonstrated understanding of (a) the cultural practices of the group, (b) memory of the actions in the correct sequence, (c) joining the ‘community’ through song singing and (d) demonstrable knowledge of the song (Pitt, 2014; Huhtinen-Hildén & Pitt, 2018).

The Speech and Language Therapy influences

Over time, the SALTmusic practice was pared down until eventually it revolved around vocal anticipation games based on integrating the theoretical ideas from speech and language therapy.

-----Insert image 2 about here -----



The Communication Pyramid

The pyramid (see image 2) is used by many speech and language therapy teams across UK for talking to parents about children’s developing language and communication. It suggests that speech, language and communication develop in a hierarchical manner, abilities in the preceding skill are required before the next level skills can be developed. The music practice detailed here is based around developing and enriching the skills in the bottom layers of the communication pyramid.

Social interaction focuses on eye contact, turn-taking and awareness of others; *Listening and paying attention* are pre-requisites to using language effectively, early communication skills and understanding about using language, that words represent things, people and events, are developed through *play*.

OWL

OWL – Observe, Wait, Listen is a strategy from the Hanen early language parent program (Girolametto, Greenberg & Manolson, 1986). The useful acronym (OWL) helps parents to remember

to concentrate on their child; to make eye contact, at the child's level; to slow down the pace of their own speaking and to emphasise and repeat key words (Pennington & Noble, 2010). In the SALTmusic programme, parents were encouraged to reduce talk to the absolute minimum, to focus their attention on observing their child's attempts at interaction, to wait and to listen and then to respond by mimicking. The OWL technique was easily shared with other family members, and parents reported that it made a huge positive difference at home.

[Intensive interaction approaches](#)

Intensive interaction (Nind & Hewett; 1994; Nind, 1996; Hewett & Nind, 2013) is an educational approach that was developed for working with learners with additional needs to develop their social communicative skills. At its heart is a model of caregiver-infant interaction, which is playful in nature. Practitioners use this intense primary interactive model in their interactions which have no task or outcome focus – the quality of the interaction is the main concern. Social meaning is attributed to all actions and behaviours. The practitioner needs a sensitive, attuned, critically reflective attitude (Nind & Hewett, 1994). These principles fitted extremely well to the practice of the Early Years arts-music team whose work was already based on similar foundations.

'Communicative Musicality' (Trevarthen & Malloch, 2000) is a well-known theoretical idea amongst early childhood music practitioners who frequently cite the theory to underpin their music education practice and use the notions to describe the attunement needed by practitioners when working with parents and young children with music. Essential to working in this way was to reduce the amount of adult talk, tune-in to the children, be alert to 'offers' of interaction, copying the 'offer' and celebrate it with positivity in the response.

Impact for children and families

Parents reported that attendance at SALTmusic groups had benefitted their children's communication. Of the 49 parents who completed an evaluation form, 90% said that their child's communication had improved.

“Absolutely transformed use of speech. Boosted confidence to try new words. OWL approach supported [us] to enable opportunities to try more speech.”

“It has definitely improved – her dad and brother are noticing a difference. Words and sign language. She's a lot more vocal – even if we can't understand her, she's trying to talk more.”

When asked about the specific benefits of music, 60% (n=42) said that the activities in which sound was practised were the most valuable (e.g., ‘pop, pop, pop, bubbles’ game), followed by musical freeplay activities and games with Lycra. Parents were able to identify that engaging in music enables forms of expression and communication that words and speech do not allow and that music acts as a bridge towards speaking confidently:

“[Child] adores music; it's a form of expression for her. Mixing music with speech unlocks [Child]'s reluctance to speak and promotes her language no end. She ‘sings’, makes sounds and now joins in with actual words of songs. She finds it easier to sing to words, can do a 3-word sentence in songs, whereas conversations are one word, music/singing boosts her confidence and makes it fun.”

When asked if the parents had benefitted themselves from attending the SALTmusic sessions, every respondent agreed. Responses related to (i) Quality time with their child, (ii) Practical help and strategies, (iii) Adult support, (iv) Seeing their child positively and (v) Impact of the team members.

Impact for practitioners

In ‘Music for Change’ (Knight, et al, 2018), early years practitioners gained confidence in supporting children’s communication and in leading music activities. The musician gained understanding of the links between music and language development and the SLT could see how music supported her therapeutic interventions. In SALTmusic, the team also developed mutual respect for each other’s disciplines (Pitt & Arculus, 2018). Confidence grew in using musical approaches for therapeutic SLT work. The power of humour and of letting children take ownership of the activity were insights gained by both disciplines. The musicians increased their knowledge of theoretical ideas to underpin their practice.

Conclusion

The conclusion takes the form of practical suggestions to guide thinking about working with music, young children and their caregivers, especially when there is a communication focus to the activity.

1. Be aware that caregivers may experience high levels of anxiety about their child’s communication.
2. Talk to caregivers about the theoretical underpinning to the practice – this can help understanding, allow them to relax and to give them strategies to use at home.

3. Work with both caregiver and child together to make the impact of the intervention stronger than working alone with either member of the dyad.⁵
4. Allow time for a child to build confidence and trust. Results are not obvious immediately. Attendance for more than 12 weeks is recommended.
5. Remove the pressure to speak by focusing on musical play, OWL and intensive interaction.
6. Give time and space for children to offer their artistic contributions to the group music activity.

ALIVE communication traits

The acronym ALIVE, devised as part of SALTMusic, can be helpful when developing awareness of children's emerging communication in caregiver-child music group contexts.

Careful observation can reveal the following indicators of communication:

- A Attention: being comfortable with attention and / or being able to give attention
- L Laughter
- I Interaction: with an object, peer, practitioner or caregiver
- V Vocalisation: Using OWL techniques can enable children's vocalisations to be heard and appreciated. Celebrating these vocalisations can lead to increasingly elaborate vocal play.
- E Expressive movement: Non-verbal children express themselves through their movements. These can be rhythmic and musical in nature.

Pedagogical attributes

Being sensitive to the needs of the group in your planning, thinking and in-the-moment decision making is a vital part of this field of practice (Huhtinen-Hildén & Pitt, 2018) so that possibilities for learning (Huhtinen-Hildén, 2012), creating and inter-acting, are opened for every member of the group. This can lead to transformations in confidence, trust, wellbeing, expression, socialisation, and

⁵ Dyad – a pair with a socially significant relationship

the cognitive skills associated with language, for children with communication difficulties and their caregivers.

Musical Development Matters

A guidance document: ‘[Musical Development Matters](https://www.early-education.org.uk/musical-development-matters)’ (<https://www.early-education.org.uk/musical-development-matters>) provides support for early childhood teachers and practitioners in their daily inclusion of musical activities as part of the nursery/school day. The document describes aspects of learning and development under the following categories: Hearing and listening, Vocalising and singing, Moving and dancing, and Exploring and playing (Burke, 2017). It complements the findings presented in this chapter with detailed information and video clips to support the practical advice it gives for the non-musician working with young children.

Reflection Process

As part of the reflection process, think about the particular communication / interaction traits of individual children during the music activity – how could you extend these interactions next time? What could you do more of/less of to encourage a child to develop these interactions further? What might help the caregiver next time?

Overall, the cited projects and related literature review provide evidence of the potential power of appropriately designed, sequenced musical activities to nurture, deepen and develop young children’s engagement with a sound world that can generate a twin benefit of learning *in* and *through* music, particularly related to the development of speech, language and communication.

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Caption for Image 1

Inviting Musical Play

Caption for Image 2

The Communication Pyramid