

The charmed dyad: Multimodal music lessons for pupils with severe or multiple disabilities

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Abstract

This multiple-case-studies research explored a multimodal approach to teaching music to pupils (from 4 to 18 years old) with severe or multiple disabilities. By combining music with, for example, tactile stimulation, movement, or visuals, meaning-making processes in music of these pupils was stimulated, helping them to understand the internal structures and expressive qualities of music. Three music teachers and a social worker participated in this study. Individual and collective video reflections and microanalysis were applied to gather data about their multimodal teaching practice. The data were analyzed through Schmid's framework (2015) of "multimodal dimensions of children's music experiences," developed for general music education. This framework consists of four dimensions: *narrativity*, *sociality*, *materiality*, and *embodiment*. Based on the findings, Schmid's framework could be revised for special education, thus providing music teachers with a tool for designing multimodal music lessons for pupils with severe or multiple disabilities.

Keywords

multimodality, music education, pupils with a disability, special education

Introduction

Music is an intangible, time-based form of art, and due to its nature, pupils may have difficulty grasping the meaning of music (Bremmer, 2015): they cannot *see* music, may have trouble physically feeling the beat, and can have a hard time orienting themselves in a stream of sound. In recognition of this problem, there is a growing interest in how music teachers can promote meaning-making in music through multimodal teaching strategies (Bremmer, 2015; Lamers et al., 2018; Nijs & Bremmer, 2019; Schmid, 2015). Empirical research studies have only recently started exploring how music teachers can draw on language, sonic, gestural, and bodily resources to bridge the invisible world of music to a visible, physical, and concrete one

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(Simones, 2017; Van den Dool, 2018). For instance, a music teacher can chant a rhythm, use a gesture to visualize it, and ask their pupils to walk to that rhythm—pupils then hear, see, and physically feel the rhythm simultaneously and have the opportunity to grasp the meaning of music through (the integration of) different modes. From this perspective, multimodal musical experiences can stimulate the meaning-making processes in music of pupils and help them understand the internal structures and expressive qualities of music (Nijs & Bremmer, 2019; Schiavio & Van der Schyff, 2018).

In general, multimodality is not a “clear-cut term” (Pramling & Wallerstedt, 2009, p. 135). However, the idea of a multimodal approach to communication stems from social semiotics, which understands communication and representation to be more than language alone; sounds, movement, and images communicate and represent as well (Jewitt, 2013). Looking more closely at the concept of a mode, Kress (2010, p. 79) describes it as a “socially and culturally shaped resource for making meaning.” This can be a “channel” of representation or communication, such as speech, moving images, written text, or gestures. *Multimodality* refers to the idea that multiple modes such as music, movement, and gestures can form an ensemble that, as a whole, can create meaning (Jewitt, 2013; Kress, 2010).

Opening up the abstract meaning of music through a *multimodal* approach seems to be specifically relevant for pupils with severe or multiple disabilities in special education (Hammel, 2016; Jellison, 2015; Ockelford, 2020). Next to the fact that these pupils can have trouble with playing an instrument, singing, or moving to music, many of them also encounter problems in engaging with and understanding the world, and in learning abstract concepts and ideas (Horn & Kang, 2012). Therefore, it can be a challenge to develop adequate music education for these pupils (Salvador, 2015). To cater to the needs of pupils with severe or multiple disabilities, multimodal pedagogical approaches have been developed to facilitate the meaning-making process of music, ranging from ones based on Orff-Schulwerk (Salmon, 2006, 2010), to ones incorporating multi-sensory rooms (Lee & Li, 2016), to Universal Design for Learning (Darrow, 2003, 2010; Jellison, 2015).

In the Netherlands, a multimodal music method “Beleven in Muziek” (BiM), which can be translated as “Experiencing in Music,” was developed by Patrick Meuldijk. Meuldijk (2009, 2014) designed the BiM method based on the ideas of experience-based framing (Timmers-Huigens, 2016) and basic stimulation (Bienstein & Fröhlich, 2008). Experience-based framing is the idea that people with a mental disability make sense of the world through experiencing concepts in concrete and multiple ways (Timmers-Huigens, 2016). Basic stimulation aligns with the concept of multimodality and promotes the idea that one has to offer multiple ways of communication to people with severe or multiple disabilities through the use of different modes, for example, language, visuals, and sounds (Bienstein & Fröhlich, 2008).

The BiM method itself currently consists of more than 40 music activities developed by Meuldijk (2009, 2014). In these activities, elements such as tempo, melody, timbre, pitch, and volume are connected to different modes, such as tactile stimulation, and also to movements and visuals with the goal of enhancing pupils’ experience and understanding of music (Lamers, 2019).

As there is a growing interest in multimodal approaches to music education, the goal of this empirical research study was to explicate BiM practices of music teachers and to give insight into the way their multimodal approaches are applied in special education. Therefore, in this study we explored how music teachers, who take the BiM method as their starting point, use multimodality in their music lessons to facilitate the meaning-making processes in music of pupils with severe or multiple disabilities. Consequently, the question of this research study was, How do music teachers apply a multimodal approach in their lessons, which are based on

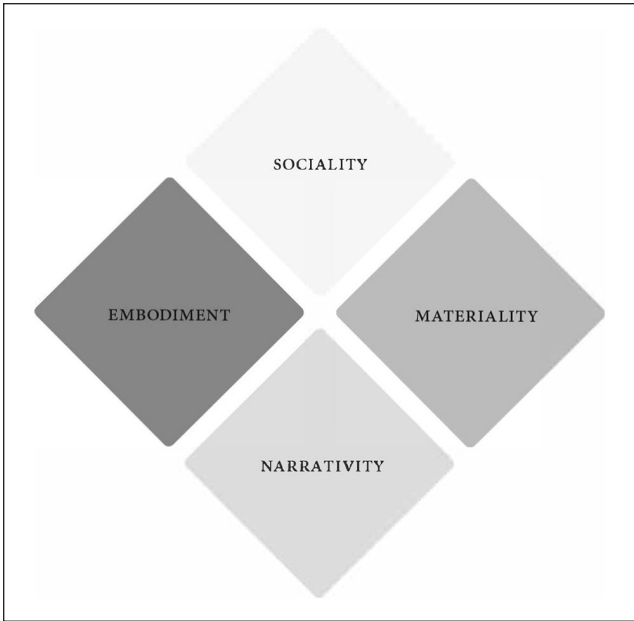
BiM music activities, to enhance the understanding of music of pupils (4 to 18 years old) with severe or multiple disabilities in special education?

Multimodal dimensions of children’s music experiences: A framework

In this research study, we used Schmid’s (2015) framework of “multimodal dimensions of children’s music experiences” for the analysis of the practice of BiM music teachers. First, this framework conceptualizes multimodality in a broader way than BiM does, which enabled us to analyze more aspects of a BiM-lesson that might actually be occurring. Second, Schmid’s framework was designed for *general* music education, and through our research study, we were able to revise it for special education.

Schmid (2015, p. 109) developed the framework “multimodal dimensions of children’s music experiences” based on theoretical and empirical research studies, and it distinguishes between four dimensions contributing to a multimodal music experience of children. These dimensions are *embodiment*, *sociality*, *materiality*, and *narrativity*. Figure 1 reflects the different dimensions contributing to a multimodal music experience of children.

Figure 1. Multimodal Dimensions of Children’s Music Experiences (Schmid, 2015).



According to Schmid (2015), the first dimension that adds to a multimodal experience of music is *embodiment*. She notes that musical experiences and meaning-making processes in music are in part implicit and embodied. Through conscious and unconscious body movements, children physically incorporate, experience, and come to understand music (Bowman, 2004; Nijs & Bremmer, 2019). Therefore, Schmid presses the need for a somatic approach to music education and for music teachers to include gestures, whole-body movements, and body

percussion in their music lessons. The second dimension creating a multimodal experience of music is *narrativity*. Schmid describes that the experience of time and the emotional experience of music seem to have a narrative quality (Micznik, 2001). Intuitively, music can be experienced as a narrative that unfolds through the stages of introduction, development, climax, and resolution. Schmid (2015) suggests teachers should incorporate different forms of narrative: from musical storytelling and programmatic music, to learning to tell a story through the process of composing.

The third dimension Schmid describes making for a multimodal experience of music is *materiality*. *Materiality* includes the concrete haptics and visual appeal of materials that make or produce sounds. The fourth dimension contributing to a multimodal experience of music is *sociality*. According to Schmid, musical activities are embedded in a social context as there is always some sort of interaction in a music lesson: with the music, with the environment, with oneself, or with others. Furthermore, a social context implies shared meaning-making, bonding, and a sense of belonging through rhythmic synchronization (Clayton, 2012; De Jaegher & Di Paolo, 2007). Music teachers should, therefore, shape the musical situation in such a way that *shared* meaning-making is deliberately established (Schmid, 2015).

Although the dimensions are discussed separately here, Schmid (2015, p. 107) notes that they are “tightly intertwined” and framed by more general conditions: for example, music is a social-cultural activity instead of a detachable object (Small, 1999), and children have the ability to map experiences in intermodal ways (Young, 2009) and can distinguish which emotions music is conveying. By integrating the four dimensions in a music lesson, the musical experience of children can be enhanced and their understanding of music deepened.

Alternative perspective on Schmid's framework

Although we wanted to use Schmid's framework as a lens through which we could explicate and analyze music lessons based on the BiM method, we took a slightly different perspective on the framework. First, the perspective of the original framework is that of children: Which dimensions contribute to their enhancement of a musical experience? In this study, however, the focus is on the music teacher: How do they *apply* these dimensions to enhance a multimodal music experience?

Second, Schmid developed her framework for neurotypical children, yet we believe that her framework also provides tools for exploring how music teachers apply multimodality in their BiM-lessons in special education and, therefore, could give more in-depth insight into the multimodal approach of teaching music in such contexts.

Schmid (2015) also describes *sociality* as one of the four dimensions. In our view, it should not be considered a separate dimension but an overarching dimension: it embeds the other three dimensions and shapes the meaning of *embodiment*, *materiality*, and *narrativity* (Kress, 2010). In Figure 2, a preliminary revised version of Schmid's framework underlying our research study is presented.

Figure 2. Dimensions of Multimodal Music Lessons (Based on Schmid, 2015).

Methodology

Research design

A multiple-case-studies approach within an interpretive paradigm was adopted to research the way music teachers make use of a multimodal approach in their music lessons. This approach offered the opportunity to explore the way music teachers teach within the classroom or home context through multiple research methods (Sandberg, 2005; Yin, 2003). Furthermore, music teachers in specific teaching contexts could have understandings and practices in common, and through a multiple-case-studies research, these commonalities can be described and recognized by others (Bremmer, 2015).

Cases

Four music teachers who base their music lessons on the BiM method for pupils with severe or multiple disabilities in special education were selected. The following criteria were used to select these teachers:

- Teachers should be trained in the BiM method;
- Teachers should have had an active music practice based on the BiM method;
- As a music teacher or social worker, teachers should be qualified to work in special education;
- Teachers had experience working with pupils with severe or multiple disabilities, in special education or at home;
- Permission of the parents or main caregivers of the pupils to take part in the research study had been obtained via a caregiver consent form.

In Table 1, an overview of the selected music teachers is given.

Table 1. Overview of the Participating Teachers.

	Teacher 1	Teacher 2	Teacher 3	Teacher 4
Professional	Music Teacher	Music Teacher	Music Teacher	Social Worker
Work experience in special education and with the BiM method	21 years, 2 years with BiM	17 years, 7 years with BiM	21 years, basic course and follow-up course on BiM	21 years, 4 years with BiM
Age of pupils being taught	5–13 years	12–18 years	4–6 years	All ages
Female/Male	Female	Male	Female	Female

BiM: Beleven in Muziek.

All the participating teachers taught their pupils a BiM-lesson on a weekly basis: three teachers in a group in the classroom and one teacher a pupil at home. Every week, these teachers carry out a BiM-lesson according to the same format, and they usually perform a core music activity one-on-one with a pupil, while the other pupils observe and wait for their turn. Generally, these teachers repeat musical activities over a period of time (usually 6–8 weeks), gradually handing more responsibility and initiative over to the pupils. During the group BiM-lessons, another teacher or carer is present to assist the music teacher.

Teaching context of teachers: Special education

Pupils with severe or multiple disabilities face unique needs and challenges. Because of the intensity of their cognitive, motor, and sensory impairments, highly specialized education, psychological support, and medical care are needed. In the Netherlands, special education is divided into four clusters (Damen, 2007). Cluster 3 is dedicated to pupils with severe or multiple disabilities (with an IQ of 35 or less) and pupils with a long-term illness. Since every child has his or her own unique personality, capabilities, and learning needs, Cluster 3 usually consists of a heterogeneous group of pupils.

Research methods

Different research methods were applied to gain an understanding of the music teacher's practices: individual video reflection, collaborative video reflection, and microanalysis.

A 30-min music lesson based on the BiM method of each teacher was recorded, and each teacher individually reflected on his or her video directly after the lesson through “guided reflection” (Tripp & Rich, 2012). Based on a pre-established guiding framework, the attention of the music teacher was directed to Schmid’s four dimensions: *embodiment*, *narrativity*, *materiality*, and *sociality*. Room was left for personal reflections not relating to this guiding framework. Tripp and Rich (2012) note that a guiding framework can enhance the quality of teachers’ reflections: “Priming the memory beforehand not only increases attention to certain details but also increases overall retention and ability to notice” (Tripp & Rich, 2012, p. 679). The video reflection was guided by one of the researchers.

In addition to the individual video reflections, a collaborative reflection session was organized with BiM experts and guided by one of the researchers: the founder of the BiM method, Teacher 3, and an additional music teacher, who is highly experienced in teaching BiM-based music lessons, were invited to reflect on the video that captured the music lesson of Teacher 2

who seemed to highlight a multimodal approach to teaching music most clearly. These experts were asked to reflect on the video with the same guiding framework as was used in the individual video reflection sessions with the music teachers. In addition, the experts were invited to choose their own reflection focus and to discuss their reflections. The data of the collaborative reflection enabled us to triangulate the findings of the individual video reflections.

Finally, video microanalysis was applied to gain deeper insight into which form the dimensions *embodiment*, *narrativity*, and *materiality* take in the social interaction between the music teacher and a pupil. The goal of a video microanalysis is to describe concretely what happened, not to abstract it (Tomori & Bavelas, 2007). During the microanalysis of a video fragment of 3 minutes, a detailed look was taken at the communication process between Teacher 2 and a pupil during the core music activity within a BiM-based music lesson. The analysis was at a scale of one to a few seconds at a time.

Data analysis

Audio recordings of the individual and collaborative reflection sessions were made. All the data were transcribed verbatim, after which a thematic-analysis approach was used to analyze the data (Braun & Clarke, 2006). First, we used a preset list of codes derived from Schmid's framework to analyze the data: *embodiment*, *narrativity*, *materiality*, and *sociality*. However, during the process, we were open to new themes that could be found in the data. Two researchers each coded two individual video reflections. The collaborative video reflection was first coded by two researchers separately, and afterward, the alignment of interpretations was discussed to achieve interpretive convergence. In the video microanalysis, physical (re)actions, facial expression, eye contact, and the materials used by the music teacher were noted in a chart every second to a few seconds at a time.

Findings

Theme 1: Embodiment

Through the individual and collaborative video reflections, it became clear that music teachers place a strong emphasis on the involvement of the pupil's body in the music lesson: these teachers integrated different modes, such as the auditory system, vision, physical sensation, and gustation or taste, to enhance the pupils' musical experience and to facilitate an understanding of music. Teacher 4 reflected, "The beauty of the BiM-method, I think, is that you not only experience music through listening or by looking at a cover of a CD, but you also physically experience music through touch." Furthermore, the video reflections provided insight into how the teachers also incorporated the modes of proprioception and the vestibular system, for example, the teacher rocked a pupil to the pulse of the music.

The teachers and experts also observed that these music teachers often will integrate listening and feeling to help pupils understand the different aspects of music, such as rhythm patterns, the pulse, musical phrasing, and dynamics. For instance, Teacher 1 rolled a ball over a pupil's leg in time with the phrasing of the music and pressed it harder or softer according to the dynamics of the music. Teacher 4 summarized this practice: "I try to give the pupil a physical experience of musical aspects being heard in the music."

The microanalysis, focusing on the interaction between the teacher and the pupil, showed the pupil reacted strongly to the professional touch of the music teacher to the music. The analyzed Teacher 2 applied touch very sensitively: he first subtly pressed the left under leg to the phrasing of the music and constantly monitored whether the pupil was accepting of being touched. Then he moved on to the right under leg and gently moved back again to the left one.

Only after having assessed whether or not the pupil tolerated and accepted being touched, did he move on to the left and right arm of the pupil.

Theme 2: Narrativity

During the individual video reflection sessions, the teachers mentioned they did not consciously focus on the aspect of narrativity in their lessons. However, during the video reflection, they did acknowledge that narrative elements played a role in their lessons. First, Teacher 2 observed that his musical activities were structured as a meaningful whole (the same beginning and end song, and a main BiM-based music activity in the middle), and thus, his lessons could be experienced as a narrative with an introduction, a middle, and an end. He explained,

You can just do random music activities: one activity with a ball, the next with a glove and another one with an umbrella. But then of course the activities don't connect. So, random activities just don't satisfy me—I really find it important that there is a connection between the music activities, and that my pupils consciously or unconsciously notice that connection.

Second, Teacher 3 noted that each separate music activity can tell a story of its own. For example, she explained that she thought of a story that followed the dynamics of the music: a wind starts to blow softly, starts blowing harder, and then lies down again. She visualized the movement of the wind and music with a blue plastic bag.

Third, the teachers explained they incorporated overarching themes in their lessons, for example, the seasons of the year or cultural events such as Christmas. Teacher 2 mentioned how he brings autumn into the classroom: with a plant spray, he will softly spray water on a pupil's skin while a music piece is being played, depicting an autumn rain shower. The pupil is then gently dried off with a soft towel during a soft musical fragment. During the next lesson, pupils will be showered with autumn leaves, after which their clothes are dusted off to the rhythm of the music. In this way, according to Teacher 2, the theme unites the music activities within a lesson and at the same time connects a series of lessons, thus deepening the understanding of the theme.

Theme 3: Materiality

In the individual and collaborative video reflections, the teachers and experts observed that materials have a certain function within a BiM-lesson, and teachers chose certain materials for their quality and certain properties.

The teachers and experts often referred to the quality and properties of the materials and how they can deepen the pupils' musical experience. They noted materials form a bridge between the music and the pupil, and certain materials are selected for their properties that enhance the experience of musical aspects in pleasurable ways. Teacher 1 explains, "It's easy to put pressure on a soft ball [to convey the loud dynamics in music] and it will still feel good [on the pupil's leg]." When selecting materials, the teachers explained the following properties will be taken into account: their shape, texture, smell, color, and usability. The teachers worked with materials ranging from a ball, a shawl, and a perfume, to a colored umbrella and loofah gloves.

Furthermore, the teachers and experts mentioned that the use of materials at the start of a lesson or a musical activity acts as a referent. For instance, Teacher 3 will enter the classroom with a bag full of materials. As soon as pupils see that bag, they know a BiM-lesson is about to start. The next step is to direct the pupils' attention to the materials by taking them out of the

bag slowly and by making contact through the materials. Teacher 3 explains, "I like to make my pupils curious, by keeping the bag closed first, and by asking them: What's in the bag?" In this way, the materials support a narrative too, because during every lesson it is a mystery what will be presented from the bag.

The teachers and experts also observed that materials can function as a mediator for establishing contact: a music teacher and a pupil who shies away from eye contact can focus their attention on the same material, establishing indirect contact through this material.

Theme 4: Sociality

In the individual and collaborative video reflections, it became clear that the music teachers were sensitive to the specific characteristics of their group of pupils within special education. For instance, to be able to influence the group dynamics, Teachers 1 and 3 always have their pupils sit in a fixed spot in a circle. Teacher 3 noted, "Having pupil F and D sit next to each other just doesn't work well." The teachers also took the sensory profiles of their pupils into consideration. Teacher 3 explained, "Pupil A used to sit on that side of the circle, but I placed that pupil on the other side because of the loud sounds coming from the portable stereo."

Also, due to the fact that the main BiM-based music activity is a one-on-one activity, the teachers felt the group should not consist of more than eight pupils in relation to the waiting time of other pupils. However, the teachers observed that the ideal size of the group also depended on the level of the pupils and whether or not another adult could join in and perform the one-on-one music activity together with the music teacher, thus reducing the waiting time for others.

Theme 5: Pupil-centered pedagogy

During the analysis of individual and collaborative video reflections and the microanalysis, one new theme was found: a pupil-centered pedagogy. Through the data, it became obvious that this pedagogy centering on the pupil is an important precondition for BiM-based music activities. Or, as Expert 3 summarized, "Your whole presence, your intention. . . the child needs to feel safe and acknowledged." The teachers and experts observed that music teachers need to have a calm presence and have to structure their lessons in clear and predictable ways to be able to create a safe learning environment. Also, the music activity itself should be structured in a predictable way. For instance, the teachers always prepared the execution of a music activity for pupils: Teacher 1 and 4 let a pupil touch the materials of an activity beforehand, and Teachers 2 and 3 always demonstrate the activity before inviting a pupil to join in. The teachers also end the activity in a verbal or non-verbal way, for example, Teacher 2 will say "Well done!" or put his thumb up.

During the activity, the teachers and experts note that attuning to the pupil is highly important. Teacher 2 explains, "You have to tune in and observe: am I welcome, can we perform the activity together?" The teachers also mention some pupils will accept eye contact, whereas others prefer a different kind of contact. In the latter case, the microanalysis made clear that a teacher can make contact through the use of a material: both the pupil and Teacher 2 looked at the material—a microphone—thus making contact through the microphone. Moreover, the teachers and experts noted that the music teachers need to sensitively keep monitoring how the pupils are experiencing the activity. For instance, Teacher 1 observed how a pupil enjoyed the ball being rolled over the legs but not over the arms. Finally, Teacher 4 mentions it is important for the pupils to feel they are allowed to explore and experiment with the

materials being offered in a music activity. She reflects, "If pupils aren't familiar with the material, I will always let them explore the material during an activity."

Discussion

This research set out to analyze through Schmid's framework how music teachers apply multi-modality in their music lessons based on the BiM method to facilitate meaning-making processes in music of pupils with severe or multiple disabilities. Drawing on the data, the dimension of *embodiment* encompassed more in the music lessons of these teachers than solely whole-body movement (e.g., moving to music or body percussion), such as Schmid's framework suggests. The music activities in the BiM-lessons appealed to the senses, hearing, seeing, feeling, smelling, tasting, proprioception, and the vestibular system. Often, these music teachers created an ensemble of modes (Kress, 2010) to facilitate the meaning-making process of pupils, such as the use of music and visuals, or music and proprioception, allowing pupils to map musical experiences in a cross-domain way (Zbikowski, 2002). Touch seemed to be especially important as part of an ensemble of modes to help pupils with severe or multiple disabilities understand different aspects of music such as the pulse, rhythm patterns, and musical phrasing. In general, people are highly sensitive to touch (Zorzal & Lorenzo, 2019), and the tactile experiences of specific material in combination with musical elements aided pupils in understanding the structural and expressive qualities of music. As such, the physical contact between these music teachers and pupils seemed to form a pivotal entry point for the experience and understanding of music. The success of the application of touch does depend on the music teacher's understanding of pupils' sensory profiles: for example, can they tolerate touch or are they tactile defensive to certain materials or ways of touching (Kilroy et al., 2019)? Furthermore, it also depends on the music teacher's understanding of (ethical) limits of physical contact as a pedagogical approach within BiM-lessons (McHugh-Grifa, 2011).

Concerning the dimension *narrativity*, in Schmid's framework emphasis was given to the story music tells; however, these teachers used themes and stories to glue the different music activities in their lessons together. They also felt that the structure of the lesson could be experienced as a narrative. Furthermore, a narrative seemed to provide a certain amount of predictability for their pupils in special education and, therefore, added to a safe and predictable learning environment.

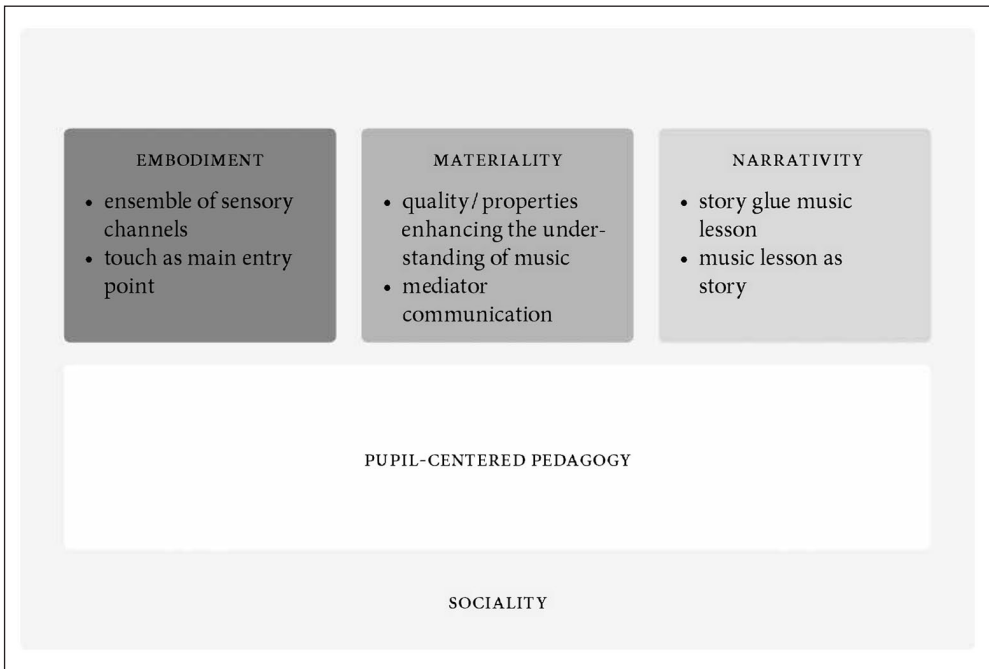
Regarding the dimension *materiality*, the data made insightful that, in accordance with Schmid's framework, these music teachers were thoughtful about the quality and certain properties of materials and how those could add to the pupils' music meaning-making process—often in pleasurable ways. These music teachers did not focus on musical instruments but on a broad range of different materials, such as balls, shawls, and loofah gloves. Moreover, these music teachers noted that using materials can have a specific function as they can serve as a vehicle to establish triadic attention. Triadic attention can be described as a form of interaction between two partners who are engaged with one another while sharing a focus on an object (De Barbaro et al., 2016). For instance, for some pupils, direct eye contact and direct professional touch might be too intrusive, so materials can help create a sense of being together while still respecting a pupil's way of communicating.

Based on the data concerning the overarching dimension *sociality*, it became clear that these music teachers had an understanding of the profiles of their pupils and how those profiles affected the social dynamics within a group. This understanding of the pupils' profiles seemed necessary for the one extra theme we found in the data: a pupil-centered pedagogy. To be able to make meaning of music, pupils in special education should not be overwhelmed by the sensory

world but be regulated in such a manner that they can be open to the sensory input being offered. Therefore, these music teachers developed a pupil-centered pedagogy: they created safe and predictable learning environments helping pupils stay attuned to the music activities. Also, during music activities, these music teachers constantly assessed how pupils were experiencing the activities and “read” small non-verbal signals that could inform them about whether or not the pupils were enjoying the activity. Through this sensitive way of communicating, the music teacher and pupils could function as a “charmed dyad” (Bishop & Burn, 2013, p. 95): a place where pupils are fully absorbed in a shared experience of music through sensory stimulation with materials and where they forget about their surroundings. As such, a pupil-centered pedagogy formed the basis on which multimodal music activities could be based.

Drawing on these different dimensions, we revised Schmid’s framework to be able to fit a multimodal approach to teaching music in special education to pupils with severe or multiple disabilities. In this revised framework, a pupil-centered pedagogy forms the basis on which the dimensions *embodiment*, *narrativity*, and *materiality* are built, embedded within *sociality*. See Figure 3 for the dimensions of multimodal music lessons.

Figure 3. Dimensions of Multimodal Music Lessons (Based on Schmid, 2015).



Conclusion

Based on the data in this research study, we altered Schmid’s framework to specifically match the needs of pupils with severe or multiple disabilities in special education. Furthermore, the revised framework gave a broader understanding of the BiM method and explicated aspects of

the way music teachers carry out BiM musical activities that formerly had been implicit, thus theoretically deepening this approach.

In this revised framework, a pupil-centered pedagogy forms the basis for multimodal music activities in special education. We found that the dimensions *embodiment*, *narrativity*, and *materiality* can be interpreted in a broader way in special education than in Schmid's original framework. For instance, in our revised framework *embodiment* refers to an ensemble of sensory modes in which touch is central; *narrativity* refers to a story that can glue musical activities together; and *materiality* encompasses all kinds of materials (not just musical instruments) that can be used as an entry point for understanding music in physical ways and as a means for establishing contact. Moreover, it is through the intertwining of these dimensions that different modalities can be connected and integrated, making the process of musical meaning-making an embodied and multimodal process. Finally, *sociality* overarches the other dimensions and shapes the meaning of *embodiment*, *materiality*, and *narrativity*.

Although more research is needed to challenge, expand, refine, and further revise the framework we have presented here, we do believe it can be of use in special music education. The revised framework can offer BiM music teachers and music teachers in special education a tool for designing music activities that can stimulate pupils' meaning-making processes in music to help them understand and, most of all, enjoy music in a multimodal and embodied way.

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Ethical Approval

Prior to embarking on the research, ethical approvals were sought and gained from the Research Group Arts Education Ethical Review Board of the Amsterdam University of Amsterdam. This ensured that informed consent was given by parents or caregivers of the participating pupils.

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Vincent Lamers has been working in special education as a music teacher for 20 years. In the last 10 years, he has specialized in giving music experience lessons to pupils with a low IQ. Within the Research Group Arts Education of the Amsterdam University of the Arts, he and Carolien Hermans conducted research into the practice of multimodal music lessons for pupils with severe or multiple disabilities.