

**Collaborative creativity in music education:
Children's interactions in group creative music making**

Submitted by Andrea Sangiorgio to the University of Exeter
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Abstract

This study intended to develop a theoretical framework for understanding children's collaborative creativity in music.

The focus was on creative interactions and on how early primary children interact when they engage in creative group music making. Related questions were on: 1) the different communicative media employed, 2) the component aspects of group work influencing children's creative endeavours, 3) the meanings that children attribute to their creative experience, and 4) the educational and ethical values of creative interactions. The study was carried out in a private music school in Rome, Italy. A group of eight 5-7-year-old children participated over eight months in 30 weekly sessions of group creative activities in music and movement. I was the teacher researcher and worked with a co-teacher.

This exploratory, interpretive inquiry was framed by sociocultural perspectives on learning and creativity. A qualitative research methodology was adopted, which combined methodological elements derived from case study research, ethnographic approaches, and practitioner research. Data collection methods included participant observation, video-recording of sessions, documentation, and strategies for eliciting children's meanings. Thematic analysis, both theory-driven and data-driven, was conducted in order to identify relevant issues.

The findings of the study suggest that in creative collaborative work in music bodily interactions and musical interactions have a stronger significance than verbal interactions. A conceptual distinction was made between 'cooperative' vs 'collaborative' which helped to characterise the different degrees of interactivity in the group's creative work. The study identified a range of component aspects which influenced the quality and productivity of children's collaborative interactions. These included: children's characteristics, context and setting, pedagogical approach, task design, collaboratively emergent processes, underlying tensions in creative learning, reflection on and evaluation of creative work, and time. Children actively gave meaning to their group creative music making mostly in terms of imagery and narrative, though they were gradually shifting towards more purely musical conceptualisations. Creating music in groups had the potential to enhance their sense of competence, ownership and

belonging, and supported ethical values such as promoting the person, freedom, responsibility, a multiplicity of perspectives, and democracy.

Three meta-themes run throughout the findings of the study, which are in line with sociocultural perspectives: i) a systems perspective as necessary to gain a more comprehensive view of collaborative creativity; ii) creativity as an inherently social phenomenon, and iii) creativity as processual and emergent.

The implications for pedagogical practice highlight the importance of including creative collaborative activities in the music curriculum.

Key words: *children, music, collaborative creativity, group work, play*

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Contents of the Data DVD

The Data DVD, which is placed in the wallet affixed to the inside of the back cover, contains the PDF file of the thesis and the video-clips referred to in the thesis.

01 - Thesis

This is the PDF file of the thesis.

About videos: if the reader is using this PDF file to read the thesis on the computer, videos can be accessed online simply by clicking on the link in the text – password: *res*. Alternatively, if the reader is using the paper version of the thesis, videos are contained in the Data DVD. The video-clips are numbered consecutively: in the text, immediately after the <http://> link, there is a code "*dvd.NUMBER*" (as a precaution, the same contents are also stored in a usb memory stick).

Here and in the tables in the appendices I use the initials of children's (fictitious) names as abbreviations. Thus, AL is Alessandra, C is Chiara, F is Flavio, FA is Fabiana, G is Giacomo, L is Lorenzo, S is Sonia, SA is Sandra, A is Andrea (me), and V is Valentina (the co-teacher).

Here is the list of the video-clips in the DVD:

- 01 - 2014 03 19 c1 Figure-Ground relationship - moon and aliens – voice
- 02 - 2014 03 19 c2 Figure-Ground relationship - moon and aliens - sequel F L S
- 03 - 2014 03 26 c2 Figure-Ground - listening and dancing - Oeves
- 04 - 2014 04 30 c2 Accompanying movement - filling the hole - dude du _ _
- 05 - 2014 03 26 c1 Figure-Ground - listening and dancing - Yellow Jackets
- 06 - 2014 01 22 c1 AL C S graphic structure into movement
- 07 - 2014 01 22 c1 F G L graphic structure into movement
- 08 - 2014 01 22 c1 F G L graphic structure into music
- 09 - 2014 01 22 c1 AL C S graphic structure into music
- 10 - 2014 04 16 c1 Figure-Ground - instrum - L A pedestrian crossing the street
- 11 - 2014 06 04 c2 Free paired improvisation - F L 1st
- 12 - 2014 06 04 c2 Free paired improvisation - F L 2nd
- 13 - 2014 02 26 c1 Accompanying movement - G L fighting with swords
- 14 - 2014 02 26 c2 Accompanying movement - G L fighting with swords - solo with group clapping
- 15 - 2014 01 15 c1 rhythm structures OOO XXX C individual invention
- 16 - 2014 01 15 c1 rhythm structures OOO XXX C F S group invention
- 17 - 2014 06 04 c2 Free composition - AL C S
- 18 - 2014 01 29 c1 postcards1 indiv invention instruments AL chattering frogs
- 19 - 2014 05 14 c2 Free group composition - AL S 1st Gestaltung
- 20 - 2014 05 14 c2 Free group composition - AL S 2nd Gestaltung
- 21 - 2014 01 29 c2 dominoes - strategies to interact - contrasting - G and L

- 22 - 2014 01 29 c2 dominoes - strategies to interact - contrasting - V and C
 23 - 2014 01 29 c1 dominoes - strategies to interact - contrasting - F and A
 24 - 2014 02 26 c2 Dominoes_2 S and F seemingly no relationship
 25 - 2014 02 26 c1 Dominoes_2 L and G synchronising with movements - not beat-based
 26 - 2014 04 02 c1 Figure-Ground - pair Gestaltungen - F L robot and sharks
 27 - 2014 04 02 c1 Figure-Ground - pair Gestaltungen - G SA ostinato 1st
 28 - 2014 04 02 c1 Figure-Ground - pair Gestaltungen - G SA ostinato 2nd
 29 - 2014 05 07 c2 Free group composition - AS SA and SAs 2 brothers - untitled
 30 - 2014 05 07 c2 Free group composition - AS SA and SAs 2 brothers - untitled 2nd
 31 - 2014 02 05 c1 frogs dialogues G
 32 - 2014 02 05 c1 frogs dialogues S
 33 - 2014 02 19 c1 Postcards bear C SA instruments
 34 - 2014 04 09 c2 Figure-Ground instrum - sunset and just music SA C
 35 - 2014 02 12 c1 Postcards3 F G L Volcano - voice 1st go
 36 - 2014 02 12 c1 Postcards3 F G L Volcano - voice
 37 - 2014 02 19 c1 Postcards volcano F G L instruments
 38 - 2014 02 05 c2 Postcards2 FA S two postcards - the flower of light
 39 - 2014 02 05 c2 Postcards2 C SA two postcards - bear and sun
 40 - 2014 04 02 c1 Figure-Ground - pair Gestaltungen - S C teacher with children and school bell
 41 - 2014 04 16 c2 Figure-Ground - instrum - AL S moon and stars
 42 - 2014 02 19 c1 rhythm structures - group work AL C S SA - OOO.XXX. voice bp
 43 - 2014 02 19 c1 rhythm structure instr AL C S SA
 44 - 2014 06 04 c2 Free composition - G SA the musical wood
 45 - 2014 05 14 c2 Free group composition - 1 C SA initial exploration phrygian ostinato
 46 - 2014 05 14 c2 Free group composition - 2 C SA emergence of the ostinato gesture
 47 - 2014 05 14 c2 Free group composition - 3 C SA holistic conception of the ostinato eb ebeeb
 48 - 2014 05 14 c2 Free group composition - 4 C SA emergence of Cs melody
 49 - 2014 05 14 c2 Free group composition - 5 C SA - C complete melody
 50 - 2014 05 14 c2 Free group composition - C SA rehearsal during group work phase
 51 - 2014 05 14 c2 Free group composition - C F SA phrygian ostinato and melody - 1st Gestaltung
 52 - 2014 05 14 c2 Free group composition - C F SA phrygian ostinato and melody plus S on drum - 2nd Gestaltung
 53 - 2014 05 28 c1 Free group composition - AL L S 1st Gestaltung
 54 - 2014 05 28 c1 Free group composition - AL L S 2nd Gestaltung part A only
 55 - 2014 04 02 c2 Figure-Ground - listening and interpreting - V djembe A tambourine - children find images
 56 - 2014 04 30 c2 Free individual composition - AL ending of moon and stars
 57 - 2014 05 07 c2 Free group composition - F G L the man and the drum 1
 58 - 2014 05 07 c2 Free group composition - F G L the man and the drum 2
 59 - 2014 04 30 c1 Free individual improvisation - F triangle

Conventions for the transcription of rhythms

In the findings I use a system for transcribing rhythms which I derived (and slightly modified) from Gordon (2012). Instead of writing with music notation, I find it more practical to use a set of rhythm syllables based on beat functions.

Thus, a 4/4 would look like this:

Du															
Du		de		Du		de		Du		de		Du		de	
Du	ka	de	ka												

A 6/8 would look like this.

Du					Du						
Du		da		di		Du		da		di	
Du	ka	da	ka	di	ka	Du	ka	da	ka	di	ka

Other metres can be formed using this principle (e.g. a 3/4 would be "DudeDudeDude", etc). Based on this information, the reader should be able to identify what particular rhythms I am referring to in the text.

For example, | Dukade Du de | would be: |  |

Acknowledgements

I would like to thank in the first place Sarah Hennessy for her warm, open, generous, and critical attitude all along the process through which this study was generated. I am grateful to her for her wise and tactful guidance.

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1. INTRODUCTION

*I require a You to become; becoming I, I say You.
All actual life is encounter.*
Buber (1970, p.62)

1.1 Background to the study

1.1.1 Research on collaborative creativity

Collaborative creativity is becoming a central theme in research. Since the 1990s creativity is increasingly understood as a social interaction process aiming at the production of novel ideas acknowledged by a group or by society at large (Amabile, 1996; Hennessey & Amabile, 2010; Sternberg, 1999). From the individualist approaches of the 1960s-80s – dealing with basic components of creativity as occurring in the individual – the focus of research gradually shifted towards a multidimensional, sociocultural approach which recognised the complexity, specificity, and social and cultural situatedness of any creative activity (Feldman, 1999; Glăveanu, 2010a, 2010b; Sawyer, 2012). This new orientation overcomes the view of creativity as 'universalised' and 'objectifiable' typical of previous experimental, cognitive research and, conversely, offers holistic, in-depth explorations of the multiplicity of individual, collective, cognitive, emotional, relational, and cultural aspects involved in the creative co-construction of knowledge (Craft, 2008; Csikszentmihalyi, 1996, 1999). Since the 2000s socioculturally oriented research on creativity has focused more directly on diverse aspects of collaboration in creativity (John-Steiner, 2000; Miell & Littleton, 2004; Sawyer, 2007) in fields such as the arts and science (John-Steiner, 2000), jazz and theatre improvisation (Kenny, 2014; Sawyer, 2003b), business and organisations (Henry, 2004; Sawyer, 2007; Searle, 2004), education (Craft, 2008; Eteläpelto & Lahti, 2008; Hääläinen & Vähäsanteranen, 2011; Littleton, Rojas-Drummond, & Miell, 2008; Vass, 2007) and in music education (Burnard, 2007; Rojas-Drummond, 2008; Sawyer, 2006b, 2008). Thus, different complementary perspectives can be integrated: not only creativity in the mind of the single creative person, not just individual creativity as facilitated by a conducive social and institutional environment, but creativity as collaborative creativity, i.e. as an inherently social phenomenon emerging from the direct interaction with significant others within a sociocultural context.

1.1.2 Creativity and collaboration in education and in music education

In the field of education, a basic rationale behind the urgency of investigating and implementing "creativity in relationship" (Craft, 2008, p.242) is that, well beyond transmitting established knowledge and skills, schools have to prepare future generations to work creatively in teams, as innovation relies on the capacity of creative people and organisations to collaboratively engage in improvisational processes of knowledge building (Sawyer, 2006a). This shift in perspective almost naturally brought about a confluence of research interests in group creativity on the one hand and, on the other, of sociocultural studies on learning as a social phenomenon (Vygotsky, 1978; Lave & Wenger, 1991; Rogoff, 1990, 2003) and on cooperative / collaborative learning (Blatchford, Kutnick, Baines, and Galton, 2003; Howe & Mercer, 2007; Johnson, Johnson, & Stanne, 2000; Palincsar, 1998; Slavin, 1991; Webb, 2009).

Recent research in music education reflects these new assumptions and perspectives. Following a similar pathway as described above, the first wave of studies on musical creativity focused on its possible definitions, processes, assessment, and educability (Richardson & Saffle, 1983; Running, 2008). Since the 1990s there has been a shift from individualistic approaches to musical creativity, mostly oriented to cognitive aspects (DeLorenzo, 1989; Gordon, 1990, 2012; Pressing, 1988; Sloboda, 1985; Swanwick & Tillman, 1986; Webster, 1990, 2002) towards sociocultural conceptions of musical creativity as a culturally situated phenomenon (M.S. Barrett, 2005; Burnard, 2006b, 2007; Campbell, 1989; Elliott, 1995; Glover, 2000; Hargreaves, Miell, & MacDonald, 2002; Hennessy, 2001, 2009a), and an increasing interest in how musical creativity develops in learning contexts through the interaction in a group (Beegle, 2010; Burnard, 1999, 2002; Fautley, 2005; Espeland, 2003, 2006; Faulkner, 2003; Kanellopoulos, 1999; Koutsoupidou, 2007, 2008; MacDonald, Miell, & Morgan, 2000; Morgan, 1998; St. John, 2006; Wiggins, 1999/2000, 2007; Young, 2008). Research on children's group musical creativity is as yet a developing field and there seems to be relatively little research on the topic, especially with regard to the age range of early primary children considered here (5-7 years old). This particular study is situated in this wider context, at the intersection of different lines of investigation: children's learning in social contexts, creativity, collaboration, and music.

1.1.3 Musical creativity and curriculum policies

Collaborative creativity is an important theoretical perspective increasingly present in educational discourse and policy, too. Numerous initiatives have been undertaken to foster the development of creativity in schools – see for example the UK Government funded programme 'Creative Partnerships', running from 2002 to 2011 and aiming to

bring arts, culture and creative approaches into the classroom (<http://creative-partnerships.com/>). In relation to music education, student's creative engagement is in many countries now an explicitly expressed goal which is required or advocated as part of the music curriculum in schools.

In Italy – the context in which this research study was conducted – the creative production of music is included in the school curriculum. The most recent national guidelines provided by the Italian Ministry of Education for the nursery, primary and lower secondary school (Ministero della Pubblica Istruzione, 2012) acknowledge the role of music as

a fundamental and universal component of human experience, which offers a symbolic and relational space favourable to the activation of processes of cooperation and socialisation, to the acquisition of knowledge tools, to the encouragement of creativity and participation, to the development of a sense of belonging to a community, and to the interaction between different cultures. (p.71)

The educational objectives which have to be accomplished by the end of the primary school (1st to 5th grade, starting at 6 years) include that children should "explore diverse expressive possibilities with the voice and with musical instruments and objects", "articulate timbral, rhythmical and melodic combinations, applying elementary schemes", and "freely and creatively improvise, while gradually learning to master techniques and materials" (p.71). By the end of their 8th year of school, lower secondary school children should be able to "improvise, arrange, and compose vocal and/or instrumental pieces, using open structures as well as simple rhythmic-melodic patterns" and to create music "*also by participating in processes of collective elaboration*" (p.72, italic mine). Thus, both 'creativity' and 'collaboration in the group' are emerging as essential components of the music curriculum, as their potential in fostering children's musical and social growth is increasingly recognised by policy makers.

The critical issue, however, is the extent to which the policy discourse is actually and effectively realised in Italian schools. Unfortunately, there is very little research about the state of music education in the school system, so that it seems difficult to have a definite image of reality. A survey on 'Music and school' promoted by the Italian Ministry of Education in 2008 (Fiocchetta, 2008) reported that in 12% of primary schools no music at all was made, and that in 47% of the cases an 'external expert' was involved as a support for primary school teachers. These teachers mostly have little or no music and music pedagogy training and, in addition to that, in-service training possibilities are usually rare, due to budget problems. My extensive experience as a music educator finds agreement with this data: primary teachers are required to make music in the classroom but, in practice, music learning and teaching, if any, has a low status (of course, there are

outstanding exceptions). Given the scope and the goal of this thesis, there is no place for an extended analysis of the situation of music and music education in Italy. Suffice it to say, then, that in spite of well-sounding propositions, the probability that Italian primary school children can make an educationally valid experience of collaborative creativity in music is rather low.

1.1.4 Music teachers and collaborative creativity

Turning to expert music specialists' pedagogical attitude and skills, it is often remarked that 'music making' is typically understood as performing, listening, reading, or appraising rather than improvising, arranging, and composing. Music learning and teaching is very often equated just with acquiring and transmitting information and skills, rather than creating knowledge. Hickey (2012) remarks that, in comparison to visual art, where young children's 'scribbling' is a culturally accepted form of expressing and communicating one's own visual thinking, in music the dominant model is that of 'playing inside the lines', strongly anchored to notation or to an aurally provided model, with little or no creative intervention on the material on part of the students. Similarly, Wiggins (1999) in relation to teacher control and creativity observes that "the traditional vision of school music making consists of the teacher standing in front of the room conducting or directing students who are carrying out the teacher's instructions" (p.30). Among other factors, the problem also lies in the lack of substantial opportunities for teacher education explicitly regarding creative learning and teaching for creativity – and this is fully applicable to Italy, as well. Teacher education and music education practices need to be revitalised, and we need to complement the transmission / reproductive paradigm in music with a more innovative, creative paradigm (this is no real news and this has been said for a long time, but there we are, still today, as the system perpetuates itself). As a rationale for this study, then, there seems to be a generalised need to provide teachers with a clear theoretical outline about creative collaborative learning coupled with structured suggestions for the teaching practice. This could help teachers to be more aware, to develop their pedagogical knowledge around creativity and collaborative creativity and, consequently, to become more effective in conducting creative activities with their students. Educating children to creatively interact with their peers – *in* and *through* music – means educating them for the future.

1.2 Context of the study

Both the pilot studies and the main study were carried out in a private music school in Rome, Italy. Thanks to my role of co-director of the school since 1997, I had the

possibility to involve as research participants some of the children who attend music courses there. Given the paucity of research on collaborative creativity in music with early primary children, it was decided to select a convenience sample of eight 5-7-year-old children. The group attended 30 weekly sessions in 2013-14 explicitly focusing on group creative activities in music and movement. Data were gathered in the second part of the school year, during 19 sessions from January to June 2014. My role was that of a teacher researcher adopting a qualitative, exploratory approach to inquiry. I conducted the group together with a colleague as co-teacher (see 7.2 for more information about the research context, and chapter 8 for more details about the group of children and the programme of the activities).

With respect to my professional trajectory and my personal agenda: I was interested from the very beginning in the creative aspects of music making. My experience as a music teacher is rooted in Orff-Schulwerk – an experiential, holistic, relational, and creative approach to music and movement (Kugler, 2000, 2002; Haselbach, 1990, 2011; Haselbach, Nykrin, & Regner, 1985, 1990; Jungmair, 1992). My 1997 thesis at the Orff-Institute, Salzburg, was on group improvisation and, ever since, as a reflective practitioner (Hennessy, 2009b; Schön, 1983, 1987) I searched for new ways of facilitating children's creative processes. University studies and readings of literature provided a theoretical background on which I could better interpret my real-world observations and actions as a teacher. Through my parallel activity as a teacher educator I had the opportunity to formalise and share my experience with other teachers in (mostly) practical workshops. Over years I progressively built in a patchwork fashion my own body of professional knowledge, through a messy and dialectic process in which practical activity and theoretical reflection were constantly intertwined, until I came to the point where I needed a step forward, from reflective practice to 'proper' research. "Research is systematic, critical and self-critical enquiry which aims to contribute to the advancement of knowledge and wisdom", says Bassey (1999, p.38). This character of analytical rigour and construction of understanding is what drew me to take the path of research. And here I am, seeking to produce relevant and useful knowledge about two aspects of music learning which I consider foundational: the group aspect and the creative aspect – how it is that we learn with / through others, and how it is that together with others we invent something new. 'Creative interactions' was my theme.

1.3 Research aims and Research questions

1.3.1 Aims of the study

Aims of this interpretive, naturalistic study are:

- to develop a theoretical framework for understanding children's collaborative creativity in music
- to achieve a stronger connection between the teaching practice with regard to children's collaborative creativity and the theoretical discussion about what it is and how it can be promoted.

More broadly, the aim of this study is to explore new theoretical perspectives and pedagogical approaches concerning creative interactions as a valuable component of music learning. The ultimate goal is to challenge and reinvigorate my own and other teachers' practices and to contribute to make children's learning experiences in music more meaningful and relevant to them.

The focus of the study is on 'creative interactions' as the observable manifestation of the phenomenon of 'collaborative creativity' – what kind of interactions they are, the communicative media that they employ, the contextual aspects that define them, the different meanings that are associated to them, and the educational and ethical values that they represent.

1.3.2 The different meanings of 'interaction'

Attempting a definition, 'interaction' refers to a reciprocal action and reaction, exerted by interdependent agents that influence and affect one another. With regard to the semantic field of the word 'interaction', I group here some related concepts according to different topics and perspectives which are going to be relevant to this study (note that the same word may belong to more than one set):

- interaction as *involvement in an activity with others*: collaboration, cooperation, teamwork, socialisation, participation
- interaction as *interpersonal relationship*: attunement, encounter, responsiveness, mutuality, reciprocity
- interaction as *relatedness through words*: communication, talk, dialogue, transaction, negotiation, interchange
- interaction as *joint cognitive activity*: intersubjectivity, shared understanding, interthinking

- interaction as *bodily connectedness*: interplay, coordination, contact, synergy, synchrony, entrainment
- interaction as *relationship between different roles in a musical texture*: imitation, variation, contrast, opposition
- interaction as *interdependence of elements within a system*: network, connectivity, dynamics, feedback.

This study concentrates on creative interactions as social processes in which something new, original, unforeseeable and valuable is generated in the 'space-in-between' two or more partners. This 'area of shared meaning' (Jordan, 2004) could be a joint activity, an emotional-relational space, a dialogue, a common mental representation, a physical interchange, a musical relationship, or an abstract space of formal relationships. The aim of the study is to investigate and interpret how creativity unfolds in these spaces of intersubjectivity.

1.3.3 Research questions

Thus, the main research question of the study, which emerged through the experience of the pilot studies coupled with the review of the literature, is:

"How do early primary children interact when they engage in collaborative creative music making?"

Subsidiary questions focus on more specific aspects of children's creative interactions in music:

1. What kinds of musical, verbal and non-verbal/bodily interactions take place among children when they create music together?
2. What constitutive aspects of group work influence children's collaboration on creative tasks?
3. What meanings do children attribute to their experience of creating music as a group?
4. What is the value of these creative interactions for children's learning?

For a detailed discussion of the research questions see 6.7 in relation to contents and 7.3 in relation to methodological issues.

From a methodological point of view, I define this study as an 'exploratory practitioner research for understanding' (see 7.5.6). Although it is practitioner research, the main focus is on observing, understanding and providing a coherent account of the phenomenon under investigation, rather than on changing and improving practice. In this

sense, it combines elements of a case-study approach and an ethnographic approach with some traits of practitioner and action research (see chapter 7).

1.4 Significance of the study

Stakeholders likely to have an interest in this topic can be:

- music teachers and teacher educators who are looking for possible connections between theory and practice with regard to the theme of collaborative creativity
- researchers on creativity, play, and peer collaboration who are interested in specific forms of intersubjectivity in music
- policy makers who need to make curricular choices grounded in research evidence.

Aspects of the originality of the work can be identified in:

- the age considered. This study involved 5-7-year-old children, at the watershed between early childhood and primary education. Most of the neighbour studies to the present one (Beegle, 2010; Burnard, 1999; Espeland, 2006; Fautley, 2005; Kanellopoulos, 1999; Morgan, 1998) involved older children, either in the late primary or early secondary school
- the longitudinal investigation on creative processes in a naturalistic setting, based on a holistic, field-oriented, interpretive, and empathic approach to the creative collaborative experience of a group of children (Bresler & Stake, 2006)
- the insider view of the teacher-researcher along with a methodological approach emphasising interpretation rather than intervention
- the fact that this is collaborative creativity *in music*, that is in a domain in which this kind of research is still relatively scarce and, in particular, where common interpretations of collaboration and interaction as based on verbal language must be expanded to include other forms of communication (as Miell & MacDonald, 2000, do, or as Chappell, 2005, observes in relation to creativity in dance).

In synthesis, this research study can make a significant contribution at a number of levels, in that it applies (and further develops) existing theory to guide and interpret innovative practices in music education. The endeavour is in making sense of an inherently "fuzzy object" (Fryer, 2012) such as collaborative creativity, trying to systematically articulate professional-pedagogical knowledge with respect to an educational experience that is by definition open and difficult to define and assess. Further, this study can represent a professional development tool for the teachers

involved and it can provide the basis for new practices and theoretical perspectives in music teacher education. More broadly, the findings of this study have the potential to transcend the disciplinary boundaries of music and to apply to other curricular subjects, as well, as "the understandings [...] gained through studying and theorising collective musical activities can inform our understandings both of creative group-work and of creativity in other contexts" (Rojas-Drummond, 2008, p.1). The educational relevance of the theme, indeed, reaches well beyond the domain of music. Creative interactions and collaborative creativity constitute a transversal, interdisciplinary issue (perhaps 'the' issue of the present cultural-historical period) cutting across different domains, fields, and theoretical perspectives, both in education and beyond (Sawyer, 2006a).

1.5 Overview of the chapters

Part One presents the review of the literature which forms the theoretical background to the study and is articulated in five chapters.

In chapter 2 I introduce the first overarching theme of this thesis, i.e. learning as a social phenomenon. I first discuss the fact that music relies mainly on embodied forms of knowledge. I then illustrate some basic assumptions of constructivist, social constructivist and sociocultural perspectives in education which are relevant for the study. Finally, I consider the contributions of the anthropology of music and of the social and cultural psychology of music to the study of children's musical creativity.

Chapter 3 introduces the second overarching theme of the thesis, i.e. creativity. Following Sawyer's (2012) distinction between individualist and sociocultural approaches to creativity, relevant literature about the creative product, person, process, and environment is discussed, relating both to mainstream and specifically music educational research. The chapter presents then the sociocultural approach to creativity as an inherently social and cultural phenomenon which requires a systems perspective, and closes with a review of recent research on collaborative creativity.

Given the age of the children – 5-7 years – it appeared necessary to take into account discourses about children's learning in groups both in early childhood (play) and primary education (group work). Chapter 4 reviews sociocultural literature on play, describes play-based pedagogical approaches which are pertinent to creativity development and some relevant findings from research on musical play. Chapter 5 draws on mainstream research literature on cooperative learning and group work with primary school children. The main factors influencing the effectiveness of peer cooperation and collaboration among primary school children are discussed.

Finally, chapter 6 brings together the two 'grand themes' of the study – learning in groups and being creative in groups – both in relation to mainstream educational literature and, more specifically, to children's collaborative creativity in music. The chapter is organised around the four research questions, i.e. the kinds of interactions and communication media implied in group musical creativity (RQ1), the component dimensions of creative collaborative work which influence its nature and quality (RQ2), the roles that 'meaning' and shared meanings play in collective invention (RQ3), and the educational and ethical values that collaborative creativity promotes (RQ4). At the end, the research questions and their implications are presented along with the discussion of possible gaps identified in the literature.

The literature review as a whole constitutes a research-informed analytical framework to observe, analyse and interpret creative interactions in children's group music making.

Part Two (chapter 7) articulates the methodology of the study. After an introduction about the research context and the participants and about the methodological issues raised by the research questions, the chapter illustrates the theoretical framework and the combination of different methodological approaches which were adopted (case study approach, ethnographic approach, and practitioner research). A detailed description of the data collection methods, research design, and data analysis methods is provided. Relevant aspects of trustworthiness and quality along with ethical procedures are discussed.

Part Three regards the findings, discussion, and conclusions of the study. Beginning with a concise description of the context of the study (chapter 8), the four subsequent chapters (9 to 12) present the findings of the research in relation to each question together with the discussion linking back to the literature.

Chapter 13 draws together the conclusions of the study, and closes by discussing limitations, possible directions for further research, and implications for pedagogical practice.

PART ONE: REVIEW OF LITERATURE

2. LEARNING AS A SOCIAL PHENOMENON

2.1 Kinds of musical knowledge

At the beginning of this literature review, a premise must be made about music as a specific kind of human expression and communication: music involves a range of different experiences, skills and forms of knowledge, which encompass the cognitive, affective, and psycho-motor dimensions of development. Elliott (1995, p.49-77) proposes a multidimensional concept of music and musical understanding, whereby musicianship involves different kinds of knowledge:

Table 1. Kinds of knowledge involved in musicianship (based on Elliott, 1995)

<i>Procedural knowledge</i>	Knowing-how, thinking-in-action, nonverbal and embodied musical thinking, knowing and understanding related to music making, or musicing, as he defines it
<i>Informal knowledge</i>	Culturally situated musical reflection-in-action, knowledge linked with practical problem finding and solving with regard to a particular musical context or practice
<i>Impressionistic knowledge</i>	Nonverbal impressions, 'cognitive emotions', and general 'feel' or 'sense' about appropriate musical actions
<i>Supervisory knowledge</i>	Metacognitive awareness and regulation of one's own unfolding musical thinking
<i>Formal knowledge</i>	Knowing-that, propositional/declarative knowledge, and all concepts, theories, and reflections-on-action about music and music making, as a relevant, though secondary, body of musical knowledge

The development of musicianship – i.e. of musical knowing and understanding – is highly context-dependent because it takes place in local communities of practice. Music students can be conceived of as apprentice musical practitioners within specific cultural traditions. The music educator's role is to help them develop as reflective practitioners "engaged in the kind of cognitive apprenticeship we call music education" (p.74 – here Elliott refers both to Schön, 1983, 1987, and to Brown, Collins, and Duguid, 1989), and as active social actors immersed in and creatively emerging out of the music cultures they are growing within.

2.1.1 Embodied knowledge

Most importantly with regard to this study, musicianship and the kinds of knowledge that music making entails are highly nonverbal and body-based. Actually, all human knowledge is rooted in the body, i.e. embodied knowledge (Johnson, 1987). Mind and body are inseparable, and cognition has its necessary foundation in corporeal experience. The body is in the mind, as bodily schemata structure the way the mind works. At the same time the mind connects to the wider social and cultural environments that frame the human experience. "Thus, both body and culture are implicated in and constitutive of mind. The body is minded, the mind is embodied, and both body and mind are culturally-mediated" (Bowman, 2004, p.38). The emerging field of embodied cognition introduces an alternative model of the mind, of intelligence and thinking skills, no longer (only) verbal/linguistic, logical, symbolic, deliberate, explanatory and conscious, but fundamentally intertwined with feelings, concerns, motivation and imagination, and holistically anchored in the body (Claxton, 2012).

This is much more the case in music. The centrality of the body and the perspective on cognition as embodied action is particularly relevant and distinctive of musical knowledge and musicianship (Westerlund & Juntunen, 2005): with some of the stronger linkages between music and body, it is apparent that music moves the body (and the emotions), that any act of musical production, especially rhythm, is based on some kind of movement (Phillips-Silver, 2009), and that musical-bodily gestures are essential to communication between players. Many musical properties and concepts – such as tension, release, accent, pulse, metre, texture, density, groove, and contour – are constituted essentially through the body. In music "knowing is inseparable from action: knowing is doing, and always bears the body's imprint" (Bowman, 2004, p.45); musical experience is embodied practice, as is demonstrated in many musical practices of diverse parts of the world (Walker, 2000). Such a perspective on musical knowledge as embodied knowledge is crucial when examining the musicianship of young children, and especially in this study, in which the pedagogical approach is strategically built on holistic music and movement activities. Thus, whenever in the following I use terms such as knowing, knowledge, thinking, or similar cognition-oriented concepts, they will refer to this embodied way of knowing and thinking. Similarly, sociocultural notions such as 'intersubjectivity' or 'shared meaning' are interpreted as ultimately body-centred musical and corporeal phenomena. This makes an investigation about interactions in group work in music, in some respect, quite distinct from solely talk-based interactions typical of most research in science, maths, or language education.

2.2 Constructivist approaches to music learning and teaching

Constructivist and social constructivist approaches in general education are mostly associated with research and teaching practices concerning maths, science and, to a certain extent, literacy. With specific regard to music education, Webster (2011) critically claims that, contrary to common assumptions about the use of constructivist approaches in arts and humanities, in music education the model of directed instruction through a top-down, reproductive-imitative approach is still largely dominant. Though attention was given to constructivist principles already in the 1990s (e.g. Hennessy, 1998b), constructivist thinking is still today not as present in music teacher education and in music teaching practices as it might be. A range of issues concern how constructivism can be concretely implemented in the music classroom – among these, its effectiveness as a pedagogical approach or more broadly as a 'way of being' and a fundamental attitude on the part of the teacher; the tension between student-centred and curriculum-centred designs; and teachers' diverse ways to interpret constructivist tenets in their pedagogy (Cleaver & Ballantyne, 2014).

As an epistemological stance (Littledyke, 1998a), constructivism is a theory about knowledge and learning which, as opposed to positivist views, holds that knowledge is not acquired from an objective, mind-independent reality 'out there', but is constructed by the individual through interaction with the physical and the social environment. According to Denzin and Lincoln (as cited in Cleaver and Ballantyne, 2014, p.229) constructivism is an anti-objectivist paradigm that "assumes a relativist ontology (there are multiple realities) and a subjectivist epistemology (knower and subject create understandings)". Thus, in the constructivist view learning is a process of attributing meaning to one's experiences and, in this sense, the learner is never a 'blank slate' on which new knowledge has to be transcribed, but builds and connects new understandings based on previous experiences. Knowledge is not acquired or transmitted, but intersubjectively constructed through processes of social exchange.

In the following I summarise the main tenets of constructivism, which also act as pedagogical principles for teaching practices, including the approach to music education taken in this research project (J.R. Barrett, 2005; Littledyke, 1998b; Hennessy, 1998; Perkins, 1999; Scott, 2006; Taber, 2011; Webster, 2011; Wiggins, 2001):

Active learning – Knowledge is actively constructed by learners, who are holistically involved in authentic, real life problems. Moving from their prior experiences and views, learners engage in meaningful activities by investigating, enquiring, questioning, collaborating, reflecting, and self-assessing their own learning processes. The issue is

not memorising information or simply reproducing prescribed behaviours – e.g. learning music pieces by rote, in a passive way – but being motivated in building new knowledge based on their own interests and needs. The curriculum is not subject-centred, but learner-centred; it is not delivered, but rather co-constructed between teacher and learner/s and between learners.

Learning for understanding – Developing musical understanding can be broadly construed as meaningful learning or conceptual learning in music. We organise musical knowledge in order to solve or create new problems by progressively expanding networks of interconnected cognitive structures and constructs (schemas) which are built through a variety of musical experiences, including listening, performing, and composing (Wiggins, 2001). Thus, in the constructivist view, learning is much more than just 'learning by doing'. Learning is rather a process which can be compared to a cognitive apprenticeship in (musical) thinking (Rogoff, 1990), in which reflection, metacognition, and ongoing self-assessment are essential to the construction of meaningful knowledge. The teacher models thinking processes related to music making and facilitates the learners' active exploration of musical activities or concepts.

Social learning – Knowledge is co-constructed through the learners' active interaction with the social and cultural worlds they live in. The notions of the zone of proximal development (Vygotsky, 1978) and scaffolding (Wood, Bruner, & Ross, 1976) are central in the constructivist and social constructivist literature (see below for a more detailed discussion). Students learn on their own, with their peers, and with the support of the teacher, within a culturally situated community of learners.

Creative learning – The essence of a constructivist approach is best represented by creative activities, in that one has to exercise understanding in order to create. Creativity relies on the comprehension of the inner logic of certain musical processes and the recombination of ideas and procedures derived from specific cultural ways of making music. Much of the work on musical creativity in education is related or relatable to constructivist views. Further, in its most committed versions constructivism is closely related to critical pedagogy (Abrahams, 2005a, 2005b). There is a 'political' side of constructivism which calls for a shift in the power relationships between teachers and students, who are equally and democratically involved in creating new understandings and knowledge. Education should be transformative and empowering, and students should be in the position to exert control and ownership over their learning. This stance fits well with a discourse about creativity (Allsup, 1997, 2003).

2.3 Sociocultural perspectives on learning and development

While constructivist thinking focuses on how individuals build representations and cognitive abilities through the use of resources, physical and conceptual tools, and information from other individuals, social constructivist and sociocultural views expand the picture to include the interactions within a social and cultural context as a foundational aspect of (music) learning.

2.3.1 Defining and distinguishing 'social constructivist' and 'sociocultural'

Before I proceed, however, it is necessary to make explicit the use that I will make of two key terms, 'social constructivist' and 'sociocultural'. The problem with this terminology is that, in much of the literature that I have examined, there is often no clear distinction between the two and, further, there is also little consistency between different studies. Palincsar (1998), for example, uses 'social constructivist perspectives on teaching and learning' as an umbrella term to label the set of theories and research studies focussing on "the social dimensions of constructivism generally speaking" (p.348), including in her review Piaget, Vygotsky and the post-Vygotskians. On the other hand, John-Steiner and Mahn (1996, p.204) distinguish between 'social constructivist frameworks', which look at the ways in which the individual child acquires knowledge by means of social interactions (at the level of the teaching activities), and 'sociocultural theoretical perspectives', whose higher level of analysis is more concerned with the whole institutional-cultural-historical horizon in which learning phenomena occur. In Rogoff's (1998) view, so-called 'sociocultural' or 'socio-historical theories' encompass a number of undoubtedly related, but nonetheless diverse perspectives – a "family of sociocultural approaches" (p.683) – which are distributed over an arch of many decades, different countries, and again different domains, from anthropology, to history, to sociology, to psychology, to sociolinguistics, to education. The difficulty in giving clear-cut definitions, then, seems to be legitimate. As for my choice in the context of this study, I would tend to use 'social constructivist / social constructivism' in relation to the psychological processes of knowledge construction (especially in educational, teaching/learning contexts), and 'sociocultural theories' to refer to the broader perspectives on the whole system of interrelated persons, tools, events, and contexts in which learning – virtually any kind of learning – takes place.

2.3.2 Vygotsky's sociocultural theory

2.3.2.1 Learning and development as social and cultural phenomena

The basic principle of sociocultural theory, developed by Lev Vygotsky and his collaborators in Russia in the 1920s and 1930s (Palincsar, 1998; Newman & Holzman, 1993; Vygotsky, 1978), is "the interdependence of the social and individual processes in the co-construction of knowledge" (John-Steiner & Mahn, 1996, p.191). In the following, the chief concepts that this study draws from Vygotsky's work are briefly summarised.

The development of individual cognition, including higher-order forms of thinking, is based on children's interactions with the social-cultural world. Vygotsky defines 'internalisation' as the process through which the child reconstructs an initially external activity as an internal operation: "all the higher functions originate as actual relations between human individuals" (Vygotsky, 1978, p.57). Thus, Vygotsky establishes "the unity but not the identity of learning processes and internal developmental processes" (p.91), a unity which, rather than merely psychological, is fundamentally social-historical. "The mind (a psychological activity / a historical unity) is comprehensible historically because it is historical. It is literally created or produced through the participation in and internalization of social-cultural-historical forms of activity" (Newman & Holzman, 1993, p.65). In Vygotsky's view, knowledge is co-constructed, transmitted and creatively transformed through the use of cultural tools (John-Steiner & Mahn, 1996). Semiotic means – as they are also referred to – support the handling of information and mediate human actions. With regard to the present research study, examples of cultural tools include musical systems and concepts, music notations, and music instruments. This plurality of different 'technologies' are the product of an historical evolution and substantiate in many different ways the practices and the different forms of thinking of cultural communities.

A key methodological stance in Vygotsky's work is the assumption that the study of higher psychological functions needs to be based on a new analytic framework, focussed on the 'process' of change, i.e. on the origin and the historical evolution of phenomena (Vygotsky, 1978, p.58-65). Different levels of 'genetic analysis' are possible – phylogenetic, cultural/historical, ontogenetic, and microgenetic, from the widest to the most local (Palincsar, 1998; Rogoff, 1990, 1998, 2003). The attempt is to take into account the profound interconnectedness of these different layers of contextualised and interacting events in shaping the characteristics of children's learning and development, as well as to consider the ways in which children are active (not just receptive) cultural agents acting back on the contexts of their learning and development and creating their

own contexts through cultural practices such as play (Wood & Attfield, 2005 – see chapter 4.). Thus, learning is not something that happens in the mind of a single child, but is the result of a social interaction, mediated by the material and psychological tools of a cultural community, and situated within a unique historical context. This significant change in perspective – Newman & Holzman (1993) define it 'revolutionary' – determines, as a consequence, a change in the very object and method of the inquiry: "the basic unit of analysis is no longer the (property of the) individual, but the (processes of the) sociocultural activity, involving active participation of people in socially constituted practices" (Rogoff, 1990, p.14).

2.3.2.2 Zone of Proximal Development and Scaffolding

With regard to the concrete forms of social interaction through which learning and development take place, Vygotsky introduced the concept of the zone of proximal development (ZPD) to explain the mechanisms that advance learning within interpersonal contexts. The ZPD is defined as the distance between the actual learner's ability to solve a problem independently and the learner's potential level of achievement when given guidance by an adult or in collaboration with more expert peers (Vygotsky, 1978).

Through a series of suitable social interactions with more knowledgeable others the learner internalises concepts and procedures related to the task and goes beyond its present developmental level. So, the focus is not so much on the outcomes of learning, but more on the process, on the dynamics of realising a potential. The seminal concept of ZPD – which Vygotsky himself regarded as a "general developmental law for the higher mental functions that we feel can be applied in its entirety to children's learning processes" (Vygotsky, 1978, p.90) – has subsequently been challenged, expanded and reformulated by scholars in different ways, generating further theoretical perspectives on socioculturally situated learning and giving rise to a number of educational applications.

A further concept which has been developed from Vygotsky's theories about the ZPD is 'scaffolding' (Wood, Bruner, & Ross, 1976). The concept of scaffolding clarifies the role of the tutor in accompanying the child in his movement within the zone of proximal development. Given a specific problem that the child is learning to solve, the tutor has to fit the level of support and guidance to the child's potential ability to perform at first only some of the component cognitive (or practical) operations involved in the task, up to the point in which she becomes able to master the whole problem solving process on her own. Scaffolding is a "learner-centred strategy", which has to be "directed appropriately at the learner's current ability level. In other words, it must occur within the learner's ZPD" (Dennen, 2004, p.815). The ZPD and scaffolding have been used as conceptual tools to

interpret learning phenomena both in the context of schooling and in situations of informal learning in naturally occurring, out-of-schools contexts in which a transition is facilitated from interindividual activity to individual skill development. These powerful concepts demonstrate a "broad applicability" to understanding the nature of instructional interaction (Greenfield, 1984, p.119) and will be central in this study, too.

2.3.2.3 Critiques and expansions of the notions of ZPD and scaffolding

It has been argued that the idea of an expert assisting the novice does not imply a passive role for the latter: on the contrary, both participants contribute to learning and manage the interaction, actively engaging in what has to be considered as a dialogue and a mutual collaboration (Rogoff, 1998). What is established between expert and learner is not just a one-way relationship which is largely adult-controlled, but a cooperation, a 'give-and-take' where the child's responses engage the tutor in actively modulating her own actions in the attempt to provide an adequate amount of support (Greenfield, 1984). Holzman (2009) emphasises the ZPD as a *performance space* – children are performing who they are and who they are becoming. Through different kinds of play – be it free play, game play, or theatrical play or performance – they also shape the contexts of their learning and development. In relation to the role of play in early childhood education, Wood and Attfield (2005) highlight the learners' *agency* as a fundamental component of the teaching/learning interaction. They claim that, if children were to learn only within a ZPD that is established by adults, they would just replicate existing knowledge, whereas play and playfulness provide spaces for them to learn beyond adults' control and create their own ZPDs. A similar distinction is made by Jordan (2009) between 'scaffolding learning *for* children' and 'co-constructing understandings *with* children'. While in the former the adult is in control of the activity and assists the child in gradually acquiring mastery over a pre-defined task, in the co-construction relationship children are empowered to make decisions and to direct the interactions with the teacher, usually in more open-ended activities with no prescribed content outcomes. In such situations children are equal, if not major contributors to the learning process, and the teacher's role is that of listening, questioning, and following children's ideas, thus developing "full, two-way intersubjectivity" (p.50). This distinction is particularly relevant in the context of the present study, in which the pedagogical approach is primarily focused on providing children with free spaces within which they can create their own artefacts with the support of the teacher.

As a further point, the concept of ZPD and scaffolding can usefully be extended to understand the interactions and symmetrical relationships within a group of peers.

Holzman (2009, 2010) claims that the ZPD can also be interpreted as the *collective* process and activity of a whole group of people engaged in learning – she refers in particular to arts-based, out-of-school programmes which are similar to the project reported in this thesis. Research studies about the effective use of talk and dialogue to solve problems (Fernandez, Wegerif, Mercer, & Rojas-Drummond, 2002), too, share this expanded conception of ZPD and scaffolding as a group and peer-based process.

Children are reported to have mutually supported each other's progress by implicitly and unconsciously using 'scaffolding techniques' of the kind typically employed in the intentional efforts of adult tutors. Thus, 'scaffolding' and 'ZPD' no longer characterise only a deliberate intervention of a teacher in the context of a one-to-one relationship, but can be reconceptualised as dynamic, reciprocal and responsive processes pertaining to groups of pupils who use dialogue as a way of creating shared thinking and understanding.

2.3.3 Post-Vygotskian sociocultural theories

From a historical point of view, the sources of the sociocultural perspective, alongside the primary influence of the Vygotskian legacy considered above, can be traced back to the attempt in the cognitive psychology of the late 1970s to develop a more ecologically valid methodology, away from the experimental, test-driven, laboratory-based psychology of the 1960s and more towards the investigation of real-life circumstances, in which the unit of study was to be the "person-environment interface" (Newman & Holzman, 1993). A further source of alternative considerations about learning might be identified in the study of "everyday cognition" (Rogoff & Lave, 1984), i.e. the examination of the ways in which thinking skills develop in non-experimental, out-of-school contexts, which are defined by specific situational tasks, within particular institutional, cultural and social settings, and where cognition is part of a practical activity. From an even broader perspective, another major impulse to the sociocultural turn came from anthropological and cross-cultural studies which introduced notions such as informal learning and situated learning (Lave, 1996; Lave & Wenger, 1991; Rogoff, 1990, and in particular 2003). Lave and Wenger's concepts of learning as apprenticeship and legitimate peripheral participation emerged in relation to adult's learning in working situations and have largely been applied by many socioculturally oriented theorists and researchers to general educational issues and schooling (as an example, see the cognitive apprenticeship approach as proposed by Collins, Brown, & Holum, 1991; Collins, Brown, & Newman, 1987; Collins & Kapur, 2014). This widened focus on changing forms of participation in sociocultural communities of practice allows for a comprehensive analysis, which takes into account and interrelates the individual (the whole person-in-the-world with her developing identity), and the social

world (the system of shared meanings and practices of a given community, reproducing itself and maintaining continuity, but also evolving over time through the transforming action of newcomers). I take these as key orienting concepts for the present study.

From an analogous perspective, but with a specific focus on children's learning and development as culturally situated, Barbara Rogoff's work (1990, 1998, 2003, 2008) also appears to be particularly significant for this inquiry, to which it can offer some fundamental conceptual tools and methodological guidelines for understanding and analysing interaction in collaborative learning within educational contexts.

2.3.3.1 Rogoff's guided participation and participatory appropriation

Rogoff's basic assumption is that "humans develop through their changing participation in the sociocultural activities of their communities, which also change" (2003, p.11), that is to say that developmental processes are inseparable from the sociocultural context in which children grow up, and to whose evolution they also contribute. Children's cognitive, social-relational, and physical abilities develop as integrated aspects of their active participation in the practices of the communities they belong to, and in relation to the particular cultural institutions and traditions, developmental goals, ethical values, tools and technologies for thinking, and communicative means which characterise these communities. Understanding children's learning, therefore, entails observing an 'activity' or 'event' as the global unit of analysis and addressing at different points one of these three "planes of analysis" – individual, social, and cultural-institutional – but never losing sight of the interconnectedness of all elements within the whole picture (Rogoff, 1998, 2008). Corresponding to these planes of focus are distinct (but intimately related) aspects of developmental processes, which Rogoff defines as 'apprenticeship', 'guided participation', and 'participatory appropriation'.

In the first plane, that of community activity, the notion of apprenticeship has been used in direct relation to development and education as a metaphor or an analogy (Rogoff, 1990, 1998) to refer to the process by which children, in interaction with more knowledgeable partners and as participants within a "community of learners" (Rogoff, 1994), actively acquire growing expertise or cognitive skills with regard to a given sociocultural domain. In this sense, music learning can also be considered as a form of apprenticeship – see Elliott, 1995.

With regard to the second, interpersonal plane of analysis of sociocultural activity, Rogoff introduced the concept of 'guided participation' (Rogoff, 1990, 2003), which builds upon

and extends Vygotsky's notion of ZPD. Guided participation is a universal phenomenon present wherever children grow up as participants in the cultural life of their communities. It concerns processes of communication and reciprocal involvement which presume 'intersubjectivity' (Rogoff, 1990), i.e. a sharing of focus and purpose between the partners, and a shared understanding which enables them to attune to each other and coordinate their joint efforts. Intersubjectivity, as a "process involving cognitive, social, and emotional interchange" (p.9) both in the dyad and in the group, is the presupposition for any mutual structuring of participation, and assumes differing forms at different developmental moments, for example in terms of an infant and a mother interacting nonverbally, or a group of toddlers playing together, or older children engaged in collective problem solving (or, with regard to this study, a group of children inventing music together).

The third plane of sociocultural analysis focuses on individual processes of 'participatory appropriation', which Rogoff (2008) defines as the personal process of change resulting from involvement and participation in social activity, "a process of becoming, rather than acquisition" (p.60). The concept of participatory appropriation represents an advancement of Vygotsky's notion of 'internalisation', which may lead to assume a neat boundary between the social context and the individual. In contrast to that, participatory appropriation highlights the inherently dynamic nature of the interplay between partners as they share a common focus or engage in a collaborative activity. The intersubjective processes that unfold in the communication can be best understood as occurring *between* the partners as they mutually engage with each other. The process of appropriation involves a creative component, in that information and skills – or more broadly, culture – are not just transmitted and reproduced, but are actively transformed by each next generation of children, who adapt, reformulate, and regenerate existing practices in idiosyncratic ways to fit the changed circumstances of their historical situation. "As a class, children are active in creating culture, not just in using it" (Rogoff, 1990, p.198).

Concluding, in Rogoff's interpretation of sociocultural theory personal, interpersonal, and cultural processes mutually constitute each other and are strictly interdependent. A methodological advantage of this perspective is that multiple aspects of a sociocultural activity taken as the unit of analysis can be explored at the same time, foregrounding at different points one single plane, but always holding the others in the background, in order to develop a comprehensive understanding of the situation as a whole. I take this as the main theoretical and analytical framework for the present study, applying it to the

investigation of children's group creative processes and interactions in music and movement.

2.4 Anthropological and social/cultural psychological perspectives in music education

After having outlined the major sociocultural assumptions and conceptual tools which constitute the broad background of the present research study, I go back to music and introduce in the following two main perspectives which inform the theoretical, methodological and pedagogical approach taken here, namely the views of anthropology of music and social/cultural psychology of music on matters concerning music learning and specifically group creative learning in music.

2.4.1 *The perspective of anthropology of music on music making and music learning*

The perspective that this study adopts in relation to children's musical creativity takes into account both the products *and* the musical and social processes of their creative activity, as both are necessary to gain a more comprehensive understanding of the phenomenon. In this regard, the study is informed by the views of anthropology of music about music as culture, in particular by Merriam's (1964) and Blacking's (1973, 1995) work. Merriam's anthropology of music (1964) brought the focus beyond the structural analysis of purely sonic properties of musics from different cultures and stressed the need for a more global consideration of music *in* culture and music as culture, i.e. the concepts, values and beliefs associated with music, the physical, verbal and social behaviours related to music making, the processes of music learning, as well as the uses and functions of musical practices within the culture. In a similar vein, Blacking (1973, 1995) proposed an anthropological concept of music as a specifically human set of sensory and cognitive abilities which humans are innately predisposed to use for expressing and communicating meanings in their lives, and as a distinctive system of symbols and social actions, i.e. a cultural manifestation. "Every musical performance is a patterned event in a system of social interaction, whose meaning cannot be understood or analyzed in isolation from other events in the system" (Blacking, 1995, p.227). In Campbell's (2000) view, through his ethnomusicological work Blacking made some significant contributions to providing a strong foundation for the ways in which we can conceive of music in education – among these, the belief that all humans have some kind of inborn musical ability which has the right to be nurtured, the emphasis on the physicality of musicianship and the close relationship of music and movement/dance as a cross-cultural

characteristic of music making. The ethnomusicological perspective on both the musics and the music-makers (Campbell, 2003) is highly relevant for music education research – and the present study, as well – as it opens up a broader understanding of music making as imbued with cultural meanings. A similar approach to the study of musical phenomena comes from the sociology of music, where Small (1998) considers music not so much a thing in itself as a kind of social action, 'musicking'. His analysis of the cultural practice of a typical concert of classical music as a celebration of the ideal relationships and values which are enacted by participants can virtually be extended to any kind of music making, including educational practices and the whole of the interpersonal relationships, power relationships, and ethical values which are implicitly or explicitly affirmed through them.

A rich body of ethnomusicological and ethnographic research has been carried out on musical creativity across different traditions which can offer possible models for music education (e.g. Campbell, 1989, 1990; Campbell & Teicher, 1997). Also pertinent to the present study are specific investigations on children's musical cultures (Campbell, 2010) and children's music making in the playground (Marsh, 2010; Marsh & Young, 2006). In section 4.5 on musical play I will talk more in detail about children's unsupervised learning in non-educational contexts as a source of information about the 'naturally occurring' creative processes in music, from which relevant considerations and implications can be drawn with regard to group creative music making in educational contexts.

2.4.2 The perspective of psychology of music

Psychology of music offers relevant viewpoints for an investigation of children's creative collaborative music making. Perhaps more than the early cognitive psychology of music (Deutsch, 1999; Sloboda, 1985), which was mostly centred on thinking strategies and operations, perception, and memory, the social psychology of music appears to constitute a significant theoretical perspective for this study, placing greater emphasis on the social dimensions of music, including the effects of the social environment and cultural norms on musical behaviour, as well as the functions that music performs in people's everyday lives (Hargreaves & North, 1999, who interestingly refer to Merriam's 1964 categorisations). Echoing Vygotskian theories, Hargreaves, Marshall, & North (2003) suggested four different levels of social influence, namely the individual (age, gender, personality, identity), the interpersonal (peer relationships and shared identity), the institutional, and the cultural (the role of schools, communities, the media and the musical traditions in shaping musical behaviours).

A second evolving strand of psychology of music which is relevant for this study is the developmental psychology of music (Deliège & Sloboda, 1996; Hargreaves, 1986), which gradually shifted the attention from a Piagetian theoretical framework, based on the identification of a general cognitive-developmental sequence (see for example, Gordon, 2012; Paananen, 2006, 2007; Swanwick, 2001; Swanwick, & Tillman, 1986) to a more Vygotskian-oriented perspective on the sociocultural contexts that affect children's musical growth and identity development in music (Hargreaves, Miell, & MacDonald, 2002). Further, studies on infant musicality (Trevarthen, 1999-2000, 2002) show how musical development and learning occurs at the intersection between biological, evolutionary, and sociocultural influences. Finally, the cultural psychology of music (Barrett, 2011) is also relevant here, in that it embraces sociocultural theories, ethnomusicological and cross-cultural perspectives, and social approaches to learning and development.

2.4.3 An interdisciplinary approach to musical creativity

As has been seen above, over the last three decades in anthropology, sociology, and psychology there has been a shift of theoretical focus towards the 'social' and the 'cultural' which is having a profound impact on how learning and music learning are conceptualised. As I will illustrate in the next chapter on creativity, such a shift to a sociocultural perspective ushers in an interest in creative collaborative music-making. An investigation of children's creative interactions in music thus has the opportunity to further explore this new research area. The intention of the present study is to shed some light on how children dynamically engage in various kinds of relationships in and through music in ways that generate novel ideas and behaviours.

In order to do this a wide theoretical background is needed, which encompasses perspectives from different disciplinary domains. Indeed, Sawyer (1998) claims that creativity research is not just a subfield of psychology – as this would impoverish the range of things we would see – but that we should adopt an *interdisciplinary approach* to fully consider the cultural, contextual and interactional factors which constitute human ways of being creative (including in music). In a similar line, pursuing the argument for the culturally situated nature of musical creativity, Burnard (2007) suggests that three theoretical perspectives are relevant for understanding musical creativity, namely *phenomenology* – centred on the subjective lived experience of creating music – *psychology* – cognitive, social, cultural, and developmental approaches to personal traits, products, processes, and behaviours – and *ethnomusicology* – which examines the practices of specific sociocultural contexts. Each of these research traditions, based on

distinct ontological and epistemological premises, can illuminate different aspects of creative behaviour in music – as *how* we look at something determines *what* we see – and thus positively contribute to a deeper understanding of the phenomenon.

2.5 Assumptions of major pedagogical approaches to music learning

I conclude this chapter with a table which, based on the preceding review, can serve as an analytical tool to distinguish between different pedagogical approaches to music education (see Table 2).

Table 2. Assumptions of major pedagogical approaches to music education

	<i>Behaviourist learning / teaching</i>	<i>Constructivist learning / teaching</i>	<i>Social constructivist learning / teaching</i>	<i>Sociocultural learning / teaching</i>
<i>What is learning</i>	Becoming trained in a range of musical behaviours	Building cognitive structures and meaningful knowledge	Co-constructing understandings – shared meanings	Participating in culturally situated practices
<i>Goals</i>	Acquiring observable skills	Developing understanding – Learning to learn	Learning together	Becoming member of a community
<i>Learner</i>	Empty vessel / tabula rasa	Active, competent, inquiring	Cooperative	Dialogic
<i>Teacher's role</i>	Source of knowledge, deviser of learning processes, trainer	Coach, mentor, guide	Facilitator, moderator	Proactive and responsive cultural agent
<i>Strategies</i>	Direct instruction – rote learning through stimulus-response sequences	Discovery learning, projects, experiments	Group work	Collaboration in authentic practices



I roughly categorise them as behaviourist, constructivist, social constructivist and sociocultural perspectives on pedagogy. I provide a synthetic definition of the fundamental assumptions about learning, the idea of learner, and the main goals, strategies and teacher's roles that characterise each approach. These categories are not mutually exclusive, but rather may coexist and be complementary to each other. I would see a sort of progressive expansion from the behaviourist towards the sociocultural, as represented by the arrow at the base of the table. In everyday teaching – and in this research project, too – we may have a mixture of all these different approaches. The balance in favour of the one or the other approach may vary, at a macro-level, depending on the specific goals and characteristics of a pedagogical intervention (here we were

mostly on the right side of the table) and, at a temporal micro-level, depending on the single phases of work within a session, for example when teaching a song by rote by taking a behaviourist approach, and then having children invent an accompaniment in small groups, according to a social constructivist logic.

3. COLLABORATIVE CREATIVITY

This chapter discusses existing perspectives about creativity and collaborative creativity and aims to theoretically contextualise the study and sensitise the researcher to the range of issues underpinning group creative practices in music education. I include here mainstream literature on creativity alongside specific literature from within the field of music education, in order to connect a general perspective with the more particular aspects of collaborative creativity in children's creative music making.

3.1 Defining creativity

Creativity is a 'fuzzy concept', i.e. a complex, multidimensional concept (Fryer, 2012) which is not easily reducible to a clear and unambiguous set of component aspects. Banaji, Burn and Buckingham (2010) distinguish various 'rhetorics of creativity', each of which discloses different perspectives on the phenomenon. Elitist and romantic notions of creativity construct it as 'genius', i.e. a unique quality of a few elected individuals. More democratic conceptions consider it as something which all human beings to some extent demonstrate. Creative acts and products can be seen in the everyday life of people, including children, and not only in the high spheres of art and science. Creativity can be a driving force for the creation of social good, though it can just as well be anti-social and troubling. Recently, creativity has been conceptualised in the business and political circles as an array of skills indispensable for workers and managers to push the economy forward. In a more child-centred perspective, creativity can be regarded as originating in play and playful behaviour. Much psychological research conceives of creativity in terms of cognitive processes, whereby cultural psychologists stress the importance of social and cultural influences on the development of creative skills. Finally, in the 'creative classroom' rhetoric a perhaps too wide or vaguely defined conception of creativity includes holistic learning, active learning, social learning, effective learning, a broad notion of intelligence, and ethical aspirations. The risk here is that such a blurred and at times too practical view of creativity, though based on noble intents, misses what is really distinctive about creativity itself, and underestimates some of the real tensions and problematic issues which underlie creative work in education. Creativity is a broad and heterogeneous concept, and diverse theoretical approaches can be used to understand its characteristics, which have contrasting implications regarding how it can be fostered in education. This chapter is an attempt to focus on which 'version' of creativity the talk is about in this study.

3.1.1 A working definition

The definition of creativity (Runco & Jaeger, 2012; Sternberg & Lubart, 1999) which can be found across most literature and in policy documents (e.g. Craft, 2001a; NACCCE, 1999) involves two main criteria, that of originality – novelty, uniqueness, imaginativeness – and that of appropriateness – effectiveness, usefulness, fit, validity, acceptability, purposefulness, or worth. Regardless of the domain in which it is situated, creativity implies the fact that something unprecedented is generated, typically as a recombination or development of already existing ideas, and that this is acknowledged by a certain group of people as in some way valuable in relation to the achievement of an objective. Some issues derive from this definition, in the first place 'original in relation to what?', which poses the problem of the degree of novelty in relation to the agent's past experience (child or adult), the standards of a given subfield, or major cultural norms and practices. Secondly, there is an issue as to 'who establishes what is creative?' and, more broadly, what is the role of the immediate and far social-cultural environment in shaping creative acts. I address the first point here, and postpone the discussion of the 'social' in creativity to a later section (ch.6).

3.1.2 High and low forms of creativity: are children 'creative'?

Creativity in human activity can be expressed at different levels of elaboration and complexity, from the eminent contributions of great artists and scientists to the more common creativity of laypersons. Making such distinctions is important to define if and to what extent children can be said to be 'creative'. As opposed to the extraordinary, paradigm-shifting creations of outstanding personalities – acts of 'Big C' creativity – the notion of 'little c creativity' (Craft, 2000, 2001b, 2002, 2003a) refers to everyday creativity which involves intentional problem-solving and problem-finding actions aimed at exploring possibilities and generating innovation. In a similar line of thought, Beghetto and Kaufman (2007; and Kaufman & Beghetto, 2009) introduce a conceptual model of creativity as a developmental continuum extending from mini-c, to little-c, to Pro-c, and Big-C creativity. 'Mini-c creativity' is defined as the intrapersonal, dynamic and transformative process by which an individual reorganises information and behaviours in ways that are novel with respect to the person's existing knowledge. Thus, if we should consider creativity only from the point of view of influential breakthroughs which have a wider impact on society and culture, then it would seem sound to state that "children are not really creative" (Sawyer *et al.*, 2003, p.240), as they have not yet mastered the rules and knowledge structures of a domain to such an extent that they can transform it in original and socially

valued ways. However, if we take a different perspective, as Craft and Beghetto and Kaufman do, it is entirely possible to acknowledge children's creative potential.

In this direction, Glăveanu (2011a) carefully weighs different arguments supporting or contesting children's presumed creativity. For example, children's playfulness, spontaneity, experimentation and freedom from conventions is regarded by modern artists and those influenced by a romantic rhetoric as an important characteristic for the creativity of the artist. However, children's productions, though precious for their parents and teachers, are based on a limited expertise and cannot have an impact at the macro-level of culture. As a counter-argument, the imaginative and expressive aspects of play, the emotional experience of discovering something new, or the creation of meanings seem to be of the same nature of the adults' world, even though in children there seems to be less intentionality, control, and ability to consciously choose among alternatives than in adults. Glăveanu recognises that these opposing conceptualisations of children and creativity – children as passive and receptive vs active and interactive, and creativity as the quality of geniuses vs a socially and culturally distributed phenomenon – are equally valid and simply draw from different interpretative frameworks. Both from a theoretical and a pragmatist point of view, however, he claims that 'betting' on children's creativity is a more favourable option than the opposite, for three orders of reasons. Firstly, the developmental and cultural psychology sees children as having agency in building their own experiences in interaction with their physical and social environment. Secondly, a more cultural reading of creativity as a situated, emergent phenomenon shows that high creativity is not opposed to but built upon everyday creativity. Thirdly, in relation to educational practices, "believing in the existence of creativity in children will further help 'materialise' it, by paying more attention to all instances with potential creative value" (p.129). As a more promising and beneficial starting point, then, the assumption that children are creative can positively influence educators' perceptions and practices. This research study accepts Glăveanu's 'bet' as a major premise for an investigation about children's creativity, assuming a conception of creative development as a continuum across ages and abilities. In the following, I will occasionally go back to examples of adults' creativity as a useful reference for understanding children's creativity.

3.1.3 Creativity as domain-general or domain-specific? The case of music

The question whether creativity is domain-general or domain-specific has recently been of interest for research. The consensus is that "much of creative ability is domain-specific" (Sawyer, 2012, p.60) in terms of thinking processes, conceptual and material tools, and cultural practices associated to an area of knowledge. Given the multiplicity of forms that

human intelligence can assume (Gardner, 1983), it seems viable to think of creativity as a hierarchy of abilities, some of which are more general – e.g. problem-solving and problem-finding skills or cognitive-emotional characteristics – and others which are more pertinent to a particular domain – e.g. improvising on an instrument or drawing pictures. The issue of specificity is relevant to the field of education in two ways. Firstly, teaching for creativity always implies the question 'teaching for *which* creativity?' – whether verbal, kinaesthetic, musical, mathematical, etc. – and in what specific ways within a particular domain or subdomain. Secondly, in the case of music it seems necessary, as has been posited above, to take into account the multi-dimensionality of the musical experience and the distinctive ways of knowing, especially its embodiedness, which are relevant to music making in comparison to more propositional kinds of knowledge.

3.2 Individualist approaches to creativity

Sawyer (2012) identifies two major approaches to the study of creativity, the individualist and the sociocultural approach. The individualist definition of creativity is "a new mental combination that is expressed in the world" (p.7) by a person who associates and elaborates in novel ways some pre-existing ideas and concepts. From a methodological viewpoint, individualist approaches are reductionist in the sense that they analyse creativity, usually based on experimental evidence, by focusing on basic components of creative processes and behaviours as occurring in a single person. As such, they provide a bottom-up view of creativity and do not offer a thorough explanation of the phenomenon, but contribute to illuminate single aspects of it. Sociocultural approaches to creativity, as will be illustrated in section 3.3, investigate how innovative ideas are collectively generated and validated by groups of people within specific social and cultural systems, and provide a top-down, real-world description of creativity as a situated phenomenon. Sawyer contends that the two approaches are complementary and both useful to build a more complete explanation of creativity.

In the following, I briefly review some of the general and music-related research on creativity belonging to the individualist approach. I will structure these contents by using Rhodes's (1961) distinction between four strands of inquiry – product, person, process, and press (i.e. environment) – which is broadly used in creativity research. This review by no means intends to be exhaustive, and aims rather to select research themes and findings that are relevant to this study.

3.2.1. Product

In the field of music psychology a first approach used in the study of creativity was based on the assessment of the creativity of the individual by empirically measuring the characteristics of the products. In the 1970s and 1980s a series of standardised psychometric tests were devised (for a detailed review see Richardson and Saffle, 1983, and Running, 2008), which largely referred to Guilford's and Torrance's criteria of *originality* (uniqueness and imaginativeness of the responses to the stimulus), *fluency* (number of ideas generated), *flexibility* (variety of responses), and *elaboration* (degree of complexity and detail in the responses). Such procedures to rate musical creativity have been used until recently. For example, Kiehn (2003) compared the improvisational abilities of children in grades 2, 4, and 6, by administering the Vaughan Test of Musical Creativity, consisting in creating rhythm or melodic answers to antecedent phrases, improvising a tune on the diatonic scale, or making up an imagery-based piece. (Un)interestingly, the results of this quantitative enquiry suggested that 4th-graders performed significantly better than 2nd-graders. Baldi and Tafuri (2000, 2002) investigated 7-10-year-old children's ability to organise a beginning, a middle part and an ending in their improvisations by using a classification system based on musicological categories. The findings suggested that children assimilate formal structures from the environment, and that the degree of elaboration of children's organisational procedures strikingly increases with age. Koutsoupidou and Hargreaves (2009) conducted a quasi-experimental study of the effects of a creative programme on the development of creative thinking. They administered Webster's Measure of Creative Thinking in Music – MCTM-II (Webster, 1994) before and after a six-month intervention in which an experimental group of 6-year-old children was engaged in exploratory and improvisatory musical tasks, while a control group just followed a more teacher-directed, imitation-based approach. The results of the pre- and post-tests showed that the experimental group scored significantly higher than the control group in terms of creative thinking, i.e. extensiveness, flexibility, originality and syntax of the responses.

A valuable contribution that studies such as these offer is that creative abilities *can* be learned, that to a certain extent they develop over time through a process of enculturation and acquisition of the rules of a musical system and, more importantly, that they can be fostered through effective educational programmes. On the other hand, a limitation of such experimental, quantitative studies is that the attention of the inquiry is too centred on measuring and classifying the responses produced by each individual child in a decontextualised manner, on the validity, reliability and objectivity of the methods used, and on the statistical significance of the results which are based on samples inevitably

too small to yield any generalisable conclusions. There is, instead, too little attention to what really happens during the creative learning process, to the meaning that the product has for the creators themselves, and to the ways in which children think while shaping their own ideas, let alone to the real-world interactions in the classroom through which these processes occur. Thus, this kind of enquiries about musical creativity may at best constitute an informative background to the present research, but they do not offer substantial information which is meaningfully relatable to the teaching-learning process of collaborative musical creativity. A further problem with the assessment and measurement of creative products is that it seems "impossible to eliminate all elements of subjectivity" (Fryer, 2012, p.27), as the definition and identification of 'creativity' to a certain extent rests on a subjective (i.e. socioculturally based) judgement. In this regard, research in general creativity has found that a reliable measure of creativity can be obtained by employing a 'consensual assessment process' (Amabile, 1996) by a group of experts who share similar views and knowledge about the domain. Amabile's consensual assessment technique can also be applied to rate the relative creativity of students' musical products and could advantageously be used by music teachers (Hickey, 2001).

3.2.2. Person

A great deal of research has been carried out since the 1950s on the traits of the creative personality. A variety of tests, check lists, and scales have been developed in order to identify and measure the characteristics which are distinctive of creative behaviour (Chávez-Eakle, Eakle, & Cruz-Fuentes, 2012), so that there is not a definitive listing of 'creative traits', but different perspectives and ways to order these attributes. Based on an extensive meta-analysis of creativity research literature, Treffinger, Young, Selby, and Shepardson (2002) propose a model in which an array of personal creative characteristics are clustered into four main categories – generating ideas, digging deeper into ideas, openness and courage to explore ideas, and listening to one's 'inner voice' – as summarised in Table 3 (next page).

These creativity traits imply both cognitive and affective processes. Russ (1996) developed a model, which links global personality traits with the cognitive abilities involved in creativity and the underlying affective processes. For example, the traits 'tolerance of ambiguity' and 'openness to experience' refer to divergent thinking and cognitive flexibility, but need to be supported by tolerance of anxiety and the emotional engagement with the task. Similarly, 'curiosity' implies both cognitive sensitivity to problems and the affective pleasure in being challenged or surprised. 'Self-confidence' and 'risk taking' on the one hand imply a sufficient knowledge base and critical thinking skills and on the other the ability to self-regulate one's own emotional states. In education

as well as elsewhere, creativity cannot just be considered as a solely cognitive phenomenon, but relies on emotional and relational processes which facilitate it.

Table 3. Categories of personal creativity characteristics (based on Treffinger et al., 2002)

<i>Generating ideas</i>	Fluency, flexibility, originality, elaboration, and metaphorical thinking
<i>Digging deeper into ideas</i>	Analysing, synthesising, reorganising or redefining, evaluating, seeing relationships, desiring to resolve ambiguity or bringing order to disorder, and preferring complexity
<i>Openness and courage to explore ideas</i>	Problem sensitivity, aesthetic sensitivity, curiosity, sense of humor, playfulness, fantasy and imagination, risk-taking, tolerance for ambiguity, tenacity, openness to experience, emotional sensitivity, adaptability, intuition, willingness to grow, unwillingness to accept authoritarian assertions without critical examination, and integration of dichotomies or opposites
<i>Listening to one's "inner voice"</i>	Awareness of creativeness, perseverance, self-direction, internal locus of control, introspection, freedom from stereotyping, concentration, energy, and work ethic

A further point in relation to personal characteristics which Treffinger, *et al.* (2008, 2012) raise is that a shift is necessary in going beyond the assessment of the *level* of creativity – whether high or low – and to consider the individual's *style* of creativity. This means going from the question "How creative are you?" to "How are you creative?", i.e. what are the creative problem-solving preferences that an individual displays. Treffinger and colleagues developed a creative problem-solving style model which involves three dimensions, each articulated in two contrasting styles: Orientation to Change (distinguishing between 'explorers' and 'developers', i.e. students who need more freedom vs those who need more structure), Manner of Processing ('external' and 'internal', i.e. students who prefer to explore ideas through active engagement with peers vs students who need more time to reflect on their own first and to prepare themselves quietly), and Ways of Deciding ('person-focused' and 'task-focused', i.e. students who are more oriented to developing rapport and care for a supportive relationship within the group vs students who concentrate more on the task itself, taking a more impersonal and well-reasoned approach to it). Each of these dimensions influences the ways the person behaves while tackling a creative problem. From an educational point of view, it seems therefore essential to take into account what works best, for whom, when, and under what conditions. Indeed, recognising the personal characteristics, strengths and interests of each student, their unique styles in expressing and applying creativity, allows educators to differentiate learning processes in order to effectively nurture pupils' creative abilities.

A useful and more practicable framework for the identification of creative traits and the formative assessment of creative learning in school age learners is the 'Five Creative

'Dispositions Model' by Spencer, Lucas, and Claxton (2012b). The framework was developed based on an extensive review of the literature (Spencer, Lucas, & Claxton, 2012a) and aims to provide teachers and learners with a tool to analyse creative behaviour in terms of a manageable number of constituent inclinations. The framework is articulated in the following set of five core dispositions and related sub-habits of mind, as shown in Table 4:

Table 4. The Five Creative Dispositions Model
(based on Spencer, Lucas, and Claxton, 2012b)

Core dispositions	Sub-habits of mind
<i>Inquisitive</i>	wondering and questioning exploring and investigating challenging assumptions
<i>Imaginative</i>	playing with possibilities making connections using intuition
<i>Disciplined</i>	developing techniques reflecting critically crafting and improving
<i>Persistent</i>	tolerating uncertainty sticking with difficulty daring to be different
<i>Collaborative</i>	cooperating appropriately giving and receiving feedback sharing the 'product'

The last disposition, 'collaborative', is particularly relevant in the context of this research study. Indeed, when analysing single children's behaviours, it is important to appraise not only the characteristics of their individual engagement with the creative task, but also their differing strategies of working with peers. A perspective too centred on individual traits, in fact, might lose sight of the interactional, social, and contextual factors, which contribute to enhance or hinder collaborative creative behaviour.

3.2.3. Process

3.2.3.1 Models of the creative process

Various stage-based models of the creative process have been proposed over the last decades in creativity research (Lubart, 2000-2001), revising Wallas's (1926) classic model of preparation, incubation, illumination, and verification, and further specifying the multiple sub-processes involved in creative work (see for example Isaksen & Treffinger, 2004). Within the scope of this review, Amabile's (1996) model is relevant for its intent of providing a comprehensive theoretical framework for a social psychology of creativity including personality and cognition. Amabile suggests a five-stages sequence articulated in problem/task identification, preparation, response generation, response validation and

communication, and outcome (see Figure 1). This process is not to be understood as strictly linear, as in many cases a creative task or problem may necessitate various cycles of work, involving a series of loops generating solutions to different subtasks. In the model three major components – task motivation, domain-relevant skills, and creativity-relevant processes – include a range of possible cognitive, personality, motivational, and social influences which have an impact on the features and the results of the creative process in its different phases.

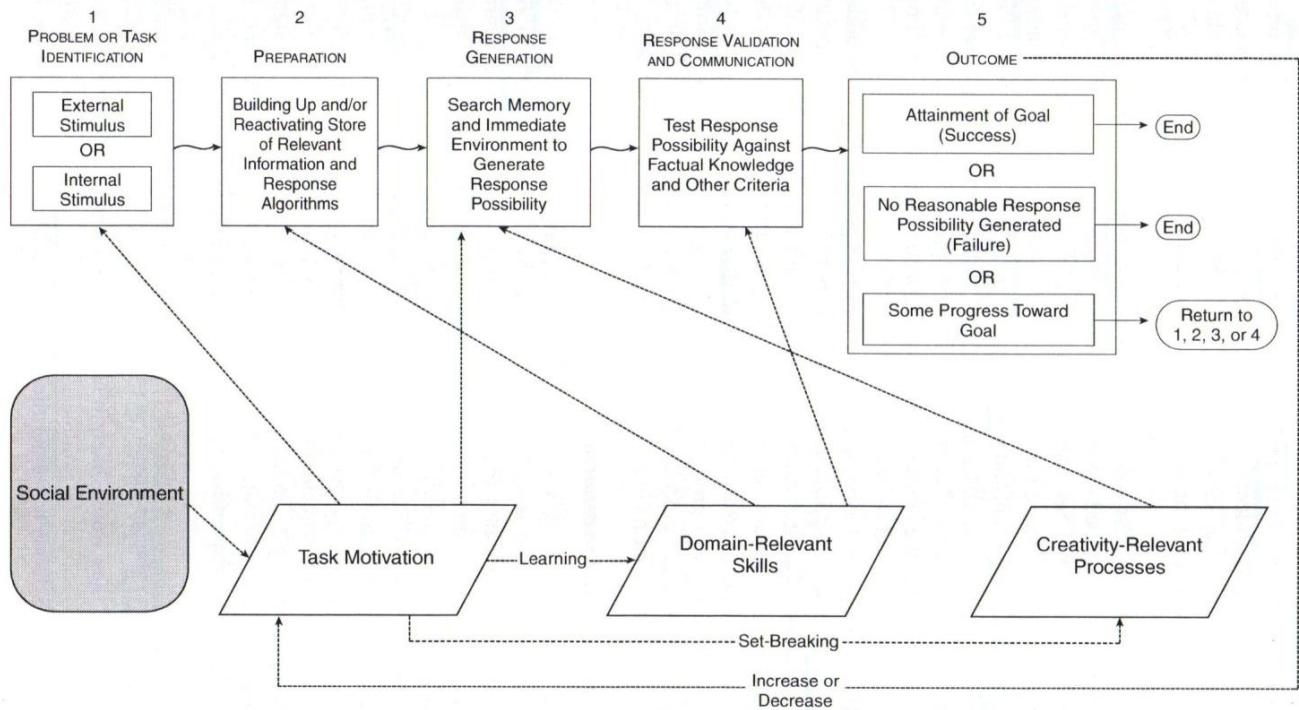


Figure 1. The componential model of creativity (Amabile, 1996)

Comparing different models drawn from the literature, Sawyer (2012) suggests eight stages: find and formulate the problem, acquire knowledge relevant to the problem, gather potentially related information, take time off for incubation, generate a large variety of ideas, combine ideas in unexpected ways, select the best ideas applying relevant criteria, and externalise the idea using materials and representations. Interestingly, he challenges the Gestaltist view of insight as a sudden restructuring of thought, and provides research evidence that insight is rather a gradual process, partly conscious and partly unconscious, along which many smaller incremental sparks of insight are generated. These eight stages of the creative process are domain-general and, as is generally observed, are not strictly linear, in that they may overlap, be repeated in cycles or occur in a different order. In any domain, indeed, creative processes mostly unfold in a complex and non-sequential fashion.

3.2.3.2 Creative processes in music

Compositional and improvisational processes have been object of research in the cognitive psychology of music (Collins, 2005; Johnson-Laird, 2002; Pressing, 1988; Sloboda, 1985), which sought to develop cognitive computational models of the mental structures and processes of expert musicians. In the field of music education, Amabile's componential model of creativity has been adapted by Hickey (2003) to examine children's creative musical thinking in composition tasks. Webster (1990, 2002) proposed an exhaustive model of creative thinking process in music (see Figure 2), whereby he defines creative thinking as "the engagement of the mind in the active, structured process of thinking in sound for the purpose of producing some product that is new for the creator" (Webster, 2002, p.26).

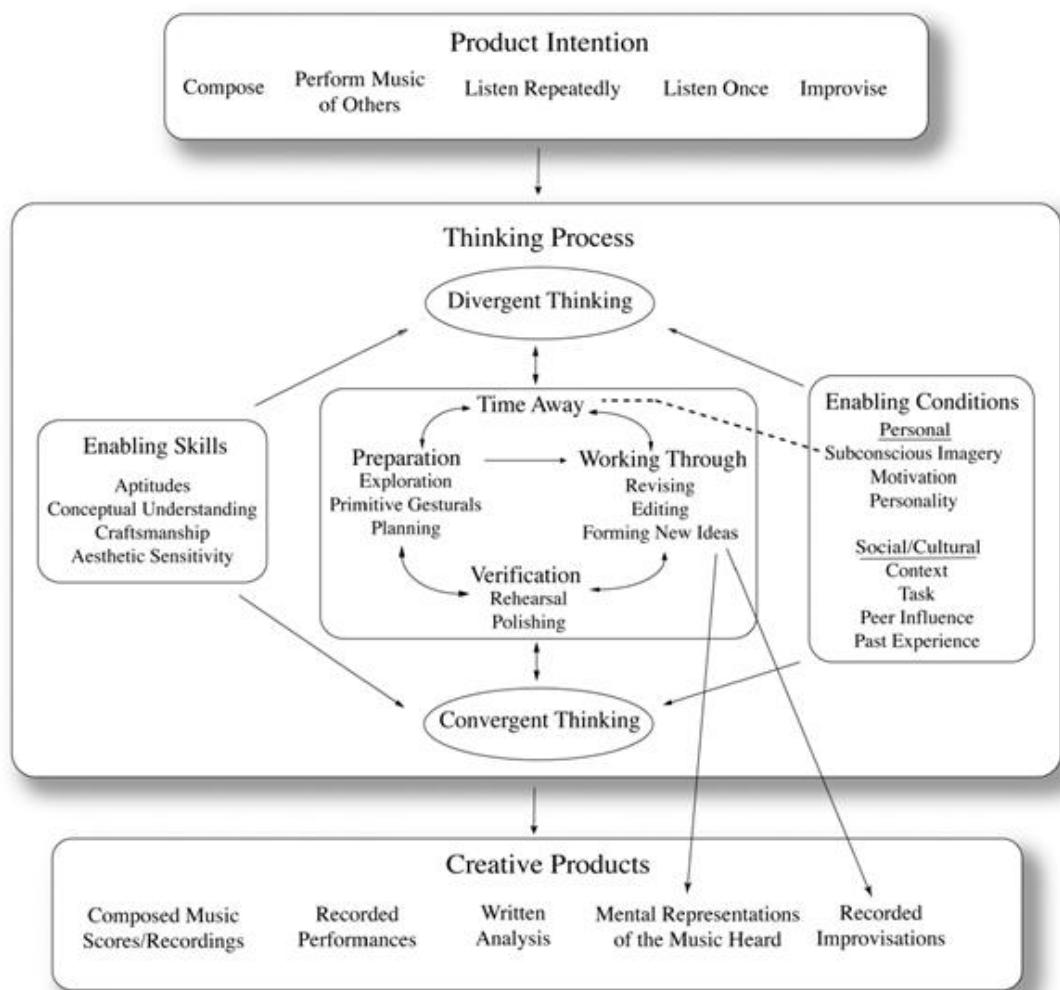


Figure 2. Model of creative thinking process in music (Webster, 2002)

The model encompasses a number of dimensions relevant to the process of generating musical ideas. The product intention – the problem-solving context which drives the process – can include composing, improvising, performing, or listening. The thinking process is based on the interplay of divergent and convergent thinking within repeated

cycles of preparation (planning and exploring), time away (incubating ideas), working through (generating, editing and refining ideas), and verification (rehearsing the finalised ideas). The process relies on a set of enabling skills – including musical skills, conceptual understanding, craftsmanship, and aesthetic sensitivity – and enabling conditions – either personal characteristics such as motivation and personality traits, or the external features of the task at hand, the sociocultural context, and (important here) peer influence. The outcome of the process may consist in different creative products, i.e. composition, improvisation, analysis, or mental representations. This model represents a valuable framework for labelling and analysing individual children's creative processes in music and can be adapted to group creative work, too.

Specific aspects of individual children's creative processes in music have been investigated. Kratus (1989) examined the relative amounts of time that children aged 7, 9, and 11 spent on exploration, development, repetition and silence during the 10-minutes composition process of a song. Significant developmental differences were found, indicating that older children tended to be more engaged in modifying and reviewing their musical ideas, whereas 7-year-old children's approach to the task predominantly consisted in an improvisatory exploration of musical elements rather than a convergent movement towards closure. Kratus relates this to children's inability to firmly hold a melody in memory and to employ effective problem-solving strategies, and to their prevalent orientation toward the process rather than the product. DeLorenzo's (1989) field-based study sought to provide insight into the creative music problem-solving processes of sixth-grade students. The qualitative analysis of eight different creative music activities was oriented on an emerging framework of four open-ended categories for observing and describing children's decision-making process, which included perception of the problem structure, search for musical form, sense for musical possibilities, and personal investment. The findings suggested that, firstly, in order to achieve higher levels of creative musicianship students need to gain reflective skills together with practical experiences – 'thinking' alongside 'doing' – and, secondly, that more structured exploratory phases and more guided discussion would help them acquire a better understanding and mastery of their own creative processes.

Burnard and Younker (2002, 2004), based on different data banks of previous research in the UK, Australia and Canada, examined the diverse thought processes and strategies of students between 8 and 21 years old in their individual unassisted approaches to musical composition. They identified and compared different categories of 'composing pathways', i.e. processes of understanding and framing the problem, alternating between divergent

and convergent thinking, generating and evaluating solutions, up to achieving a final outcome. In terms of Wallas's (1926) stages of the creative process, a first category of pathways would display minimal movement between the phases and proceed in a linear fashion from the exploration to the fixation phase. At a higher level of complexity and skill were those processes which were more flexibly regulated and involved an ongoing interplay and frequent feedback loops between the different phases of work. Thus, depending on the students' age, prior musical experiences and extent of formal instrumental training, a wide range of individual composing pathways can be found, from simplistic and mainly linear-based models to recursive and sophisticated ones.

Wiggins (2007), too, underlines the fact that compositional processes are characterised by a dynamic interaction between different constituent phases. In her own model (see Figure 3 overleaf) she maps the process as starting with some kind of experimentation with respect to the possibilities offered by the sound source, the goal or intention of the music being composed, and, if used, text (or, it may be added, other extra-musical referents). These emerging musical ideas are immediately set into context and organised through repetition, development, evaluation, revision, and rehearsal, based on what Wiggins defines as the composer's 'holistic conception' of the work. Drawing on previous research (Wiggins, 1994), she maintains that in the initial phases of the work the music is somehow envisaged as a whole, in terms of a framework of melodic or rhythmic motivic ideas, or overall mood, affective qualities, and style. The details of the single component parts are, thus, constructed, added or rejected according to this larger global design, which steers the process from the very beginning as a deliberate and conscious plan or as a tacit, partly subconscious image in the mind of the creator. Wiggins (2007) also includes in her model the role of different aspects of the sociocultural context in shaping the compositional process: the musical knowledge acquired in formal or informal settings, the expectations of the audience of adults or peers to which the composition is addressed, the support of a safe-feeling learning environment, the sense of ownership, self-determination and personal agency of children composers, and the social issues arising in collaborative work with peers. In Wiggins' view these features of the compositional process are pertinent both to individual and collaborative composition.

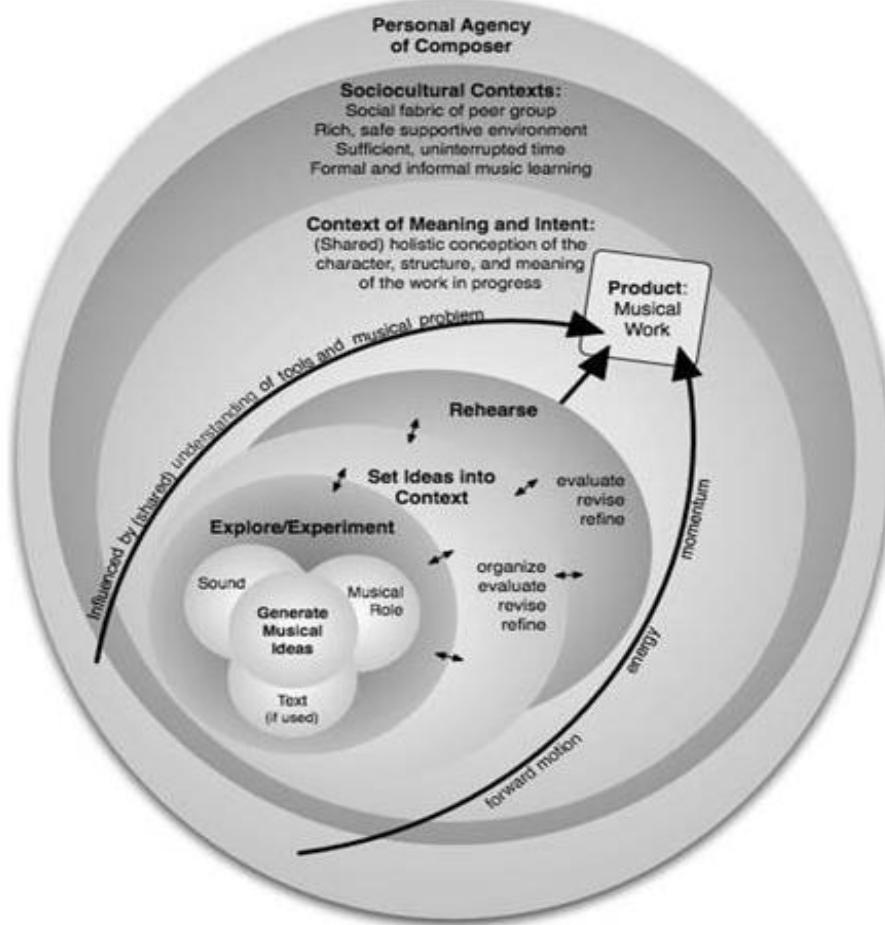


Figure 3. Model of compositional process in music (Wiggins, 2007)

A last, relevant remark on creative musical processes: from a broad cross-cultural perspective, Glover (2000) claims that, given the accelerated global evolution of the last decades in terms of intercultural contacts and hybridisations, "any fixed notion of what composing *is* has been thoroughly deconstructed as it becomes clear that the processes of making music are as diverse as the musics themselves" (p.3). A pluralist view of what 'composing' may mean in different sociocultural settings is now necessary in order to distinguish the approaches of different musical styles and genres, with regard to the particular kinds of musical processes enacted and to the composer's and the performer's roles. Composing – and for that matter, improvising or any kind of creative music-making process – is not a culturally neutral activity, and creative work in education has to acknowledge its own situatedness as a cultural practice.

3.2.3.3 Processes in creative development

With regard to children's processes of development of creative musical skills, it is relevant to mention here Swanwick and Tillman's (1986; see also Swanwick, 2001) seminal work

on the sequence of musical development, Paananen's (2006; 2007) research, strongly rooted in a neo-Piagetian framework, on the age-related development of melodic and rhythmic improvisation skills in children, and Gordon's (1990; 2012) Music Learning Theory as a stage-based model of the progressive development of audiation skills, including creativity. However, in relation to the present study, this useful information regarding individual children's creative development in music needs to be complemented by a closer examination of the role of children's intentions in inventing music, the role of the social environment and of collaborative interaction with others in shaping learning. This also implies a shift from an experimental research methodology focusing primarily on individual cognitive processes – as in Paananen or Gordon – to a more ethnographic approach in naturalistic settings concerning more broadly the culturally situated nature of children's real-world creativity (Burnard, 2006b, 2007).

3.2.4 Environment

Since at least the 1980s there has been a shift from a focus on the individual creator to the significance of the context, in business as well as in education, in order to ascertain the characteristics of work or learning environments which are most conducive to creative performance. A new branch of creativity studies, the social psychology of creativity (Amabile, 1996; Hennessey, 2003), aimed to achieve "a comprehensive view of individual creative behavior in social context" (Amabile & Pillemer, 2012, p.13) by examining the impact of environmental factors on creativity. In particular, Amabile's (1996) work on intrinsic motivation shows that, beyond the individual's skills and creative abilities, the conditions under which they work (or learn) can have a strong effect on their motivational orientation and on the resulting quality of their creative processes. Thus, cognitive and personality traits together with intrinsic motivation – i.e. intra-individual components of creativity – are combined with the external nurturing or detrimental forces which are exerted from the immediate and wider social environment, be it at the team-level or at the organisational and institutional level.

And yet, in the light of the questions of this research study on collaborative creativity, the focus of the social psychology of creativity is still the creative behaviour of the individual, even though such an approach positively expands the previous interest on the product, personality, or processes of the creative person and includes the social context as a determining factor in supporting or undermining creativity. Burnard (2007, p.1205) calls it the *sociopersonal* perspective on creativity, rightly highlighting the difference between this approach and a sociocultural approach which considers creativity as an inherently social phenomenon. Using a distinction which Rogoff (1998) makes with regard to cognitive

development, the social psychology of creativity might be defined as a 'social influence' approach to creativity, in that the individual is taken as the unit of analysis and the social interaction is added as an 'influence' on their creativity. From a research methodological point of view, the input of the social environment is thus treated as an independent variable, and the creative performance of the target individual as a dependent variable, whose differing outputs in relation to the external influence can statistically be detected by means of an analysis of variance (ANOVA). The underlying assumption is that it is possible to independently define 'individual' and 'context' as separate factors and to examine how the one varies with respect to the other (I will discuss this more in detail in the methodology chapter). In contrast to that, the sociocultural view sees creativity as something which is generated within a social context and which would be difficult to ascribe to a lone creator, and even more so if the focus is on collaborative creativity, as in this study. Thus, a further essential step forward must be made, in regarding creativity as a property of a sociocultural system, not of a single person. This is what I am getting at in the following.

3.3 Sociocultural approaches to creativity

3.3.1 Systems perspectives on creativity

The individualist approaches to creativity examined in the preceding section provide a great amount of information about the phenomenon and as such they cannot be dismissed, but are best complemented by a sociocultural perspective which integrates further aspects in order to more comprehensively understand how creativity works (Sawyer, 2012). Since the late 1980s creativity research has increasingly oriented itself towards 'confluence' or 'systems' approaches (Sternberg, 1999), recognising that "creativity arises through a system of interrelated forces operating at multiple levels, often requiring interdisciplinary investigation" (Hennessey & Amabile, 2010, p.571). Indeed, creative phenomena can be studied at a neurobiological level (which I am not dealing with here), or in terms of cognitive and affective processes, or as personality traits, as seen above. But creativity is also expressed in the interaction of small groups and teams, or as a characteristic of particular social environments (e.g. in business or education), or as major societal and cultural forces which drive humanity towards innovation. A systems approach considers these multiple aspects of what creativity is as a whole in which micro-level phenomena are nested within macro-level ones and each part of the system, moving at different timescales and with different dimensions, influences and is influenced by other parts (see Figure 4).

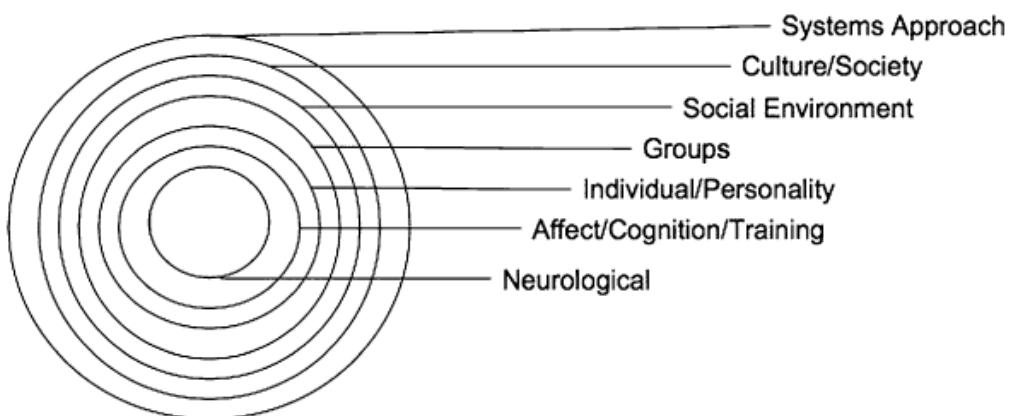


Figure 4. The major levels at which creativity forces operate (Hennessey & Amabile, 2010)

Interestingly, similar 'concentric' conceptual models are used in the literature to illustrate this systems perspective: see, for example, Bronfenbrenner's bio-ecological systems theory looking at the development of the individual as embedded in micro-, meso-, exo, and macro systems (in Chappell & Craft, 2011), Rogoff's individual, interpersonal, and cultural-institutional foci of analysis in sociocultural theory (Rogoff, 2003), or Davis and Sumara's (2006) map of nested categories of emergent phenomena situated at different hierarchical levels of complex organisation, extending from bodily sub-systems to individuals, groups and collectives, societies and cultures, up to the species *Homo Sapiens*. 'Systems thinking' seems to be most suitable theoretical approach to understand the complexity of creativity. With regard to the study of creative development Feldman (1999) advocates a 'multidimensional approach', which includes cognitive processes, social/emotional factors, issues related to family and upbringing, influences of formal and informal education, specific characteristics of the domain and the field, social/cultural contextual aspects, and the wider historical forces and events. Csikszentmihalyi's (1999) 'systems perspective' – perhaps the most influential systemic model of creativity (see Figure 5) – takes into account the interdependence of the *individual* (the characteristics of each person, including skills, motivation, personality traits, and cognitive styles), the *domain* (the set of objects, rules and representations that constitute a domain as a shared culture), and the *field* (the social and institutional context which selects the contributions that can be deemed creative). This model has also been adopted in music education as a framework for conceptualising musical creativity in music education settings (Elliott, 1995; M.S. Barrett, 2005).

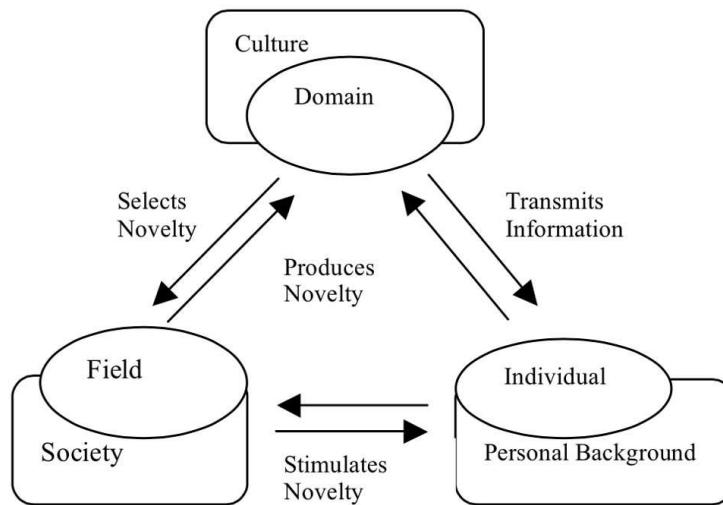


Figure 5. The systems view of creativity (Csikszentmihalyi, 1999)

However, Csikszentmihalyi's view tends to be more focused on High-C creativity, proposing an interpretation of the domain as an established body knowledge, of the field as the institutional and organised circle of 'gatekeepers' who evaluate what is creative, and of the individual as somebody who is able to introduce decisive and socially acknowledged innovations. As a consequence, as has been noted above, he considers children as 'not really creative', because the import of their creative expressions is actually not relevant for the wider audience. As a counter-argument to and expansion of Csikszentmihalyi's line of thought, Glăveanu (2011b), drawing from both systemic models of creativity and from sociocultural theories, claims that "creativity is a socio-cultural-psychological process" (p.50) – at once an individual, social and cultural act – and stresses the necessity of viewing 'fields' and 'domains' at *all* levels, from the micro-level of the classroom, family, and everyday life to the macro-level of scientific and artistic breakthroughs. A significant methodological implication of a systemic approach to creativity is that intra-personal dynamics of creative processes have to be understood in the light of the interplay of inter-personal relations within which they are generated. This implies a paradigm shift. Individualistic approaches in past creativity research adopted a *He-paradigm*, giving an elitist account of the lone genius, or an *I-paradigm*, considering the creativity of the 'normal' person while maintaining the individual as a unit of analysis. Instead, a systemic approach – or better, a cultural psychological approach – to creativity has to adopt a *We-paradigm*, which looks at creativity in a more relational way and acknowledges that 'self' and 'other' are interdependent and co-constitute each other (Glăveanu, 2010a).

Such a sociocultural and systemic approach to creativity seems to represent the most suitable theoretical background based on which the present study is carried out,

particularly because of its focus on creative interactions and on how creativity emerges 'in between' people. It is the research questions themselves that involve a systemic view, if the goal is to understand how intersubjectivity, shared understanding, and interdependence are co-constructed in the creative collaboration with others.

3.4 Group creativity – Collaborative creativity

In recent years a number of socioculturally oriented studies have focused on the collaborative aspects of creativity in diverse fields such as arts and science (John-Steiner, 2000; Sawyer, 2003), business and organisations (Henry, 2004; Searle, 2004), education (Craft, 2008; Littleton, Rojas-Drummond, & Miell, 2008; Eteläpelto & Lahti, 2008) and music education (Rojas-Drummond, 2008). In a sociocultural perspective, group creativity has to be understood as a situated process emerging from the interplay of a variety of concurring factors. As Littleton *et al.* (2008) state it,

if researchers are to understand and characterise collaborative creativity they need to examine the nature and significance of the interactions, relationships and cultures which constitute and sustain such activity, as well as the mediational role of cultural artefacts, including tools, sign systems and technologies. (p.175)

In the literature the terms 'group creativity', 'collaborative creativity' or 'creative collaboration' and others may be used interchangeably, or in some cases a distinction may be made between some sporadic sessions of creative group work implying a shared purpose and coordination of effort versus a long-term collaboration as an enduring relationship of joint creative endeavours (Moran & John-Steiner, 2004). In the context of this study, given the extension of children's encounters over a whole school year, I prefer to talk about 'collaborative creativity', though I might also employ the terms group or collective creativity and other phrasings to refer to the ways in which they invent something together.

3.4.1 Operationalising collaborative creativity

Collaborative creativity can be characterised as involving complementarity and integration, mutual emotional scaffolding, and collaborative emergence, as follows:

3.4.1.1 Complementarity and integration

Through interchange, partners sum or multiply their individual possibilities of action and expand their reach through the other. They jointly generate new ideas and are able to construct multiple perspectives. In science and beyond, the juxtaposition and exploration of alternative positions is a productive resource for partners to build an elaborated and

multifaceted understanding of a topic (John-Steiner, 2000). Division of labour based on working styles, disciplinary knowledge, and personal expertise enriches the opportunities of the partnership. Conceptual complementarity – the dynamic tension between conflicting visions – deepens, widens, and transforms the partners' habitual modes of thought. In successful creative collaborations, divergences are balanced through the focus on a shared vision or common purpose, and a "unity-in-diversity" is achieved (p.39). The integration of differences is crucial to the construction of creative syntheses. In Vygotskian terms, through collaboration partners create mutual zones of proximal development, and can transcend the limitations of their isolated skills and knowledge. "In partnerships, starting from the youngest age, we broaden, refine, change, and rediscover our individual possibilities" (p.189). Complementarity and integration, however, are not only to do with thought processes, but also with identity and motivation (Moran & John-Steiner, 2004), and with emotions and temperament, in that the kind of mutuality and interdependence that characterises long-term creative partnerships between siblings, family members, friends, lovers, teammates, and close colleagues is made of care and conflict, trust and challenge, reciprocal commitment and criticism, cooperation and competition. Emotional dynamics play an essential role in supporting or hindering creative collaborations.

3.4.1.2 Mutual emotional scaffolding and emotional dynamics

Expanding the notion of ZPD to the affective sphere, John-Steiner (2000) suggests that the 'emotional scaffolding' between partners creates a safe zone of mutual care-taking, trust, belief in each other, and constructive criticism which heightens their willingness to take risks in the face of the uncertainties or failures of creative undertakings. The creative self-in-relation is more resilient because it is stretched and strengthened by the supportive presence of the other. Thus, by constructing "we-ness" (p.204) partners build a shared identity which is bigger than both individuals. They function as cognitive and emotional resources for each other. Not only do they create together new ideas and products, but also their very identity is transformed through the collaborative creative process (Moran & John-Steiner, 2004). Reciprocal support between partners, however, does not mean that collaboration is immune to tensions. There can be a marked discrepancy between the promise and the reality of creative collaborations. It has been seen that an emotional atmosphere charged in a negative sense and unequal power relations can significantly impair the effectiveness of a collaborative effort (Eteläpelto & Lahti, 2008), resulting in disputational talk, dominance of one of the partners, and lack of a true dialogical process.

Nevertheless, tensions are vital in terms of discussion and negotiation of opposing views, as the goal is not to reach a superficial consensus, but to work out and evaluate creative solutions through critical argumentation. Taking as a precondition the fundamental value of tolerance of diversity, "collaboration is not absence of tension, but fruitful cultivation of tension" (Moran & John-Steiner, 2004, p.12). In education, recent research on collaborative creativity stresses the central role of emotions in joint creative ideation (Vass, Littleton, Jones, & Miell, 2014). It points out as necessary to shift the emphasis from explicit argumentation and accountable reasoning in collaborative discourse (exploratory talk: Mercer, Wegerif, & Dawes, 1999; co-constructive talk: Rojas-Drummond, Mazón, Fernández, & Wegerif, 2006) towards affectively constituted interthinking and emotional connectivity, especially in creative contexts. Going beyond the analysis of children's dialogues in collaborative scientific problem solving and hypothesis-testing, studies on primary school children's collaborative creative writing (Vass, 2004, 2007; Vass, Littleton, Miell, & Jones, 2008) identified a variety of emotion-based discursive features which inspired content generation, such as musing, acting out, humour, and singing. Moreover, it became evident that such playful, affect-laden behaviours – though perhaps not conforming to typical expectations regarding group work in the classroom – are present throughout the phases of the creative process. Thus, emotions do not just 'influence' creativity, but are an essential component part of it.

3.4.1.3 Collaborative emergence

Emergence is a property of complex dynamical systems by which novel, unpredictable characteristics and behaviours appear out of the interaction among the component units (Capra, 1996; Sawyer, 1999, 2003b). Emergent phenomena have been observed in biological, neuronal, societal, economical, or evolutionary systems (Johnson, 2001). Sawyer (2003a) traces the roots of the theoretical concept of emergence to late nineteenth-century and early twentieth-century *organicist* and *evolutionary* thinking both in philosophy and biology. These ideas strongly influenced the beginnings of psychology as well as creativity theories. In his view, both creativity and development can be considered as emergent processes. The anti-reductionist assumptions at the basis of complex thinking are that a system is more than the sum of its component parts, and that the structural arrangement and the interactive processes among a number of basic entities produce over time some higher-level properties which are irreducible to the lower level components. Sawyer distinguishes the emergent processes studied by biologists or complexity theorists from what he defines "collaborative emergence" (Sawyer, 1999, 2003a, 2003b, 2006b, 2007; Sawyer & DeZutter, 2009). He identifies models of

collaborative emergence in the improvisational performances of jazz groups and improvisational theatre groups, as well as in preschool children's pretend play.

Features of collaborative emergent processes are:

- *limited number of complex agents*: unlike computational models in complexity theory, where a great number of homogeneous agents interact based on simple rules, in collaborative emergent processes a few complex agents interact based on complex communication rules;
- *unpredictability*: individual members have agency and creative potential (i.e. they cannot be reduced to simple rules). No one agent, nor an external observer, can fully anticipate what is going to happen next in the group interaction;
- *no centralised guidance of the process*: there is no group leader and no guiding script, rather the leadership is distributed. It is in the collaborative interaction that the entire group determines the direction of the collective action;
- *high degree in contingency and openness*: at each point each decision closes off many alternative pathways, and at the same time it opens up and constrains further potential choices. Further, the meaning of each decision may not be clear at the moment in which it is made, as it often becomes clear only in the subsequent interpretation and use made by the other group members;
- *processual intersubjectivity*: intersubjectivity is constructed through a continuous process of mutual coordination within the joint activity. Rules are not just given at the beginning of the process, but also emerge, implicitly or explicitly, through the process itself.

In this study 'collaborative emergence' represents an interpretative metaphor to understand the creative processes occurring in children's collaborative creative learning. An open issue is that of the adaptability of this concept in the context of the study. Though borrowing the conceptual frame and the terminology may be helpful in terms of overall vision and analysis, it will be necessary to clearly identify what similarities can be established and what differences must be made in applying it to young children's group creative music making.

3.4.2 The group creative process

The models of creative process that regard individual creativity (see above 3.2.3) can be extended and adapted to group creative work. However, there are some key features of

creating as a group (Sawyer, 2007) which have to be added to what has already been said above and which are also relevant in the context of the present study:

- creativity in the group unfolds over time, as an incremental, nonlinear, highly interactive process. Many small creative sparks are generated based on the available experience of the group members and subsequently interwoven to work towards a creative solution;
- innovation emerges from the bottom up through a process of self-organisation of information, which is often best reached without a control from above;
- creativity in the group has a 'conversational' character, in that collaborators have to practice deep listening in order to achieve effective results. Members of successful groups build upon each other's contributions, co-constructing novel ideas in a sort of gradually ascending spiral.

Drawing on Csikszentmihalyi's theory of *flow* (1996), Sawyer (2006b, 2007) suggests that groups performing at the peak of their creative experiences – as observed in theatre, music, sports, business, and beyond – attain a collective state of mind which he calls *group flow*. In his view, the conditions that favour group flow are:

- a clear goal that serves as a focus for the group, but that is open-ended enough for innovation to emerge, i.e. an optimal balance between structure and improvisation
- close listening and complete concentration
- a sense of autonomy and control on part of each member, and at the same time
- deep relatedness and flexibility in balancing one's own voice with those of the others ('blending egos')
- equal participation to the group's endeavour
- familiarity, i.e. sharing a body of knowledge and common ways of thinking and acting, yet allowing for diversity and complementarity to enrich the collective generation of ideas and avoid 'groupthink'
- communication, dialogue, and interaction (more at an informal, rather than formal level), along with low social anxiety and high enjoyment
- readiness to face failure, and motivation to deliberately practice as a group in order to maximise the outcomes of the joint effort.

The open question, again, is to see to what extent such characterisations of (adults') group creativity can be applied to children's joint creative work.

3.4.2.1 Performance creativity: interactive processes in jazz

A last important distinction put forward by Sawyer (1998, 2003b) is the one between *product creativity* and *process / performance creativity*. Whereas much creativity research has focused on the accomplishment of some form of creative product, there exist many cultural practices in which the creative process and the resulting product coincide, such as theatre improvisation or improvisational musical performances both in Western and non-Western cultural contexts. This distinction is significant in this study, because young children's musical creativity rarely gets to 'ultimate products' and often retains a strong improvisational character (as observed by Hickey, 2012, and Kratus, 1989, among others). In this sense, it seems meaningful to consider some ethnographic and socioculturally oriented research on the improvisational genre *par excellence*, jazz, which can provide concepts and views that are useful to analyse and interpret children's processual ways of being collectively creative in music. Indeed, collaborative creativity is an inherent component of the musical and social practice of playing jazz (Kenny, 2014). In examining how instructors communicate with students about how to engage in group interplay during jazz rehearsals, Black (2008) reports that a central concept in jazz is that of 'listening', meant as 'interactive attentiveness' to the other players in the moment-to-moment communication during the group performance. 'Listening', in this interactive sense, is an organising principle of the improvisational activity.

Another useful concept is that of 'grounding' (Gratier, 2008), i.e. the interactive process of moment-to-moment monitoring of shared understanding that takes place between improvising jazz musicians. 'Grounding' has also been used in relation to other communicative practices, such as mother-infant communication and conversation, and refers to the ways in which partners display awareness of the present state of the interaction with the other in order to continuously update their 'common ground' and coordinate with them. 'Grounding' in communication has to do with timing and phrasing, that is with the temporal organisation of the interchange between the partners. According to Gratier's study, physical indices of 'grounding' such as mutual gaze, postural orientation, periodic head-nods, and expressive gestures are less evident in musical interaction than in verbal interaction. Musical devices that have an important 'grounding' function are repeating, imitating, variating another musician's motif, mirroring, matching the other's rhythm or intensity, punctuating, interlocking, completing, and synchronising. 'Grounding' is a basic strategy to establish, sustain and bring forward the musical interaction with others. As such, it positively adds to the vocabulary and 'conceptual kit' that I am drawing from the literature in order to describe and analyse how children interact in creative music making.

3.5 Towards children's musical group creativity in education

In chapter 2, proceeding in parallel between general literature and specific literature from music education research, I have outlined the sociocultural perspective on learning as a situated social phenomenon. In the light of this perspective I have then introduced in this chapter the theme of creativity and collaborative creativity. The literature reviewed in these chapters serves as the broader theoretical background to the present study.

In the following chapters I will concentrate my focus on children and group musical creativity. Given the age of the children I worked with (5-7 years, the 'watershed', as Glover, 2000, calls it), I consider both early childhood research on play (chapter 4) and research on group work and cooperative learning with primary school children (chapter 5). Finally, in chapter 6 I examine more in detail the most relevant findings about children's group musical creativity, highlighting possible gaps in the literature which are the focus of this study.

4. PLAY AND MUSICAL PLAY

The particular composition of the group of children I worked with – ranging between 5 and 7 years of age, and attending the last year of nursery school, the first and second year of primary school – as well as the kind of pedagogical approach that was adopted in the research project entail a double perspective on collaborative learning, which draws on different research areas. On the one hand, it seems essential to clarify the role of *play* in learning and development as conceptualised in early childhood education – a perspective which seems at any rate extendible to later years, too. On the other hand, given the kind of activities which we offered in the study, it also seems relevant to consider the body of research on *group work* and cooperative / collaborative learning, which typically focuses on children of primary (and secondary) school. Thus, an investigation into the musical creativity of children of this particular age, situated around the transition from early childhood education to primary education, requires both perspectives on 'play' and 'group work' as necessary theoretical backgrounds for the study. Arguably, the context of this project was on the whole adult-initiated, in that a framework for the group work activity was provided for by the teacher. At the same time, however, within that framework children often initiated their own responses and ways of playing, which the teacher was not directly 'controlling', but rather 'following'. So this is a kind of continuum, of gradation between play and work.

This chapter introduces the theme of play, while the next one is centred on group work.

4.1 Characteristics of play

In children's lives play involves a variety of behaviours, intentions and contexts, which make it difficult to provide an ultimate and clear-cut definition (Anning, Cullen, & Fleer, 2008; Broadhead, Howard, & Wood, 2010; Wood & Attfield, 2005). As a superordinate category, play encompasses diverse activities such as physical and manipulative play, symbolic and imaginative play, rough-and-tumble play, and structured and rule-based play. Children may play as a way to express and communicate emotions, to experiment with ideas and materials, to relax and have fun, to release surplus energy, or to socialise with their peers. I will refer here to sociocultural discourses on play and specifically point at those traits and forms of play which are most pertinent to this study.

As a general consideration, play facilitates learning and is closely related to it, in that it induces and facilitates processes which are relevant to the development of new skills and dispositions. Through play children are holistically activated across the three domains of development – psycho-motor, affective, and cognitive (Wood & Attfield, 2005). While playing children practice their gross and fine motor skills, coordinate their movements – also in relation to others – and learn about their own body. Play involves experiencing emotions, developing social interactions and relationships, trying out new repertoires of behaviours, moods, and feeling states, and developing a sense of the self. Play can contribute to intellectual growth by stimulating a range of cognitive processes, including being attentive, thinking, understanding, organising, communicating, and negotiating. The cognitive aspects of problem-solving and problem-finding, as well as imagining and creating, make playfulness and being playful an important precursor to creativity.

Characteristics of play (Wood, 2010; Wood & Attfield, 2005) which in the perspective of this study have a role in creative learning comprise the following:

- *child-chosen and child-invented.* It is the children (not the adults) who are in control and make the rules, decide what and with whom, take risks, and create their own play situations. In play an element of freedom, choice, and invention is fundamental. Play belongs to the players;
- *active involvement, emotional engagement, and motivation.* Playing demands being fully present, both cognitively and emotionally, to one's own actions and interactions with other players. Children can demonstrate very high levels of concentration and commitment in playful situations. Play is intrinsically motivating and motivated;
- *fun.* Play is to do with spontaneity, amusement, humour, laughing, teasing, and fooling around. At the same time, *play is enjoyable*, in that it satisfies deep needs of the child and can generate a deep sense of pleasure. Thus, play can be light and entertaining as well as profoundly rooted in and connected with the personality of the players. Play contributes to enhancing children's emotional and relational well-being and can have a therapeutic value;
- *focus on the process, rather than on the product.* It is the activity in itself – the doing – which is the essential part of play;
- *imaginative.* Play is to do with exploring the potential of materials, objects, tools, and symbols. It implies inventing imaginary worlds, making up stories, and organising meanings of different kinds. Play is very closely related to imagination, fantasy, and creativity;

- *social activity.* Through play children often share experiences, thoughts, feelings, meanings, and develop important communication and thinking skills. Playing with others helps children develop social cognition and emotional literacy, i.e. being empathic and aware of one's own and others' emotions, engaging in group problem solving and decision making, recognising and dealing with conflicts, and experiencing strong feelings in a safe, non-threatening situation.

Significantly, play and especially collaborative play support the development of metacognitive and self-regulatory skills (Whitebread, 2010; Whitebread, Coltman, Jameson, & Lander, 2009), that is monitoring and controlling one's own mental processing. Strategies such as planning, implementing and evaluating one's own actions are particularly relevant for higher order thinking, problem solving, and creativity (Whitebread, 2010). In addition to cognitive strategies, self-regulation also concerns the emotional, social and motivational aspects of the activity. In a Vygotskian perspective, the ability to govern one's own mental behaviour is learned through the interaction with others, moving from other-regulation to self-regulation. In this shift from the external to the internal, 'private speech' – or self-speech, i.e. children thinking aloud, talking to themselves, or commenting their own actions – represents an intermediate step towards fully internalised metacognitive strategies in solving a task. Interestingly, Whitebread's research (2010) with regard to 3-5-year-olds found extensive evidence of metacognitive and self-regulatory behaviours in correlation with self-initiated and collaborative activities. Playing with others on self-determined tasks can enhance metacognition and self-regulation, which in turn pave the way for creative thinking.

From a broader sociocultural perspective, children's play is culturally situated and reflects their understanding of the complex network of social, cultural and historical relationships they are participating in. Thus, play does not express simply the individual child's world, but is influenced by the practices and values of the specific cultural contexts within which they grow as competent social actors and co-constructors of learning (Rogoff, 2003; Wood, 2007; Wood & Attfield, 2005).

4.2 Types of play

In the following, I focus on those forms of play which are relevant to this study. With respect to the traditional, Piagetian-based categorisation, three main types of play can be distinguished, i.e. *sensori-motor* play, *symbolic* play, and *rule-based* play (Wood & Attfield, 2005). These categories can be useful in the domain of music, provided that the

implication of a developmental progression through a fixed series of stages is not taken as 'the norm'. Indeed, as sociocultural research in education and development has shown, children combine different kinds of play throughout childhood and beyond. In relation to music, it can be argued that sensori-motor play can refer to the discovery by a young child of the sounds which an object-instrument can produce as much as to the exploration by a contemporary composer of the unconventional ways to play a traditional instrument. Both actions – the child's and the adult's – entail playing with the physical and acoustic properties of the sounding object. Analogously, making music as symbolic play means associating sound with some extra-musical meanings – which is what five-year-olds might be doing while they play at something and represent it with vocal sounds, or also what adults might do while they compose programme music and represent some natural or human events through a symphonic piece. Likewise, one could say that there is not a big difference between musical rule-based play by children – as often happened in this study with 5-7-year-olds, for example – and the quantitatively more complex but qualitatively similar ways of applying improvisational and compositional rules in music as more expert teenagers or proficient musicians can do. Thus, the distinction between these three forms of play can be helpful to identify and describe different ways of playing in/with music, as long as these are not considered as hierarchical, rigidly age-related steps but as largely co-present and equally possible modalities of engagement with music.

Particularly relevant for creative learning is the distinction between epistemic play and ludic play (proposed by Hutt and others, cited in and elaborated upon by Wood and Attfield, 2005). *Epistemic play* probes the possibilities offered by a tool – it answers the question 'what does this do?' – whereby 'tool' broadly refers to cultural tools, symbol systems and artefacts, material and human resources in the environment, as well as physical, social or cognitive resources of the person. Epistemic play aims at acquiring knowledge about something through exploration and problem solving. *Ludic play*, instead, involves a more free and imaginative approach to 'what I can do with this', often guided by fantasy, pretence, and mood states, in which the child looks at the potential of the object in relation to their present interests. Both forms of play – one might consider them as 'attitudes' – are important for the development of creativity. Indeed, in the playful relationship with a tool, be it a musical instrument, an idea, or a situation, the activity can be more object-oriented (how this tool can be used) or more self-oriented (what I can and want to use the tool for).

Through *role play* – otherwise defined as pretend play, imaginative play, fantasy play, or dramatic and socio-dramatic play – children create imaginary situations in which they immerse themselves as actors and rule-makers. In role play children invent or reinterpret their worlds, free from situational constraints, using language and symbol systems to convey meanings, trying out new roles, self-regulating their behaviour and setting the level of challenge they find appropriate for themselves. In this sense, through play children create their own zone of proximal development. As Vygotsky (1978) famously said: "In play a child always behaves beyond his average age, above his daily behaviour; in play it is as though he were a head taller than himself" (p.102). In this perspective, play is a "leading factor in development" (p.101), and a powerful driving force in learning. Play is a revolutionary activity (Newman & Holzman, 1993) because it implies creating potentially new meanings and exercising control and power in an adult-directed world. An important feature of *free play*, in which children create open scenarios, is the role of rules. The paradoxical nature of free play is that, if on the one hand through play children liberate themselves from externally imposed constraints, on the other hand self-imposed rules implicitly or explicitly emerge through the process itself and are respected in order to maintain and develop the play sequence (Wood & Attfield, 2005). This characteristic of play – being revolutionary and anarchic – faces practitioners with a dilemma, whose opposing poles are on the one hand allowing for the free flow of play and providing space for its educational potential, and on the other hand harnessing it in order to regulate learning and control the outcomes. The negative sides of the two positions are chaos and unproductive activity versus stifling and disempowering children's play (and creativity). Thus, the quality of learning and teaching through play, as will be outlined below, relies on the careful balance of these issues within a co-constructed curriculum, developed in dialogue with children.

Play research has often related play to creativity. Pretend play, in particular, has been found to facilitate divergent thinking and other cognitive processes which are conducive to creativity, such as insight ability and imaginativeness (Russ, 2003). However, as Craft (2000) cautions, not all forms of play are necessarily creative: for example, some forms of pretend play may involve more imitation of existing models – which is anyway highly significant for children's development and socialisation – than real insight and deliberate restructuring of those elements, and there are forms of play which are not creative at all. Thus, in spite of some educational rhetoric, the conflation of play with creativity *tout court* might be misleading, in that some of the types and characteristics of play are necessary to creativity, but others are not. What play and creativity do share, as Craft claims, is the "openness to possibilities" (p.50 – more generally on the relationship between play and

creativity as 'possibility thinking', see Craft, 2003a, and Craft, McConnon, & Matthews, 2012).

With regard to music and this study, the aspect of meaning-making in imaginative play is relevant to those forms of creative musical play which involve some sort of symbolic representation, for example when a sound or musical gesture stands for something, or when imaginary roles and relationships are acted out through music and movement. In my experience, nursery and primary children often make music that refers to an extra-musical event or object, so that the meaning of the musical action is not given by the sound itself, but by the reality that it symbolises. By attributing meanings to music in form of imagery and narrative structures, children use sounds as a (further) medium to express their own personal, social, and cultural worlds. They make sense of the music making process – and of the musical outcome that results from it – because they connect it with a story, a plot, a script, or a vision of some kind.

4.3 Arguments for a pedagogy of play

In this section I examine some models of effective play-based pedagogy which are highly relevant to the pedagogical approach to creative group music making taken in this study.

4.3.1 Integrated approaches

Play is now broadly acknowledged as central in young children's learning and development. A more contentious area, however, is the nature and function of play in educational contexts, because of the tension between the traditional commitment to freedom and spontaneity in play versus the necessity to guarantee progression and the achievement of good quality learning outcomes through the educator's action.

A pedagogy of play can be defined as

the ways in which early childhood professionals make provision for play and playful approaches to learning and teaching, how they design play/learning environments, and all the pedagogical decisions, techniques and strategies they use to support or enhance learning and teaching through play. (Wood, 2009, p.27)

Contemporary research on play, learning and teaching in early childhood education is providing substantial evidence about what an effective play-based pedagogy looks like. In the UK, a detailed answer is offered by a study on Researching Effective Pedagogy in the Early Years (Siraj-Blatchford, Sylva, Muttock. *et al.*, 2002), informed by sociocultural theories and based on an influential government-funded longitudinal study on Effective Provision for Preschool Education (<http://www.ioe.ac.uk/research/153.html>). This study

proposes a pedagogical model which can be useful to conceptualise curriculum design. In the model, the *pedagogical framing* refers to the wider contextual decisions about the structure and contents of the curriculum (including planning, organising and arranging spaces and resources, implementing, and assessing/evaluating); the *pedagogical interventions* refer to the actual face-to-face interactions which the educator engages in, and the techniques and strategies they use in their teaching. In the most effective settings, practitioners could strike a balance between proactively offering appropriate learning environments and structured directions, and providing opportunities for children to benefit from instructive play activities.

Siraj-Blatchford *et al.* (2002) visualise a model for curriculum design through a diagram (p.26; further elaborated in Siraj-Blatchford, 2009, p.149), which I fuse with Wood and Attfield's diagram (2005, p.139) and present as in Figure 6.

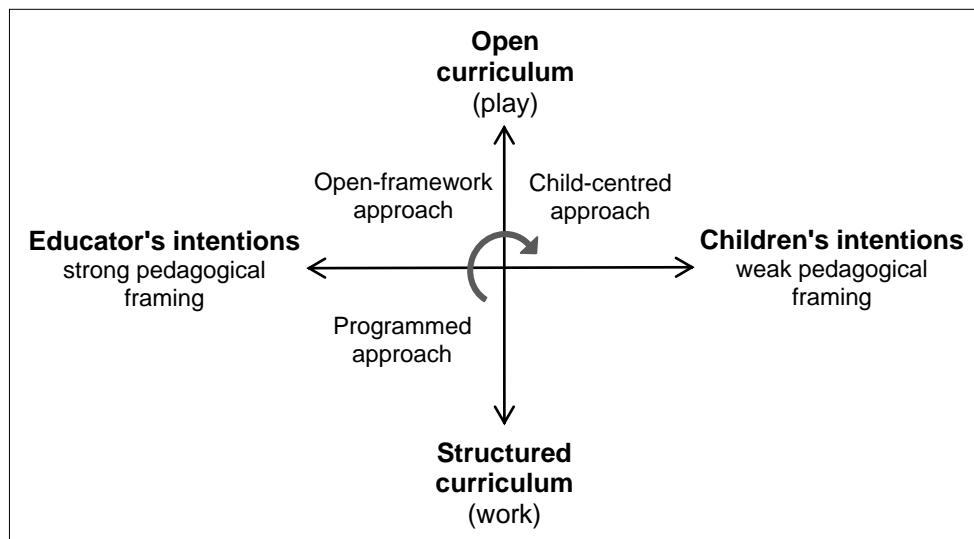


Figure 6. A framework for play-based curriculum design
(adapted from Siraj-Blatchford, 2009, and Wood & Attfield's, 2005)

The main organising principles are pedagogy and curriculum, visualised in the diagram as intersecting continua defining different areas. The degree of pedagogical framing refers to how much initiative and control either the teacher or the children can have. The curriculum refers to the learning contents, the knowledge and skills which children are meant to learn, and it can be conceived of as ranging from structured and defined to open and flexible. In the *programmed approach* the activity is highly teacher-directed and their intentions prevail over children's intentions; the learning contents are mainly structured and pre-given for the children to acquire. In the *open-framework approach* there is still a strong framing, in that the overall curricular goals and the learning environment are set by the teacher, but children have more freedom to make choices and are scaffolded by the teacher in their interactions with the contents and materials. In the *child-centred approach*

it is the teacher who follows and supports children's independent intentions and open-ended explorations. The issue is, clearly, how to balance these three different approaches to curriculum design with regard to a single session of work as well as over longer periods of time. Siraj-Blatchford (2009) makes a case for adopting stronger framing and curriculum principles in early childhood, based on the premises of sociocultural theories and on the experience of exemplary practices which refer to those theories. None of the single approaches described above – programmed, open-framework, or child-centred – seems in itself to be sufficient as a model for teachers' curricular and pedagogical choices. They need to be integrated in diverse ways. Indeed, the major findings of Siraj-Blatchford *et al.*'s study (2002) are that an effective pedagogy

- provides challenging yet achievable experiences
- includes a variety of teaching strategies, such as modelling, observing, asking questions, interacting verbally with children, providing differentiated opportunities for play, and organising learning environments
- values both teacher-directed work and free child-initiated yet potentially instructive play activities
- regards the teacher's main role as guiding and scaffolding children – without dominating their thinking – whereby learning is a process of co-construction which involves 'sustained shared thinking'
- views cognitive and socio-relational learning as complementary and mutually influencing each other (Siraj-Blatchford, 2009, p.156).

The findings of this research suggest that, in terms of the model presented above, it is necessary to reconsider the role of the early years practitioner and to shift teaching practices towards a balanced integration of different pedagogical approaches.

A similar model by Dockett and Fleer (adapted by Briggs and Hansen, 2012, p.67, see Figure 7) visualises the relationship between *adult-led* play, where the role of the adult is that of a 'manager' who organises resources, time, and space, or leads programmed instructional activities, *structured/guided* play, i.e. activities which involve guiding, supporting, and mediating children's choices within an open framework, and *child-led* play, in which the adult engages as co-player and play tutor, following children's ideas. The concentric circles represent the fluid roles of the adult, extending from providing input to responding to children's initiatives, and stress the centrality of the child's self-directed activity as the focus of the educational interaction.

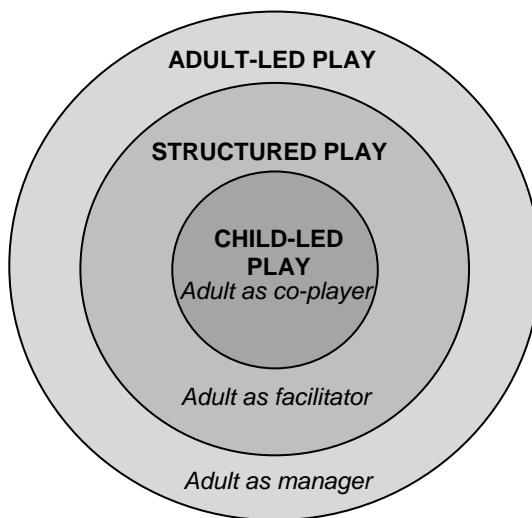


Figure 7. Adult roles within a play based environment
(Briggs & Hansen, 2012, p.67)

Wood (2010) proposes a model of integrated pedagogical approaches in which the play-work tension is resolved in favour of a combination of adult-directed and child-initiated activities. I report the model here (see Figure 8) because it appears to be particularly illuminating in interpreting the pedagogical approach taken in the study.

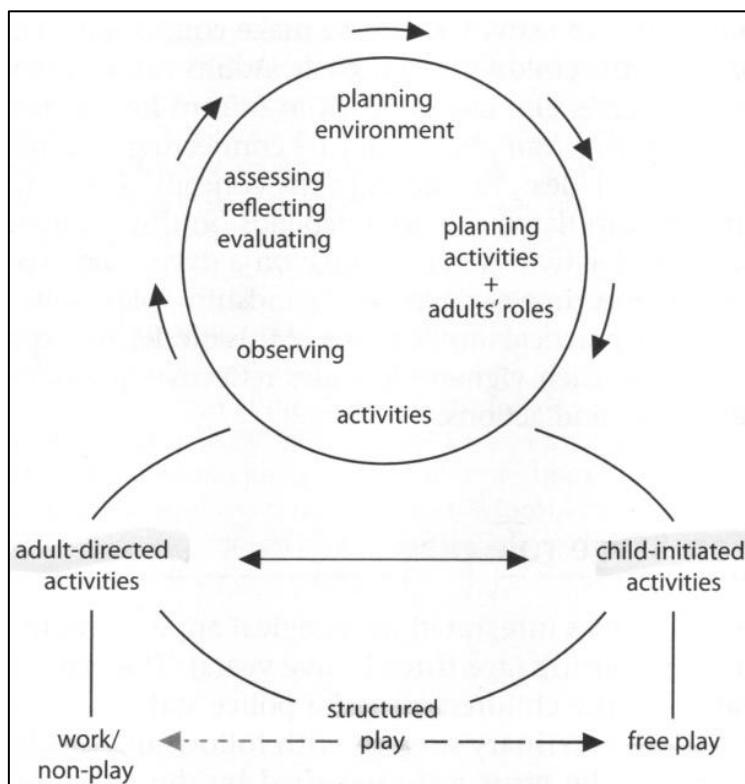


Figure 8. Wood's (2010) model of integrated pedagogical approaches

Within the practical constraints of the particular context in which they are working, practitioners are involved in iterative cycles of planning, interacting with children in the

activities, observing and evaluating their choices, interests, and skills, and further planning. In the flow of activities, teaching and learning become complementary and co-constructive processes, moving along free play activities in which children can exercise choice, structured play activities which are more adult-directed (possibly in response to observations of children's behaviours), and 'work' activities which have tighter instructional goals determined by the adult. The model can map a specific instance of learning or it can be taken as a whole to represent the dynamic nature of the progressive interactions between children and adults: they are engaged over time in a mutual relationship in which the one can inspire the other in further developing the learning/teaching process.

Thus, an integrated approach to early childhood education has the potential to meaningfully integrate issues that may otherwise be perceived as dichotomies: scaffolding children's learning versus co-constructing understanding (Jordan, 2009), and adopting a 'cultural transmission / directive approach', in which play is used as a learning tool to acquire knowledge, versus taking an 'emergent / responsive approach', in which learning means transformation of participation, knowledge creation, and is generated by children's agency, power, and control (Wood, 2010). In the context of the present study, these integrated approaches offer a very significant model for a pedagogy of musical creativity, which can effectively and flexibly balance the teacher's guidance with children's agency (see below, 6.4.4.2)

4.3.2 Assessment of play in early childhood education

In a sociocultural perspective, assessment and evaluation (Wood & Attfield, 2005; Fleer & Richardson, 2009) take on a different meaning from the traditional norm-referenced, criterion-referenced and curriculum-based assessment. The purpose is here not to provide quantitative and measurable evidence, but to qualitatively document the whole learning journey through which children's participation evolved from the position of legitimate peripheral participants to that of active co-constructors of their own knowledge and culture. Following Rogoff (1998; 2008 – see 2.3.3.1), different planes of assessment are possible – personal, interpersonal, community/institutional – so that assessment concerns not only the observation of the individual child, but also the processes and the interactions with other members of the group, both child-teacher and child-child interactions, and the wider social and institutional context. Fleer and Richardson (2009) propose an Interactions Chart of sociocultural observation, mapping the child's changing degree of participation in the interaction, from modelled behaviour, through decreasing degrees of scaffolded assistance, to independent activity.

What seems most meaningful here, in the perspective of Vygotsky's zone of proximal development, is that assessment is both of the *actual* and the *potential*, in that it observes children's present behaviour or performance, but at the same time it looks at the processes which are in a state of becoming. Wood and Attfield (2005) also stress the fact that assessment refers to both *intended* learning outcomes and *possible* learning outcomes, so not only whether pre-defined end results have been accomplished, but also what else is emerging there for the teacher and the children to build on. These two main orientations in assessing children's learning – assessment of children-in-context and assessment of the potential zone of expansion and growth – are highly relevant for a study on children's group creativity like the present. In a sociocultural view – I would argue – observing, analysing and evaluating children's creative musical processes and products means that at each time the educator is surely looking at the actual outcome and the actual behaviour of the group of children, but the real focus is on what is *beyond* all this, on what is still possible, hidden, and embryonic.

Therefore we also assess and evaluate

- the potential of a piece of music in terms of further manipulability of the material
- the potential of the evolving creative process of which this one result represents just a provisional sub-phase
- the potential of children's emergent interactions within the group (children and teachers) and what may come out of them
- the potential still unrealised in children's zones of proximal (musical) development
- the potential of this particular situation for children's learning, and the affordances (Wood & Attfield, 2005) that the overall learning context has to offer (what else, what if, what can we do with this).

As a last remark, it seems important to consider and evaluate play both in terms of 'what play *does* for children' – i.e. the undisputable benefits of play on children's learning and its value as a powerful learning tool – and of 'what play *means* for children' (Wood, 2010, p.11), i.e. their emic, insider views of what is significant to them in the activity of playing. The distinction between these two orientations seems to provide a ground and a justification for the third research question of this study – what meanings children attribute to their creative collaborative music making – because it opens an interesting perspective 'from the inside' on children's purposes and lived experiences while inventing music together.

4.4 Interactions in cooperative play

In relation to the development of sociability and cooperation skills through play, Broadhead's research (1997, 2006, 2010) analysed children's joint play activity in the Foundation Stage and Primary year 1 classes. A tool was developed for the observation and interpretation of playful learning, the Social Play Continuum, which has been used both for research and professional development. The observations focused on children's playful interactions with peers in five traditional areas of provision – sand, water, role play, and large and small construction. Children's actions and language were classified along a continuum encompassing four domains: the Associative Domain, the Social Domain, the Highly Social Domain and the Cooperative Domain (see Broadhead, 2010, p.56-57 for the complete framework – see in Table 5 a summarised version of the Social Play Continuum). The observational and related interpretative schedules help to qualitatively identify, sort out, analyse and reflect on children's behaviours and speech, thus mapping out emerging levels of shared understanding, reciprocity and cooperation in children's interactions.

Table 5. The Social Play Continuum (simplified from Broadhead, 2010, p.57)

Associative Play	Social Play	Highly Social Play	Cooperative Play
No/very little dialogue	May involve much movement	Group relatively stable with some entering or leaving	Shared understanding of goal orientation
No/very little eye contact	Children leave and join the play at frequent intervals	Suggestions emerge which begin to extend ongoing play	Players remain predominantly together until goals are achieved or new goals identified
Little regard for proximity of peers	Little development of play ideas	Some shared understanding of goal orientation	Players seek additional resources to extend their play themes
Limited periods of peer interaction	Little shared understanding of goal achievement Dialogue does not always relate to activity Adult intervention may often be sought	Adult intervention seldom sought	Absorption in task with extended levels of concentration Adult intervention not sought until completion

Increasing levels of reciprocity →

When play is located within the Highly Social and Cooperative domains, children demonstrate more complex strategies in using resources and language to initiate and maintain play. Broadhead (2010) reports a study in which an open-ended play area was introduced into foundation classrooms in order to facilitate children's cooperative play – the 'whatever you want it to be place', equipped with a wide range of resources and artefacts. Among the conclusions of the study was that such an open space, in which children could freely introduce play themes connected to their school as well as home

experiences, was more likely to generate social and cooperative play, richer use of language, problem solving and reciprocity. Again, the opportunity to collaboratively self-regulate their own play and learning appears to be tightly intertwined with children's intellectual and social development. And, as Broadhead (2006) claims,

the more cooperative the play, the more likely it is that children will connect with and understand other children's knowledge along with a deeply fulfilling, emotional engagement with the world around them. Sociable and cooperative endeavours expose children to other children's perspectives and they become experts for one another, scaffolding their own and their peers' learning experiences. (p.202)

As has been seen, the perspective on play in contemporary sociocultural research in early childhood education can contribute relevant knowledge as to how children learn and how learning, teaching, and play can form a unity in favour of children's development. This contribution may well extend beyond the boundaries of early childhood education and the Foundation Stage: play does seem to be an essential vehicle for learning not only for very young children, but also for primary school children and beyond (Briggs, & Hansen, 2012). Unfortunately, just as children begin to develop more advanced play skills, including collaborative skills, a much less flexible curriculum restricts the opportunities for play in the primary school. Wood and Attfield (2005) argue that, rather than focusing on more challenging work, policy makers should also integrate more challenging play in teaching practices. One of the future directions of play research as indicated by Wood (2009) is to provide empirical understanding of the different forms that play can assume in educational settings, including primary, especially in relation to discipline-based knowledge such as music. And, in relation to the present study, relevant questions concern the nature, value and benefits of a creative collaborative approach to music making – or musical play, I may say – for KS1 children.

4.5 Musical play

Though this study is placed in a clearly educational context, i.e. there are children learning in group being guided by teachers in a music school, there is at least an indirect relevance of research on 'musical play' (Marsh & Young, 2006), which is typically associated with non-educational, unsupervised, out-of-school learning contexts. Home, daycare, nursery, playground, or after school and recreational settings are not the music classroom; nonetheless, forms of music making occurring in those contexts have much to reveal as to how children learn and creatively collaborate in free play activities. It is argued that pedagogy has to acknowledge these alternative types of 'informal' learning (Green, 2008) and possibly integrate children's own musical cultures into the texture of

the classroom culture (Soccio, 2013; Young & Glover, 1998). In spite of the differences, it seems then to be worth taking into account what 'spontaneously' and 'naturally' happens there, as this might shed some further light on what the case is in a teacher-assisted, institutionalised context focused on creativity such as the present study. Also, it may be relevant to consider to what extent the activities children engaged in through the project are forms of 'musical play' and how this contributes to their creativity.

Children's musical play can be defined as "the activities that children initiate of their own accord and in which they may choose to participate with others voluntarily" (Marsh & Young, 2006, p.289). Musical play is enjoyable, intrinsically motivated, self-initiated and self-controlled. There can be diverse forms of musical play according to age and social-cultural context, but some characteristics are common to all of them, irrespective of cultural variability. Musical play is multimodal, as movement, singing, and use of possible instruments are blended. It has an improvisational character, in that it is spontaneous or not pre-planned, and involves processes of change and transformation over time. Musical play is a form of social interaction and a fundamental form of communication, identity construction, and collaboration, for infants and toddlers with their caregivers (Trevarthen, 1999-2000, 2002), for young children in the nursery (Young, 2003, 2008), for mid-childhood children with their playmates in the playground (Campbell, 2010; Marsh, 2008), or for pre-adolescents with their garage bands (Green, 2002; Miell & Littleton, 2008).

With regard to the age of the children in the present study, some important lessons can be drawn from the playground which are relevant for teaching and learning procedures in the classroom: music learning as a participatory process, small group work rather than large group drill, holistic learning of songs through repeated observation and aggregative 'catching' of elements within a musical whole, coexistence of multiple levels of competence in the group, subversion of the simple-to-complex teaching paradigm, dynamic and open musical forms, no dichotomy between process and product, creative processes of formulaic construction, and collaborative generation of multiple variants of short textual, melodic and rhythmic phrases (Marsh, 2008). Indeed, "it is time for adults to peer out through the windows of the classroom and *notice* children's musical play" (p.318, italic in the original), as this might enable educators to better understand children's own musical worlds and the wider cultural and contextual influences – family, friendships, or media – which contribute to construct the musicality (and musical creativity) they bring into the music lesson.

Having examined the contributions that research on play in early childhood education and ethnographic research on musical play can offer to the present investigation, in the next chapter I turn to research literature on group work and children's interactions in cooperative / collaborative learning in the primary school.

5. GROUP WORK: INTERACTIONS IN COOPERATIVE/COLLABORATIVE LEARNING

In this chapter I outline a different perspective on children's (creative) collaboration, which derives from research on cooperative learning and group work with primary school children. I first introduce some definitions and a rationale for using group work. I then discuss the main factors influencing the effectiveness of peer cooperation and collaboration as they have been identified in research studies in general education, particularly with regard to primary school. This review contributes to build a framework for observing and analysing collaborative interactions which is part of the methodological tools of the study.

5.1 Group work as a way of organising learning

As a teaching / learning strategy, alternative or complementary to teacher-directed instruction and to individual work, the practice of grouping pupils with the aim of fostering more independent and active learning processes has been widely researched at least since the early 1970s (Blatchford, Kutnick, Baines, and Galton, 2003). Cohen's (1994) broad definition of group work focuses on the students' active involvement and the teacher's delegation of responsibility: "students work[ing] together in a group small enough that everyone can participate on a collective task that has been clearly assigned. Moreover, students are expected to carry out their task without direct and immediate supervision of the teacher" (p.3). As a possible criterion for the distinction between 'collaborative' and 'cooperative' learning, Dillenbourg (1999), Galton and Williamson (1992), and Ogden (2000) indicate the kind of division of labour among the group members: in cooperative learning, which is often highly structured in its procedures, students solve sub-assignments separately and eventually put them together into the final outcome, whereas in collaborative learning all members share the same task and produce a joint output. In the following, I will use 'group work' as the superordinate concept, encompassing both collaborative and cooperative learning (or, in specific cases, I will adopt the terminology used by each author).

Cooperative and collaborative learning can be realised through a diversity of techniques, more or less structured, applicable to specific subject matters or also content-independent, some of which have been tested through experimental and naturalistic studies (Slavin, 1991). It goes beyond the scope of this introduction to group work to

illustrate in detail the characteristics of the main models, which have been developed within cooperative learning research. It must be noted, however, that most research on group work has focused attention on verbal exchanges among students, mostly with regard to maths, science, and literacy, and based on convergent, closed tasks. Though some of these techniques are applicable to the domain of music (e.g. Kaplan & Stauffer, 1994), the examination of creative collaboration in group music making requires that also further media of interaction be taken into account, specifically musical and bodily interactions. Nonetheless, this body of research has the potential to offer helpful evidence-based findings about the nature of the interactions in group work and the main educational issues related to it.

Although to the present date "in many classrooms group work is still a neglected art" (Galton & Hargreaves, 2009, p.1), there is abundant research evidence that group work can bring an array of substantial benefits: it can enhance students' academic achievement, improve intergroup relations, increase students' self-esteem, and promote cooperativeness and altruism (Slavin, 1991). Positive educational outcomes of group work include higher-level reasoning, better retention, more time on task, intrinsic motivation, cognitive development, perspective-taking, and social support (Johnson, Johnson, & Stanne, 2000). Further, an essential long-term goal for education which group work has the potential to contribute to is nurturing students' democratic citizenship, i.e. developing an 'attitude of concern for others', being committed to values of social responsibility and peaceful confrontation, overcoming socio-economic or racial barriers (Schul, 2011).

There are a number of theoretical perspectives which attempt to give reasons for the effects of group work, focusing on motivational factors, social cohesion, cognitive elaboration, and development of cognition through social interaction (Slavin, 1996). Among these, social interdependence theory constitutes a major theoretical foundation of much cooperative learning research and practice and offers a conceptual structure to understand individualistic, competitive, and cooperative approaches (Johnson & Johnson, 2005). The premise is that "the ways in which participants' goals are structured determine how they interact, and the interaction pattern determines the outcomes of the situation" (Johnson, 2003, p.936). In groups there can be no interdependence at all, which results in unrelated, individualistic work; negative interdependence, when individuals compete with one another; and positive interdependence, when individuals can reach their goals only if the other members can also attain theirs or if a single, common goal can be achieved only through the joint effort of the group. The goal structure of a cooperative

learning activity is such that the emergence of positive interdependence in the group is facilitated, inducing behaviours of what is defined as 'promotive interaction', i.e. mutual assistance, sharing of resources, effective communication, and trust.

5.2 Factors influencing the effectiveness of group work

Educational researchers have long explored the conditions under which group work can be productive and have analysed the factors that influence its effectiveness (for example, Cohen, 1994). Johnson and Johnson (Johnson & Johnson, 1999; Johnson, Johnson, & Holubec, 1994) identify five critical elements for the success of the cooperative experience:

- *positive interdependence*: tasks are designed so as to ensure the full participation of all members of the group, by establishing mutual learning goals, joint rewards, divided resources, and complementary roles;
- *individual accountability*: each member is actively responsible for their own learning and for the group performance;
- *face-to-face promotive interaction*: students help, support, and encourage each other while learning;
- *development of social skills*: prior to and alongside group work on academic contents, students have to learn fundamental interpersonal and social skills, such as communicating effectively, making decisions together, building trust in each other, and managing conflicts constructively;
- *group processing*: members have to monitor and assess the effectiveness of their work as a group, identifying possible aspects that need improving.

In order to analyse the structural features that characterise a group learning situation, in the following I adopt and expand the framework proposed by Blatchford *et al.* (2003), articulated in four dimensions – 'classroom context and groupings', 'students' group work skills', 'task design', and 'roles of the teacher' – to which, given the focus of this research study, I add 'interaction processes' and 'outcomes and assessment'. These dimensions are to be thought as mutually influencing and strongly interrelated. Such an analytical tool can be useful to consider the specific factors conditioning the interactions in a group of children who are inventing music together, which is ultimately the object of this study.

5.2.1 Setting the physical and social context: space arrangements and groupings

A number of variables regarding the preparation of small group work determine the external context in which it takes place: the arrangement of the physical layout of the room, the size of the groups, the group composition, and the stability of groups over time. Baines, Blatchford, and Kutnick's (2003) observational study suggests that flexible grouping practices – individual, paired, small group, large group, or whole class work – should be strategically arranged in order to maximise the potential for learning and interaction in relation to the task and the purpose of each activity. The size of a working group should be a function of the task characteristics, the students' age and group experience, and the aims of the work. Baines, Blatchford, Kutnick, *et al.* (2009) point out that a bigger number of students tends to make social loafing or free riding more likely, communication more difficult (because of the increasing number of possible interactions among group members), and the individual's sense of responsibility for the group's outcomes weaker. In this regard, Schul (2011) remarks that pairs and threes are appropriate for younger or less experienced children, whereas groupings of four or five children are small enough to leave sufficient room for the active participation of each member, yet sufficiently large to stimulate the production of a wide range of ideas and points of view, which is conducive to a richer problem-solving process. Criteria for group composition (Baines *et al.*, 2009) can be the ability mix, the gender mix, the relation of friendship between members, the students' personality and working style, and the integration of children with special needs or children whose first language is not the one used in the classroom. It would seem convenient to give students the possibility of choosing their teammates, though reserving the ultimate decision for the teacher (Baines *et al.*, 2009), but overall the matter remains rather controversial.

5.2.2 Preparing and developing pupils' social and group work skills

Researchers agree about the importance of social and group work skills as a necessary foundation for effective group learning. In fact, the attitudes and behaviours required in small group work are very different from what is usually required of students in conventional teacher-directed whole-class activities or in individual work and just 'aggregating' children by giving them a collective goal will not necessarily transform them into a cohesive and functional group. For this reason, developers of cooperative learning models suggest using team-building and skill-building activities in order to raise students' awareness of the mechanisms implied in group dynamics and to practice the necessary interpersonal and collaborative skills in coping with the challenges of group work

(Johnson and Johnson, 1987). These include: actively listening to each other, taking turns, acknowledging the other person's perspective, stating ideas freely and clearly, clarifying differences of opinion, providing constructive feedback, resolving problems or conflicts amicably and democratically, accepting responsibility for one's own behaviours, sharing tasks and resources equitably among group members, encouraging everyone to contribute to the group effort, promoting each other's learning, giving help to and seeking help from other group members, and monitoring and evaluating the group's progress (Gillies, 2003; Gillies & Ashman, 1998).

A relevant strand of research that points to the importance of developing group working skills is the SPRinG project (Social Pedagogic Research into Groupwork), aimed at improving the effectiveness of pupil groups in classrooms (Blatchford, Galton, Kutnick, & Baines, 2005, 2008). This ambitious, longitudinal project involved a wide number of classes in the UK from Key Stage 1 to 3 and was based on a 'relational approach' intended to develop in children the set of social, emotional, and cognitive abilities that are foundational to engaging in collaborative interactions. As Blatchford, Baines, Rubie-Davies, Bassett, & Chowne (2006) claim, this approach effectively promoted more active, sustained involvement in group activities, more connectedness within the group, and more higher-order inferential forms of reasoning. Such relational activities proved helpful in enhancing the effectiveness of group work also with 5-7-year-old children, in terms of increased attainment in literacy and mathematics, motivation to work in groups, and quality of peer interactions (Kutnick, Ota, & Berdondini, 2008).

Another body of research which is relevant to the theme of preparing children to group work is the use of Exploratory Talk and the training of primary school pupil's joint critical reasoning skills through the Thinking Together approach (Dawes, Mercer, & Wegerif, 2004; Mercer, Wegerif, & Dawes, 1999; Wegerif, Mercer, & Dawes, 1999). Based on observational research in primary schools, Mercer (1996) distinguished three types of talk, *disputational talk*, characterised by an individualistic, competitive attitude resulting in unsupported assertions or counter-assertions; *cumulative talk*, characterised by a complaisant attitude towards the group, resulting in positive, though uncritical confirmations of what others have said; and *exploratory talk*, in which a critical attitude allows children to challenge each other's suggestions by providing reasons and justifications. 'Ground rules' for Exploratory talk can be established through discussion in the group, such as: all relevant knowledge is shared; each group member is encouraged to actively take part in the group's discussion; constructive challenges and alternative ideas are accepted, but must be supported by reasons; an agreement is sought; and the

group as such is responsible for the decisions taken. Numerous studies have confirmed the effectiveness of this approach in helping children collaborate on problem-solving tasks (Rojas-Drummond & Mercer, 2003), improve their individual reasoning skills (Wegerif *et al.*, 1999), and develop a more cooperative and inclusive attitude towards disadvantaged categories of pupils (Wegerif, Littleton, Dawes, Mercer, & Rowe, 2004). Further characterisations of productive talk have later on been put forward, for example 'co-constructive talk' (Rojas-Drummond, Mazón, Fernández, & Wegerif, 2006) which denotes the more inclusive style of group verbal coordination necessary to tackle open-ended and creative tasks. Indeed, in the more recent developments of this line of research, Wegerif (2011) critically acknowledges the necessity to understand thinking and talk not only in terms of explicit reasoning and argumentation in the context of convergent tasks, but also as the *identification with dialogue itself*, i.e. the fact that the learner is able to adopt the perspective of another in a dialogue. Thus, a wider 'dialogical model of reason' appears to be crucial to fostering productive interactions. "[I]n essence a dialogic approach to teaching for thinking and creativity is summed up by encouraging children to be open and to ask questions" (Wegerif, 2010, p.12). Dialogue is here not just a means, but an end in itself. Such an approach values Playful talk – i.e. imaginatively and playfully producing ideas in the exchange with a partner, and mutually triggering each other's thoughts – as the necessary foundation stage for deeper reflection and creative thinking.

A definition of 'productive talk', i.e. verbal exchange that is conducive to goal achievement, is inevitably task dependent, as different kinds of talk serve different goals. Vass (2007; Vass *et al.*, 2008), for example, has highlighted the role of emotion-based interactions in children's collaboration on creative writing. Baker-Sennett, J., Matusov, E. & Rogoff, B. (1992) investigated the interaction processes of creative planning by a group of six 7-9-year-old girls who developed a play almost independently of adult direction. They employed different strategies for planning in advance and planning during action, coordinating their efforts, jointly taking decisions, overcoming moments of confusion or misunderstanding, anchoring the process by devising a written plan, and managing both social relationships (including conflicts) and the cognitive challenges implied by the task. This study is particularly significant for the present one in that it represents an outstanding (and exceptionally mature) model of children's creative collaboration and at the same time it provides a clear example of applied sociocultural methodology.

With regard to the present study – in which talk plays a secondary role as an aid to but not as the essence of musical interactions – the notion of 'dialogue' appears to be the

central contribution of the body research on Exploratory talk: musical interactions as a dialogue, music teaching and learning as a dialogue among children, teachers, and musical ideas and tools, and creative music making in group as a form of multi-modal dialogue. The issue of 'talk', at any rate, concerns important parts of the music classroom activity (see also Glover & Young, 1999, and Young & Glover, 1998, about how language can be used in the musical context as a tool for understanding): how verbal information is handed over and understood, how a vocabulary of labels and concepts connected to experiences emerge over time, how ideas are proposed and negotiated during group work, how children's comments and overall thinking are elicited, and especially in what ways verbal communication is interwoven with nonverbal and musical communication.

5.2.3 Task design

A central dimension to be addressed in considering group work is the nature of the group task. Cohen (1994) argues that there is a strong relationship between the type of task assigned to the group and the quality of interaction that it determines. Not all tasks are 'good' group tasks: indeed, for lower-level learning tasks – e.g. instructional tasks, rote learning, or acquisition of basic procedural knowledge – whole-class instruction and individual learning may be more effective than group work (see Rogoff, 1998; Blatchford *et al.*, 2003). In contrast, there can be high-level cooperative activities which are ill-structured, i.e. the task is open-ended, is not based on standard procedures or routines, and requires members to organise the group work, plan how to allocate different roles and sub-tasks, and reach consensus about a jointly devised solution (Gillies & Ashman, 1998). Thus, different tasks foster different types of interaction, which are in turn associated with different learning outcomes. A table (see Table 6 on the next page, based on Cohen, 1994, here with musical examples) summarises the close relationship between these three variables. With regard to the present study, centred on creative processes, an orienting consideration is that in open-ended group work the richness of interactions between children (both content- and group-related) is essential for the quality of the group outcome.

As for the structure of the teaching / learning process Baines *et al.* (2009) and Dawes *et al.* (2004) propose a similar three-phase format, each group-work session consisting of:

- a *briefing phase* or *whole-class introduction*, in which target skills, contents, or strategies are identified and the subsequent practical activity is set up
- a *group work phase*, in which children experience group work and collaborate on a task

- a debriefing phase or *whole-class plenary*, in which children share the outcomes with the class, and are guided in a group discussion to evaluate what they have accomplished and how they have worked together.

The inner organisation of the group work phase depends on the specific contents that are object of the session. Clearly, this general structure can be more complex and arranged in an extended series of intermediate steps and secondary ramifications.

Table 6. Group work: Relationship between type of tasks, level of interaction, and learning outcome (based on Cohen, 1994, and elaborated)

Task / Activity	Level of interaction	Learning outcome
Clearly defined, structured, convergent, closed tasks <i>acquiring and recalling information, applying procedures in order to find a correct solution to the problem:</i> e.g. performing ensemble music based on a score	Limited interaction	Relatively low-level outcomes and learning
Open-ended, ill-structured, complex, creative tasks <i>sharing resources, coordinating efforts, discussing alternatives</i> e.g. designing and inventing a piece of music together	More elaborate and conceptually oriented interaction	High-order thinking skills Production of new knowledge

5.2.4 Interaction processes: interplay of cognitive and social-relational factors

Interaction is at the core of group work. The way children act, react, and interact, simultaneously or sequentially, directly or indirectly, affects the quality of their learning experience and of the group outcome. A first feature of collaborative interaction is the symmetry/asymmetry in the relationship. Blatchford *et al.* (2003) contrast the symmetrical child-child relationship, more mutual and equal, with the asymmetrical child-adult relationship, characterised by a marked disparity in hierarchy and power. Sociocultural research (Rogoff, 1998), however, questions this view, claiming that not necessarily does an adult play an authority role with children, and not necessarily are children in positions of equality in their relationships. Indeed, while collaborating on activities children create their own group cultures and their own meanings and understandings of their worlds, which involve issues of power, hierarchy, and control bound with their roles and personal relationships in the group, perceived social and academic status, relative expertise, gender, race, ethnicity, age, and motivation. Peer interaction in group work can occur in a variety of ways according to diverse purposes, assumptions, or practical conditions.

Damon and Phelps (1989) distinguish three main approaches to peer education – *peer tutoring, cooperative learning, and peer collaboration* – based on the differing quality of peer engagement and, in particular, on the different degrees of equality and mutuality that these differing kinds of relationships foster in the interaction.

It seems important to consider that peer collaboration is not always fully effective, due to social-psychological factors which can disrupt the collaboration in the group. Salomon and Globerson (1989) examine some detrimental interpersonal dynamics which hinder teams from achieving their full potential. In their view, a team is a social system in which the members' cognitive, motivational, and behavioural processes develop interdependently, i.e. group members affect each other in building a shared motivation and in forming reciprocal expectations as to how they are handling the group task. In this complex process of mutual influences, single members or the whole group may show behaviours which undermine the joint performance, such as 'free riding', 'social loafing', monopolising the activity, 'ganging up against' an undesired activity, excessively relying on the teacher's help, or competing with other group members. Baines *et al.* (2009) present further social-psychological reasons why the interaction in group collaboration might not work well. These include: the whole group or single members do not get involved in the group work; some members are excluded or ignored by the others; group members do not reach agreement or compromise, or are unable to solve their conflicts; some members disrupt the activity; the group is passive, not engaged, disorganised, and wastes time on other off-task actions; pejorative criticism creates a negative group ethos; gender issues interfere with collaboration; or children are not motivated either with regard to accomplishing the task or to working in groups. Thus, a variety of relational and motivational aspects, which stem from or feed back into cognitive difficulties, can determine the partial or total failure of group interactions. Thus, the two aspects, the cognitive and the social-relational, are interdependent and concur in determining a "between-person state of engagement" which might be conceived of as a "continuum of intersubjective awareness that ranges from almost complete lack of joint attention to continual coordinated participation" (Barron, 2003, p.349). Key to the success of the collaboration is the extent to which partners can develop and maintain attunement with one another, both with respect to the shared understanding about the task and to the communicative interchange with partners.

5.2.5 Assessment in group work

A relevant question about group work is in what terms its 'effectiveness' can be defined and how it can be evaluated. The meanings of 'productivity' can, according to Cohen's view (1994), range from conventional academic and content-related learning, to higher-order and conceptual learning, to active participation and equal-status interaction, to prosocial behaviours. The purpose of the assessment and the relevant evaluation criteria should be consistent with the task design and the overall goal of group work, and these

should be made explicit to students (Webb, 1995; 1997). *Summative* assessment is about gauging the quality of the final product, the performance outcome of the group work, i.e. how well students have solved the task. Alternatively, *formative* assessment can focus on the quality of the learning processes yielding that outcome, including the group interactions, the cognitive and metacognitive strategies used by the members, and the relationships and dialogues emerging within the group work. Assessment ought to be more than just the teacher measuring or somehow judging students' knowledge and skills. A fundamental pedagogical strategy is to involve children themselves in assessing their own work by employing forms of *peer assessment*, *self-assessment*, and *group processing*, i.e. asking children to elaborate and reflect on their own experiences and outcomes. Ideally, assessment should become a constructive and self-critical attitude that children internalise, so that they can responsibly be involved in the whole learning process both as 'producers' and as 'assessors' of their own learning. In the next chapter I will discuss aspects of assessment and evaluation which are more closely related to creative group work in music.

5.2.6 The teacher's role

Effectively implementing group work is for the teacher a complex task, which involves a wide range of roles (Webb, 2009), which include: arranging the physical space and the materials; forming small groups according to carefully chosen criteria; designing an appropriate type of task; motivating and preparing students for group work by providing them with relevant know-how about interaction, communication, or thinking strategies; making clear to students what they are expected to do; guiding the group through structured phases of work; monitoring, coaching, and assessing what students are doing; harmonising the group work mode of learning with related whole-group, teacher-led activities or individual work; and building over time sequential pathways through which specific group work skills, alongside content-related knowledge and skills, are progressively built. The common thread underlying these different actions of the teacher is to have students articulate their thinking and mutually elaborate on their ideas so as to maximise their learning through group work.

Modelling collaborative behaviour. It has been found that, inasmuch as the teacher models cooperative behaviours, questioning practices, or explicit reasoning, students tend to mirror that same kind of discourse when working independently in groups (Gillies, 2004, 2006; Gillies & Boyle, 2006; Gillies & Khan, 2009). The teacher gives a first-hand example of the communicative style students are encouraged to use within the small group activity (Webb, 2009).

Observing and standing back. Observing what is happening in the particular situation of a group and correctly diagnosing where possible obstacles might be is the necessary premise for any successful intervention in the group activity.

Intervening is a delicate matter which has closely been examined by research (Webb, 2009). It seems appropriate for the teacher to actively intervene only when children are apparently unable to cope with the task, when communication problems emerge, or when some members or the whole group are supposed to be off-task. Inexperienced groups of children are more likely to need some kind of support on the part of the teacher. In Blatchford *et al.*'s view (2006), teachers should seek to achieve a fine balance between carefully setting up the activity in the briefing phase and minimally but strategically interacting with pupils during the small group work phase. While intervening in the group process, it is crucial that the teacher succeed in interpreting students' thinking and in further stimulating it through probing techniques (Webb *et al.*, 2009).

Probing students' thinking – Eliciting further explanations about how students are solving the problem is useful both to enhance critical reflection and metacognition and to model questioning skills important for group work. Gillies (2004, 2006; Gillies and Boyle, 2006; Gillies and Khan, 2009) studied teachers' communication skills in order to identify specific 'mediated-learning behaviours', i.e. interactions designed to promote thinking and scaffold students' learning. These can be both content- or process-related, and include: clarifying discrepancies or options children are faced with, acknowledging emerging ideas, challenging children's perspectives, tentatively offering suggestions, and posing open questions that may help children better express their thoughts.

5.3 An analytical framework for group work

The following diagram (see Figure 9) attempts to visually summarise the main constituent aspects of group work, as examined in the literature reviewed above. Such a framework can be a helpful tool to observe and analyse the factors that influence cooperative and collaborative processes in small groups (this is related to RQ2). The use of the colours in the diagram represents the fact that the quality of the interactions in group work is a function of both the teacher's choices and the pupils' characteristics and actions. Assessment is recursive and takes place in different forms all along the process.

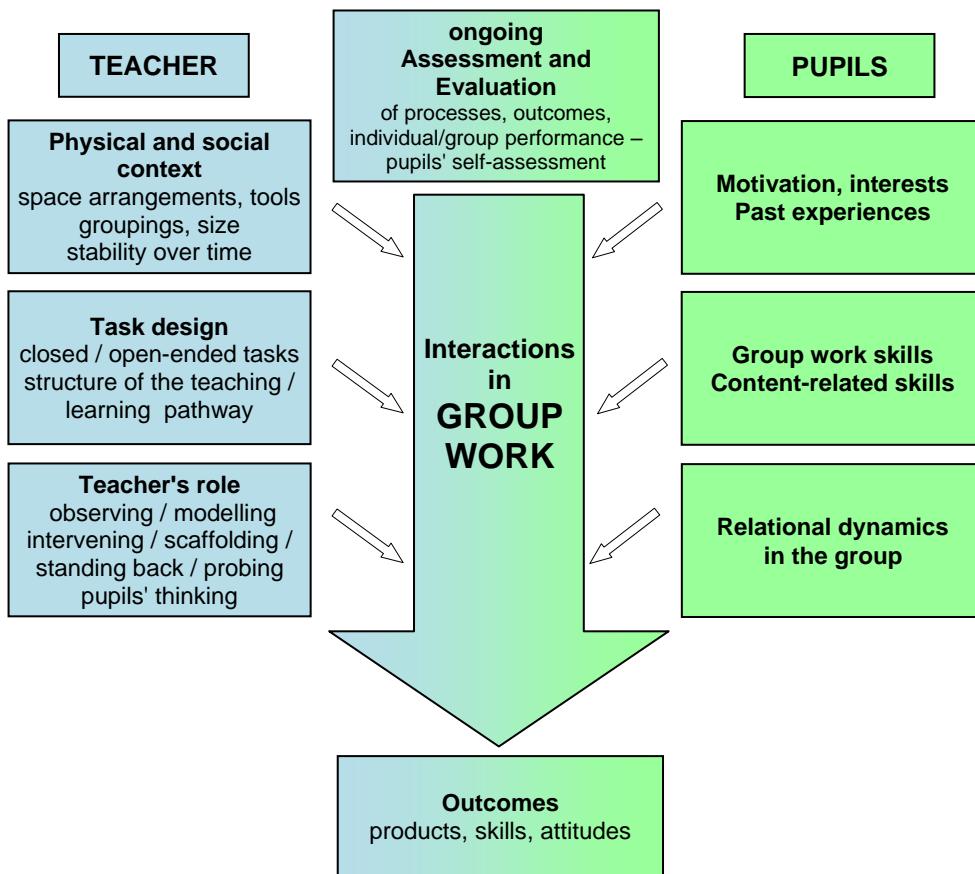


Figure 9. An analytical framework for group work

The literature on group work reviewed here is to a great extent focused on thinking skills, reasoning, and talk mostly with regard to the domains of maths and science, sometimes literacy, and only rarely the arts. As such, there are surely still many aspects 'missing', if the endeavour is to understand the nature of creative interactions in music. Nonetheless, most of the above is pertinent to what was done in this study, and such a conceptual framework offers a structured perspective for analysing the different components of group work.

The issues that remain open concern the specific characteristics of *creative* group work and creative group work *in music*. At this point it is timely to focus on 'creativity', 'group', 'children', and 'music' all at the same time. Also, the research questions – and especially the third RQ about the meanings that children attribute to their experience of creating music and movement as a group – impose a different perspective and consequently a distinct methodological approach. The orientation of this study towards how children perceive their own lived experience and how this is significant for them requires an interpretative stance quite different from the 'social influence' approaches (Rogoff, 1998) typical of much research on cooperative learning. Instead of experimentally categorising

and measuring the effect of some independent variables (e.g. size of the group, kind of task, preparation of children, and so on) on a dependent variable (e.g. effectiveness in terms of outcomes or acquired abilities), the research questions I have call for a naturalistic, ethnographic, and phenomenological approach aimed to investigate in depth the unique situation of a group of children in a particular cultural context. In the following chapter, therefore, I finally look at socioculturally-oriented, ethnographic and phenomenological studies on collaborative creativity, only briefly in general education and more substantially in music education.

6. CHILDREN'S CREATIVE MUSIC MAKING IN GROUPS

6.1 Introduction

In the preceding chapters, I have looked at learning as a social phenomenon in the perspective of sociocultural theory, then I have addressed the other 'grand theme' of this work, creativity and collaborative creativity, taking into consideration general theories as well as more specific views of creativity in the musical domain. Subsequently I have pointed more directly at children's learning in groups and, given the particular target age of this study and the kind of activities involved in it, I have examined literature on play in early childhood education, on musical play, and on cooperative and collaborative learning in mainstream education. In this chapter I am finally bringing together the two main topics – learning in groups and being creative in groups – in relation to mainstream educational literature and more specifically to children's group creative music making.

The chapter is thematically organised around the four subquestions of the study. It examines the kinds of interaction and communication media implied in group musical creativity (RQ1), the component dimensions of musical creativity in education (RQ2), the roles that 'meaning' and shared meanings play in collective ideation (RQ3), and the educational and ethical values that collaborative creativity represents and fosters (RQ4). This thematic review constitutes a research-informed analytical framework to observe, analyse and interpret creative interactions in children's group music making. Eventually, I present again the research questions and how answering to these can contribute to fill gaps identified in the literature.

6.2 Collaborative creativity in education and music education

Based on a sociocultural stance as discussed in chapter 3, children's musical creativity is viewed as inherently contextualised activity, located both within the individual world of children and within the complex network of cultural systems in which they grow (Burnard, 2006b). Rather than thinking of children's creativity as developing in universal, discrete, and age-dependent phases to some extent related to Piaget's learning theory (Gordon, 1990, 2012; Paananen, 2006, 2007; Swanwick and Tillman, 1986; see section 3.2.3.3), it seems more meaningful to consider that *what* constitutes musical creativity and *how* creativity develops in children's lives are both cultural constructs. Indeed, Burnard (2006b) maintains that, given the diverse forms of musical engagement in which creativity

is expressed across the musical cultures of the world and the varying ways in which children's creativity is shaped by contextual influences of family, peers, schooling, and media throughout their development, a shift is necessary to "concentrating on the practice (or 'how', 'what', 'where', and 'with whom') of musical creativity as situated cultural activity" (p.369). In the following, therefore, I review a number of studies on children's group creativity in music (and wherever relevant in other domains) which have adopted a sociocultural approach. The attempt is to gather relevant information and theoretical models useful to understanding children's creative interactions in music and to identify gaps in the literature.

6.3 Kinds of creative interactions: communication media

At a purely descriptive level, considering the *media* through which communication occurs, three kinds of interaction can be distinguished: verbal, nonverbal, and musical interactions. In the following, I first examine them individually and then show how they are interrelated. This section is to do with the first research question, about the types of communication that children utilise in their joint creative action.

6.3.1 Verbal interactions

Especially in the context of group music making, a premise which must be made first is that, though music is non-verbal, the activity of making music requires to a large extent the use of verbal language, in terms of labelling, explaining, or pointing out objects, events and processes. In a small scale empirical study about the use of verbal communication in a group of three 7-year-old girls engaged in a collaborative composition task using digital technology, Wallerstedt (2013) found that their verbal skills for communicating and sharing intentions were rather limited, as they were not posing questions or clearly articulating ideas and problems (this leads back to the issue of guidance on the part of the teacher). Yet, the interesting finding was that they could use a concept that they had invented on their own as a tool for discerning musical parts of their group composition and planning the piece. In sociocultural terms, words as conceptual tools mediate meanings and make it possible to participants to coordinate their actions.

In relation to the use of verbal language in children's group musical creativity, some questions are raised which are intended to show some of the implications of the first research question and to sensitise the researcher to possible aspects of interest emerging in the course of the study: How do children use language in the activity of

collaboratively planning a piece of music? How do they express in words their conceptual understanding of musical events? What kinds of talk do they use there (cumulative, disputational, exploratory, co-constructive, playful, etc.)? To what extent do they express musical meanings through words or, conversely, through direct musical action?

6.3.2 Bodily interactions

Complementing or substituting verbal language, different types of nonverbal, body-based communication represent a fundamental component of the interactions. Meanings are also conveyed through a set of paralinguistic features which accompany speech (emotional tone of voice, pitch contour, loudness, prosody, rhythm, intonation, and stress). Other nonverbal means of communication which necessarily have to be taken account of are facial expression, eye contact and gaze, bodily gestures, physical contact, body posture, body movement, and use of space. In this study, given the age of the children (5-7) who may not be inclined to use speech extensively, the analysis of these body-based expressive and communicative behaviours is key to understanding what is happening in the interaction, for an important part of the exchange may occur at the nonverbal level. With regard to the collaborative music-making on instruments among 3-4-year-old children, Young (2008) argues that an over-reliance on linguistic structures and on collaboration as negotiation achieved through verbal exchange may cause us to lose sight of some of the inherently musical processes which are at the base of children's joint creativity. Likewise, research on children's interactions in pretend play, though providing valuable information on how children share meanings, enact roles, and agree on narrative events, may be too focused on collaboration as conversation to capture the function of musical collaborative mechanisms such as imitating, synchronising, matching of motor patterns on the instruments, or adjusting to the other's expressive intention and dynamic. Thus, language-derived versions of collaboration can be useful to understand the collective creative process of planning a 'piece of music' – i.e. the preliminary compositional decisions which a group must reach through discussion in order to devise some sort of product – but they would be insufficient to grasp the complexity of the moment-by-moment bodily interactions in the free flow of children's improvisational actions. In various respects, indeed, the interactions I am studying here are 'embodied interactions', which have a direct impact on the creative music making process.

Further relevant examples of embodied musical communication are the musical gestures used to convey information about the organisation of the music, for example giving a sign for the beginning or ending of playing, or using movement cues such as head-nods or hand-gestures to signal a forthcoming change. Such visual indications help players keep

connected in the flow of musical events. In relation to rhythm interaction, a phenomenon which is also relevant here is 'entrainment', which refers to the synchronisation of two or more independent rhythmic processes (Clayton, Sager, & Will, 2004), put simply, 'being in sync' or 'keeping in time'. The embodied-cognitive strategies involved in the process of two or more players aligning with a shared beat / rhythm include: 1) perceiving regularities in the flow of the temporal events, i.e. forming expectations and anticipations with regard to an inferred pulse or metre, 2) synchronising their bodily movements to the perceived auditory stimulus in order to produce a coherent set of sounds on the instrument, and 3) recursively adjusting and correcting their own motor output to the incoming rhythmic information, including micro- or macro-deviations, perturbations, or ambiguities in the music. Phillips-Silver, Aktipis and Bryant (2010) suggest that this ability to perceive and synchronise to rhythmic music rests on the integration of different sensory modalities, namely the auditory, the motor, and the vestibular systems (the latter being activated, for example, while rocking, walking, or dancing to the music). To these I would add the visual system as an essential component of this crossmodal integration of beat-related perceptions: in fact, at least with respect to my experience with children, visually monitoring the partner's motor actions facilitates rhythm synchronisation (Sangiorgio & Hennessy, 2013).

As a third observation about body-based creative interactions, I stress here the importance that movement activities and dance have in the educational approach taken in this study, both as a pedagogical strategy and as a pedagogical goal (in many respects akin to Young, 1992, or to Dalcroze- or Orff-oriented approaches). Movement can be used in various ways and with different aims, such as getting in contact and establishing trust (i.e. for a relational aim), laying the foundation for specifically musical abilities (e.g. rhythm skills), or also for its own sake as an individual or group creative and artistic expression. In the conception of 'music' and 'musicking' that is portrayed here movement plays a foundational role, so much so that I would prefer to use the phrase 'music and movement' rather than just 'music'. However, this is not consistently done throughout the study because in some cases it may burden the writing and make it too awkward to follow.

Concluding, relevant questions which emerge based on the above can be:
How do children interact through movement, gestures, and other nonverbal means of communication? What role do these body-based forms of interaction play in adding to their shared creative experience? How is nonverbal communication integrated with verbal communication within the creative group process?

6.3.3 Musical interactions

A useful way to categorise and analyse musical interactions is in terms of 'interactive behaviours', the most fundamental of which are modelling, imitating, varying, and contrasting. Different sources identify similar arrays of interactive modes, mainly with regard to pair or group improvisation (e.g. in music therapy Bruscia, 1987; in contemporary classical music: Globokar, 1979; and in its applications to music education: Meyer-Denkmann, 1970). With regard to jazz education with high school and undergraduate students, Monk (2013) advocates an approach to improvisation as a dialogical skill and suggests eight strategies for collaborative improvisation, namely copying, adapting, contrasting, punctuating, highlighting, supporting, signposting, and allowing (see Table 7). These interactive strategies can also be adapted to genres other than jazz. The advice is to first practice them individually through distinct goal-oriented exercises – so that students can learn to make conscious choices in constructing the improvisation – and then to combine them and apply them as tools for interaction while playing whole pieces.

Table 7. Strategies for collaborative improvisation (drawn from Monk, 2013)

<i>Copying</i>	responding with a musical statement that shares some aspects with another player's music
<i>Adapting</i>	taking one element of another player's idea and transforming it
<i>Contrasting</i>	responding by opposing a different musical content
<i>Punctuating</i>	framing a leader's ideas
<i>Highlighting</i>	occasionally joining the leader in order to underline specific features of their improvisation
<i>Supporting</i>	providing a basis for another player to take the lead
<i>Signposting</i>	restating some previous material in order to provide coherence to the improvisation
<i>Allowing</i>	listening to the partner before entering the impro, or just playing in the background

Within a study on the experiential differences between improvising and composing, Burnard (1999, 2002) observed the musical interactions emerging in a group of 12-year-old children engaged in duo and group improvisations. She identified the 'interactive roles' of leader, follower, supporter, partner, and mediator, as summarised in Table 8 below:

Table 8. Interactive roles in group improvisation (elaborated from Burnard, 1999)

<i>Leader</i>	takes control of and determines play
<i>Follower</i>	plays a more passive or background role and tends to match what others do
<i>Supporter</i>	facilitates and guides joint action by providing a stable context for leaders
<i>Partner</i>	flexibly interacts with another partner at an equal level, often swapping leadership roles with them
<i>Mediator</i>	makes connections and unifies the musical outcome by shadowing and deriving material from others

The children of Burnard's study assumed different roles depending on contextual factors such as the relative musical ability and experience of the players involved, their availability to take on different roles, the characteristics of the instruments chosen, the extent to which mutual trust among the improvisers supported the ongoing interaction, and the moment-to-moment evolvement of the musical interplay. Interestingly, a very similar range of interactive roles is proposed in improvisation in music therapy (Bruscia, 1987). It should be clear that interactive behaviours and strategies as well as interactive roles do not *per se* relate to any particular musical content. Rather, they only define the kinds of musical relationship – of musical 'functions', as it were – that are created in the interaction among players.

In the analysis of the musical interactions between the children of this study, orienting questions may be: How are children interacting musically with each other? What strategies do they adopt and what roles do they assume in the interaction with their partners? What relationship is there between the features of the creative task and the interactive behaviours that they display? Do children show any preferences in taking on specific roles?

6.3.4 A global look at interactions: transactive communication and shared understanding

Limiting the investigation to just one of these three media of interaction (verbal, nonverbal, and musical) would mean separating what is inextricably connected within one whole act of communication and missing important parts in it. So it is perhaps necessary to tackle the methodological challenge of observing and analysing different levels of interaction at the same time as parts of an entirety, in order to gain a more comprehensive view of the situation and to better understand the mixture of ideas, motives, feelings, and perceptions that children bring to their joint creative efforts.

Taking this 'holistic' view brings the focus a bit further than the observable interactive behaviours, and seeks to get to basic characteristics of human interaction and communication, such as 'intersubjectivity' (Rogoff, 1990), attunement, mutual engagement, or shared understanding.

In this perspective, I find helpful the notion of 'transactive communication', which Miell and MacDonald (2000 – see also MacDonald, Miell, & Morgan, 2000) used to investigate the influence of social variables on the nature and quality of 11-12-year-old children's collaboration on creative tasks. Transactive communication, in relation to talk and verbal interactions, refers to the attitude of building on, extending and elaborating on each other's ideas, as opposed to using a more limited amount of talk and offering just unelaborated agreements or disagreements with the others. Transactive communicative actions in music consist in producing musical refinements, extensions or elaborations of previously presented musical material or responding musically to earlier verbal questions or suggestions from the partners, as opposed to non-transactive playing for themselves, just repeating musical ideas, or not being engaged with or oriented to the partner through music. The major idea is that, in order to be 'transactive', the interaction must bring the discourse forward, either through music or talk, or both. The advantage of Miell and MacDonald's methodological approach is that it focuses on the broader communicative intention rather than just on the means of interaction (which should include, at any rate, nonverbal components, too). As for the relative amount of verbal and musical interaction in children's creative collaboration on composition tasks, Morgan (1998) observed that the extent to which 9-10-year-old children interacted through music or talk was dependent on the nature of the task. Her study found that, when children were engaged in a task involving direct representation of external events, group productivity was related to both verbal and musical interaction, whereas formal and emotion-based tasks tended to rely primarily on musical interaction.

In conclusion, beyond the use of either verbal or musical statements (or nonverbal means of communication), what seems significant in the ways children interact in the group is how they build a 'shared understanding' of the joint activity (Rogoff, 1990). Gathering evidence from previous research with primary school children, Wiggins (1999/2000) defines the characteristics of shared understanding in collaborative composition in terms of the children's ability to construct a common vision of the problem at hand and of the strategies necessary to solve it, based on their culturally situated knowledge of music and on their personal interpretation of possible solutions to the task. Using the jargon of improvisational theatre (Sawyer, 1999, 2003b), what I am globally trying to capture in

these interactions is the "yes, and" attitude of improvisation, where performers accept offers and build on them, so as to develop the conversation further. So, the questions that guide my observation are: When, how, and to what extent are these children interacting – verbally, nonverbally, or musically – in such a way that they are mutually reinforcing and bringing forward each other's action? How do they co-construct a shared representation of what they are doing together?

6.4 Dimensions of creative group work

In this section I outline the main dimensions which influence creative group work in music. I prefer to talk here about 'dimensions', 'component aspects', or 'contextual aspects' rather than 'factors', as I did in chapter 5, because the term factors implies a 'social influence' approach and a quantitative methodology (Rogoff, 1998 – see 5.3). Conversely, as this is an observational and exploratory qualitative study, my intent is here to consider the characteristics of the group, of the task and of the creative process, the role of the teacher, and issues about assessment as *qualitative dimensions* which support or hinder children's collaborative creative endeavour. The aim is to devise a framework for the analysis of children's creative group work in music, to be applied in the examination and interpretation of a particular, situated, and unique group of children.

6.4.1 Characteristics of the group

As a first step, the features of the children involved in the group are to be taken into account. In a systemic perspective, while looking at the interactions I may consider the individual children – each with their own original personality, background experiences and sociocultural worlds, learning styles, collaborative skills, and musical and creative skills – or specific dyads or small groups – which can be formed as temporary subgroups around single activities – or the whole group as a community of learners with its own distinct and evolving identity (including the teacher, I should add, who is part and parcel of the system).

The relevance of knowledge and expertise as preconditions for creativity is unanimously acknowledged in general research on creativity and in educational research. In relation to 5-7-year-old children, whose knowledge-base is limited in comparison to older children of later primary or secondary school, the issue is in what ways they can be creative based on a restricted set of skills (in a deficit-view perspective) or, phrased more positively, how their creative potential can be meaningfully expressed at *that* level of expertise. One of

the main aspects of originality of this research study is the age-range considered, which is rather 'young' and relatively unexplored in the literature on collaborative creativity in music. These abilities are in this phase still germinating and therefore not as easily detectable both in pedagogical and research terms.

Another aspect to look at is that of power relationships within the group. Though not exclusively, this is also related to knowledge: the more expert child can exert control and assume leadership in the group because they can better handle the conceptual tools and artefacts that are necessary for the activity (Espeland, 2003, 2006; Baker-Sennet, *et al.*, 1992). Thus, a more comprehensive view of collaborative creativity has to take into account both the cognitive and the relational and group-dynamical aspects in group work. As a notable example, Miell and MacDonald's (2000) study demonstrated that preexisting relationships of friendship can significantly influence the process and outcome of joint creative action. Typically, friends already share common knowledge and a way of working together which enable them to more easily coordinate ideas, distribute roles, and build a shared understanding of the activity.

6.4.2 Task design in creative activities

Different terms can be used to define the 'creative task', i.e the starting point which sets the creative process in motion: initiating spark, impulse, stimulus, guiding idea, rule, or others, depending on the nature and intention of the 'task'. This is usually provided by the teacher, but it may also derive in various ways from the children themselves. The design of the task is central in giving the activity a direction, because it provides a motive and a structured context for the generation of ideas. In relation to adult-initiated but child-extended creative play in early childhood education, Craft, McConnon, and Matthews (2012) use the term 'provocation', referring to an open format framed by the adult – in terms of materials or events – which is set up as an initial stimulus for children to explore multiple possibilities and develop their own narratives. Beegle (2010) and Hickey (2012) also talk about 'prompts' that serve as referents for children's planned improvisations, whereby the features of the prompt – be it a poem, a painting, a piece of music, an emotional state, or a meaningful life event – inspire different kinds of responses in children's improvisatory activity. Burnard (1995) classifies compositional tasks as 'prescription tasks' – implying a high control on the decision making – 'choice tasks' – offering a range of compositional options to choose from – or 'freedom tasks' – leaving students increased responsibility and autonomy in the process. Indeed, a fundamental property of the creative assignment is the balance of structure and freedom (or constraint and freedom) that it prescribes, which I define as the *degree of openness* of the task.

This is usually represented as a continuum between strictly delineated ('convergent') tasks versus open-ended, ill-structured, and complex tasks. Hickey (2012) suggests that it is more appropriate for beginners to work on assignments with fewer externally given parameters so that they can establish their own boundaries independently and work with rules that are generated from within the creative activity itself rather than from the outside. A further differentiation regards improvisation and composition tasks. These may be thought of as distributed along a continuum ranging from the production of a musical organism which structurally retains some character of openness to the closure of a thoroughly planned and scripted outcome. With regard to improvisation, Hickey (2009) advocates a wider use of free improvisation tasks in school music, especially as a starting point from which to expand towards more structured improvisatory assignments. This position, in her view, is in contrast to more traditional pedagogies, including Orff and Gordon, which tend to move in a bottom-up fashion from simple to complex, from single elements to the whole, and from structured to free.

Thus, the major point in carefully guiding children's creativity is to design 'enabling parameters' (Wiggins, 1999) which are neither too restrictive and therefore inhibiting nor too open and consequently disorienting and disabling. In Wiggins' view, given the holistic character of the creative processes that she observed in children, it is better to select one broad parameter as an overarching idea – e.g. style, form, textural organisation, metre, or affective characteristics – and to allow children to freely organise the remaining elements. She critically remarks that she has "never observed [children] beginning with an isolated rhythm pattern or series of pitches unless instructed to do so by a teacher" (p.32) and challenges the frequent practice of 'school-like creativity' of designing simplistic and excessively reductive assignments based on the ungrounded assumption that simple rules will help children be more creative. There is an issue here – which remains open in planning for children's creative processes – that is about authenticity, ownership and expression of identity in creative work (also raised by Glover, 2000) versus a conception of creativity as mere technique and learning of the mechanics of idea-generation. Children's needs and propensities are very different and they may experience the same kind of task in different ways (Burnard, 1995). It seems therefore essential to provide for children a rich variety of creative opportunities, adjusting the level of task challenge to their skills, choosing group tasks that promote positive interdependence both in relation to goals and resources (Johnson & Johnson, 1999), and above all letting children choose for themselves and self-regulate their own creative learning process.

6.4.3 Group creative processes in music

In a previous chapter (3.2.3) I have presented models of the creative process both in general creativity and in musical creativity which are in the first place related to the creative phases of work of a single creator, though they are to some extent applicable to group work, too. In this section I continue from that point and present some further models, which highlight the specific features of creative processes in groups and in music.

6.4.3.1 Models of the group creative process in music

A first model that I find relevant for this study is Sawyer's (2003b, 2008) model of group creativity, which analyses the dynamics of interaction processes, musical or verbal, in group improvisation in jazz and theatre (interestingly, he had already used this model in the analysis of preschool children's improvisations in pretend play).

I briefly summarise and describe the phases of the group process as follows (see Figure 10):

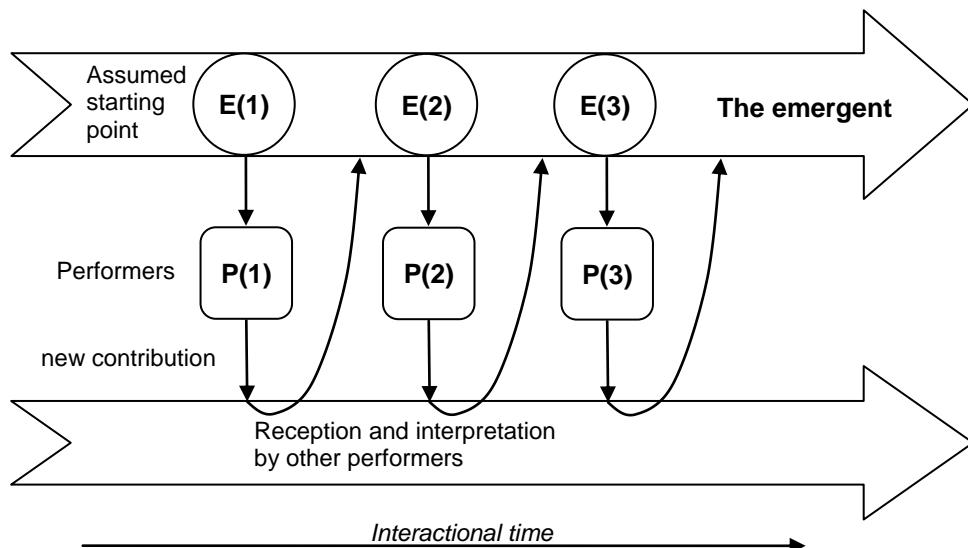


Figure 10. Model of group creativity (simplified from Sawyer, 2003)

- The situation which is assumed as the starting point of the interaction (E1) imposes constraints and opens up possibilities for the first improviser to act. Sawyer terms 'emergent' this independent constraining force which results from the flow of previous events or interactions.
- Based on these constraints, the performer of the first act (P1) introduces a new creative idea.

- In response to the first player's contribution, the other group members evaluate the act by rejecting it or by accepting it and building on it. This kind of decision is collective in nature and determines the extent to which the idea is integrated into the next emergent state of the interaction (E2).
- Likewise, this new emergent (E2) poses constraints on what the subsequent players can do (P2). Thus, in an ongoing and cyclical process, new actions are originated by single players, are interpreted and selected by other members, to become constituent part of the emergent and creative action of the whole group (E3).

The nature of the emergent is thus very dynamic, in that it changes at every moment of the group interaction. Further, at different points in time the emergent may offer to the next performer different degrees of constraint, in that it may narrow the range of possible contributions, or instead it may open many potential options for further creative action. Two competing tendencies are at work in such group creative interactions, namely inventiveness and coherence. On the one hand, in order for the group to be creative each performer should exert freedom and contribute something new and unprecedented; however, if the group is to maintain intersubjectivity, performers need to produce ideas which are congruent with the collectively determined emergent and which remain within or close to these structures, otherwise the collaborative action of the group may lack cohesion and eventually be disrupted. This model is designed to account for highly unstructured forms of improvisational collaboration. However, given the substantial continuity between improvisation and composition as productive processes, it can also be applied to more structured forms of group improvisation or to exploratory and improvisational phases within larger group composition processes.

In a study about fifth-grade children's verbal, nonverbal, and musical interactions during planning and performance, Beegle (2010) presents a non sequential four-part model of the process of 'planned improvisation' (see Figure 11). 'Planning improvisation' means jointly devising a short piece based on a prompt in which the major traits are fixed in advance, but which can be performed in slightly different ways each time and maintains an improvisational character. It was found that, regardless of the prompt, the groups of children went through a similar process and moved in and out of four main phases of work. These included *exploration* (aiming to generate and select ideas), *role assignment* (defining the structure of the music in relation to the task and distributing musical functions), *run-throughs* (trying out and consolidating ideas), and *discussion/negotiation* (evaluating and refining ideas).

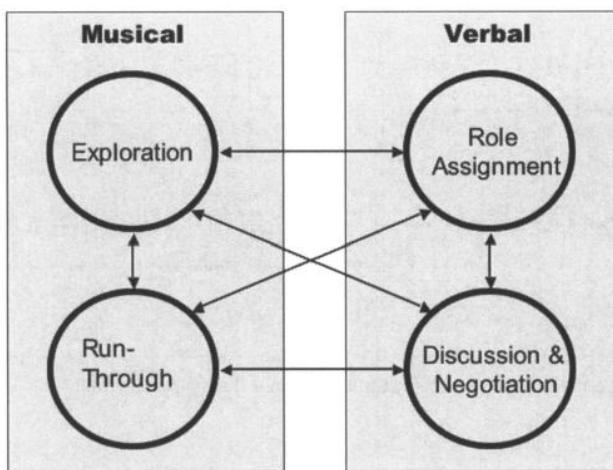


Figure 11. Nonsequential four-part process of planning improvisation (Beegle, 2010)

A model of the group composing process of lower secondary school students was offered by Fautley (2005 – see Figure 12 below), elaborating on Amabile's (1996) and Webster's (2002) models and adapting them to the group context. The process is articulated in a series of stages and phases, partly recursive, through which a piece of music is created by the group. In the pre-generative stage a stimulus is provided, and relevant musical knowledge and repertoires of composing techniques are activated, in terms of both cognitive and sensory-motor activity. In the proper generative stage of the group work students first discuss and clarify the nature of the task and the strategies to tackle it, and then explore, generate, select, and organise ideas, assembling them into a structure. One or more phases of 'work-in-progress performance' can occur in form of a complete run-through of the piece or as a rehearsal of just a section of it. It may take place informally within the small group or it can be more formally organised by the teacher as a way for the group to evaluate what is being done. In the post-generative stage, possibly repeated cycles of phases of revision, transformation and modification, and extension and development aim to refine and eventually establish the piece, until the group is ready for the final performance before the whole classroom. The final presentation can be regarded as the end-point of the creative process and the opportunity for the students to 'officially' perform their piece. Fautley's (2005) model has proved effective as a heuristic tool for classroom teachers – and in this sense is also relevant for this study – as it can assist the teacher in identifying and labelling the different phases of students' joint work.

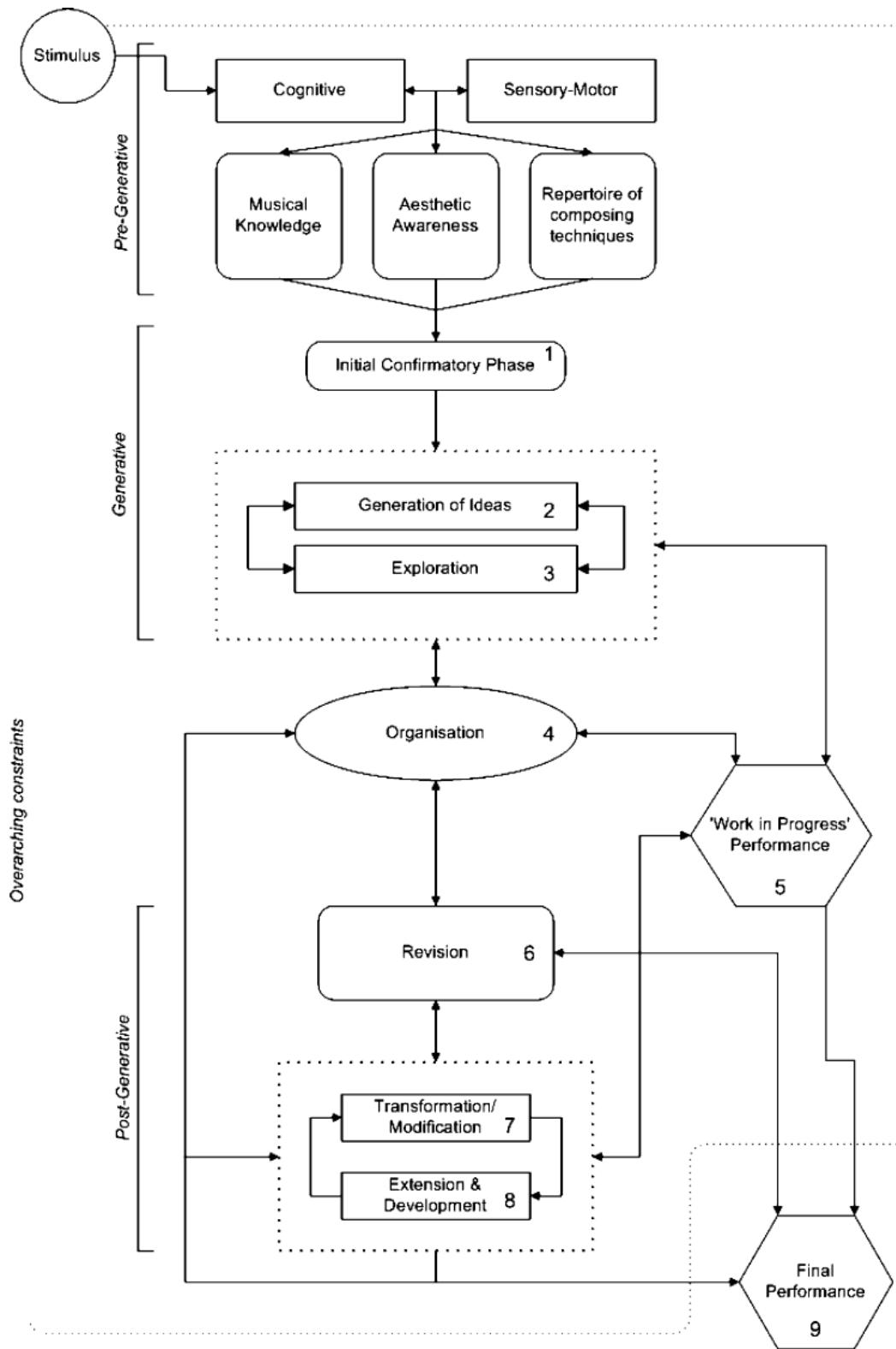


Figure 12. Model of the group composing process (Fautley, 2005)

Fautley's (2005) model appears to be more oriented to identify and analyse cognition and decision-making processes in the different phases of compositional group work. In a different perspective, Espeland's (2003, 2006) model was developed within a study which involved 9-11-year-old children in Norwegian schools and aimed to identify the elements

and the structure of compositional processes in small groups and the relationships between the musical piece being created and the process and context of its generation (see Figure 13). The unit of analysis, in accordance with a sociocultural approach, is children's mediated action as situated in a social, cultural, institutional, and historical context in which agents interact with one another and with cultural tools. Basic components of the process are *compositional actions* (i.e. task-related activity: invention; planning, structuring and leadership; appropriation, evaluation and revision) and *personal actions* (self- and group-related activity, focusing more on personal motives and intentions, interpersonal relationships, power relationships, and forms of non-task-related behaviour). A third basic component in the model is *cultural tools*, i.e. the musical instruments (artefacts) along with music-related language and conceptual tools (symbols) as well as the chosen vocal, instrumental, verbal, and kinaesthetic means of expression and communication (signs, here defined as 'modes of articulation'). Relevant contextual elements which represent an influencing background are the physical and organisational setting, the teacher input, the pupils' perceptions of the teacher's actions, and pupils' personal background and dispositions. All these components are best conceived of as in a dynamic relational and circular relationship. Espeland argues that an analysis confined solely to the composers' cognitive processes or to the musical and aesthetic aspects of the creative product would not be relevant to compositional practice in schools, and that far more significant is to look at the very process of the group composition and how children's mediated actions interrelate with the context.

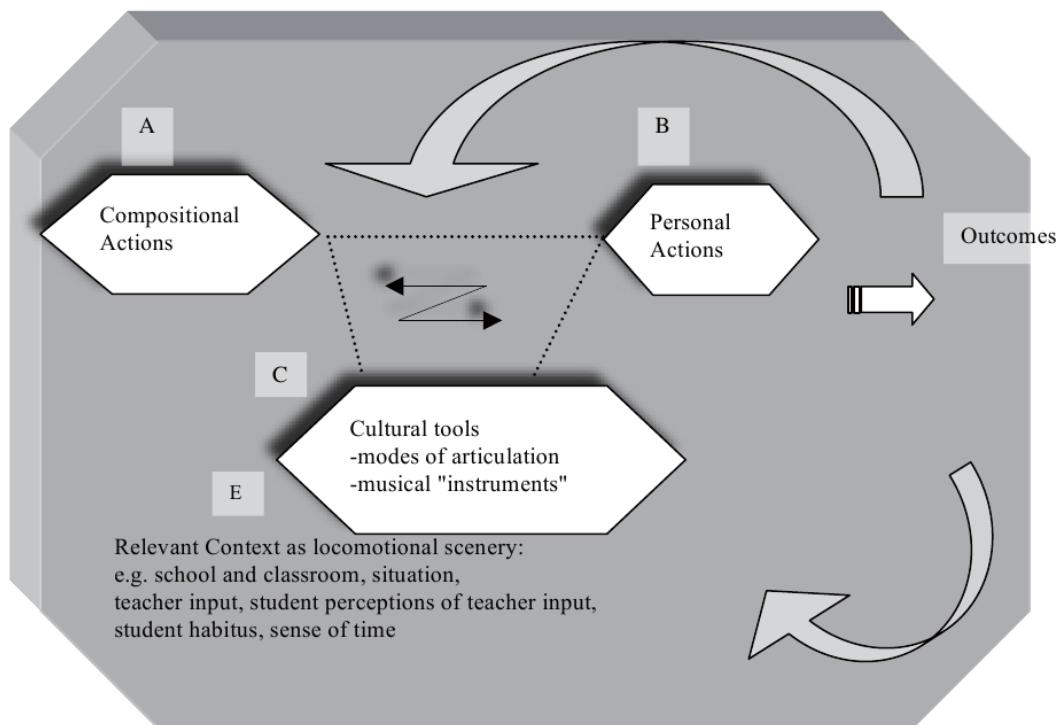


Figure 13. Model for understanding compositional processes in small groups
(Espeland, 2003, 2006)

Wiggins' (2003) frame for understanding children's compositional processes (similar to the 2007 model mentioned in 3.2.3.2 – see Figure 3) shares with Espeland's model the strong sociocultural orientation. The focus of the analysis, besides elements examined previously, is on how children collectively build a common vision of the meaning and intent of their work and develop a shared understanding of the compositional problem, the curriculum, and the cultural worlds they draw on as a source for their creativity. The importance of a rich, safe, and supportive environment, of sufficient uninterrupted time, and of a rich social interaction within the group are also stressed. The significance of this way of looking at children's compositional processes lies in the fact that it recognises the contextuality and complexity of children's creative group work and the primary role of the meanings and perspectives that they themselves bring to the situation.

6.4.3.2 Different timescales in processes of creative interaction

In a systemic perspective, processes of group creative interaction can be studied at multiple timescales, ranging from the micro-level of single social-neuro-cognitive events in the mind/brain (which is not a focus in this study) to emergent phases in short micro-interactions within an activity (as in Sawyer's model), up to longer sequences of organised and goal-directed interactions in working on a task that can extend over a period from less than an hour to some weeks (as detailed in Beegle's, Fautley's, Espeland's, and Wiggins' models). A wider time frame for considering creative interactions and the development of collaborative creativity concerns the macro-level of psychological, social, and cultural processes that unfold in communities of learners over longer periods of time, e.g. a whole-year project such as the one examined in this study. Here the phenomena that the creative interactions generate can be interpreted in terms of 'transformation of participation' (Rogoff, 2003). Over time children can build a group culture of creative collaboration – in terms of strategies, norms, routines, viewpoints, conceptual tools, language and discourse, mindsets, and values – not only 'acquiring' information and skills and being encultured, but also co-constructing and creating their own shared musical worlds. Over time they can develop their musical identities both as individuals and as a group.

6.4.4 Role of the teacher

6.4.4.1 Teaching creatively and teaching for creativity

In this section I add some considerations to those made in 5.2.6, which regard the teacher's role in the enhancement of effective collaborative creative processes.

An important distinction introduced by the NACCCE report (1999) is the one between *teaching creatively* and *teaching for creativity*. 'Teaching creatively' consists in devising materials and imaginative approaches that result in children's motivation, interest, attention, and effective learning and, actually, does not necessarily imply that children themselves are being creative. 'Teaching for creativity', instead, goes beyond that by focussing on the learners' activity. It is realised by *encouraging* children's positive self-image and potential as creative learners, assisting children in *identifying* their creative inclinations, and *fostering* children's active and creative involvement. In order to acknowledge the central role of the learner as a knowledgeable expert of their own creative learning processes, Jeffrey and Craft (2004) argue that a redefinition of the distinction might be of help, in terms of the teacher's *creative teaching* on the one hand and the learner's *creative learning* on the other.

With regard to *teaching creatively*, Sawyer (2004a, 2004b) makes the case for an improvisational approach to teaching, where scripted activities and curricular contents are balanced with the flexible yet 'disciplined' co-construction with students of an improvised dialogue which is collaborative and emergent in nature. In particular when 'orchestrating' children's creative collaboration, the main issue for the teacher is how to combine design and improvisation (Hämäläinen & Vähäsantanen, 2011), i.e. how to pre-structure the learning process and concurrently maintain a space of freedom for adjusting it in real time according to the flow of interaction in the classroom. In the field of music teacher education, Abramo and Reynolds (2014) distinguish creative musicianship from creative pedagogy and argue that creative music pedagogues are responsive, flexible, and improvisatory while meeting the needs of different learning circumstances; have the ability to experiment with possibilities, deal with ambiguous and dynamic learning situations, and avoid cognitive closure while remaining open to multiple perspectives; are able to associate disparate and seemingly incongruent ideas in novel ways by using metaphorical and analogical thinking; and, finally, they can embrace and integrate multiple identities – professional, social, and personal – in order to connect with students and devise innovative learning pathways.

In relation to *teaching for creativity*, the pedagogical approaches of creative practitioners (Denmead, 2011) have been described as encouraging in learners basic dispositions or ways of being-in-the-world such as *not-knowing*, *open-endedness*, *playing like a child*, and *becoming*, i.e. attitudes of acceptance of uncertainty, freedom from fixed expectations, playfulness, uninhibitedness, and being-in-flux while being involved in creative processes. In the line of research about 'possibility thinking' as the core of

creative learning in early childhood and primary contexts (Craft, 2002; Cremin, Burnard, & Craft, 2006), the model of creative pedagogy which is proposed focuses on question-posing and question-responding (Chappell, Craft, Burnard, & Cremin, 2008), play, innovation, risk-taking, being imaginative, self-determination, and intentionality. Nurturing possibility thinking, especially in relation to arts-based education, primarily relies on three main characteristics of a pedagogy for creativity, namely: supporting co-constructive processes with children and among children which emphasise real-life experiences and personal relevance; placing high value on children's agency, ownership, and control over their learning; and holding high expectations with respect to children's ability and motivation to learn how to engage creatively with materials and ideas (Craft, Cremin, Hay, & Clack, 2014). Thus, the teacher serves here as a catalyst for creativity, facilitating, activating, initiating, stimulating, accelerating, and bringing about transformative learning processes and the emergence of creative ideas and behaviours.

Finally, with regard to fostering creativity and collaborative learning, Hämäläinen and Vähäsantanen (2011) highlight the important role of the teacher in providing guidance for students as to how to interact productively, setting appropriate task structures which involve a real need for collaboration within the group, finding the right balance between the children's domain-related and creativity-related skills and the challenges entailed in the task, giving sufficient instructional support and offering relevant strategies particularly in relation to generating and working on ideas, and establishing an overall emotional atmosphere which is conducive to a critical yet constructive engagement within the group creative activity.

6.4.4.2 Tensions in creative pedagogies

Due to the radical openness of creative processes for which by definition there is no clear-cut and convergent solution, creative work in education implies circumstances in which there is no right or single way to solve a pedagogical problem, and a challenging decision must be taken between contrasting principles of action. In educational literature on creativity (Craft, 2003b; Chappell, 2005, 2007a, 2007b) various tensions and dilemmas have been identified. In the following I concentrate on the tensions which I regard as most relevant in relation to this study.

Freedom vs Structure

This is the fundamental tension in all creative activity. Creativity consists of "innovation within constraints" (Sawyer, 2008, p.54), where some shared knowledge, rules, and conventions give the boundaries and concurrently the enabling stimuli for the production

of ideas. With regard to the teacher's choices, the basic questions are 'how open/constrained is at each point in time the process of inventing music? and 'how open/constrained is the resulting product?' In relation to dance education, but applicable to music as well, Chappell (2005, 2007b) terms "spectrum of task structures" (p.51) the continuum of teacher's choices extending from the purposeful play of largely free tasks, to the scaffolding and tight apprenticeship of 'narrower' tasks. This tension can also be interpreted as the degree of control that is imposed either by the teacher or by the children on the creative process (see below).

Process vs Product

The contrasting positions are here on the one hand creative experience as a dynamic and exploratory process – i.e. a focus on the activity of composing – and on the other the pressure to accomplish and perform products which are socially acknowledged as valuable – which implies a focus on the creative outcome as the main goal of the process (Winters, 2012). A balance must be found or a choice made between taking the risk of keeping the process vital, evolving, and improvisational and, alternatively, rehearsing, refining and polishing the performance to meet the expectations of the audience to whom the resulting composition is meant to be performed (Chappell, 2007b). From the learners' point of view, this tension concerns creativity as experience vs creativity as product, i.e. being engaged creatively vs achieving aesthetic quality (or conformity with the given task). In a wider educational perspective, the tension process/product ultimately leads to the opposition between creativity and performativity agendas (Craft, 2003b).

Being creative vs Acquiring knowledge and expertise

This tension refers to the knowledge-base issue, i.e. to the largely held opinion that in order to be creative a person needs some kind of expertise to operate with. Indeed, children need in some way to internalise some music-relevant contents, motor skills, or working procedures before tackling a creative task, otherwise the resulting music might have limited substance (Koutsoupidou, 2008; Winters, 2012). The critical point is the extent to and the ways in which children can be 'prepared' by adequate training and vocabulary building as a precondition for the creative communication of their own ideas, and how these different learning trajectories can proceed parallel to and intertwining with each other. This distinction between instruction/acquisition and creative externalisation relates to different conceptualisations of creativity (Chappell, 2007b) either as using techniques and building domain knowledge (which broadly has to do with curriculum questions, see Craft 2003b), or as allowing free expression, unfolding children's latent creative potential and unlocking what 'is already there'. Chappell (2007b) defines this tension as 'personal/collective voice vs craft/compositional knowledge', whereby the

source of creative ideas is either 'inside out', as expression of the self from within the person, or 'outside in', as enculturation and creative appropriation of existing sociocultural practices.

Children's agency vs Teacher's guidance

This is a fundamental tension in creative work in education. Koutsoupidou (2008) distinguishes between two opposing teaching styles, the didactic/teacher-led one and the creative/child-centred one, as having differing objectives and outcomes. In relation to primary school children he claims that age (in terms of maturation and previous experience) is an important factor in determining the level of guidance that the teacher has to provide to the group. In his view, younger children who have not yet developed a repertoire of ideas and skills to improvise and compose will probably need some guidelines, which might lead to a more directive approach. This would sound like 'the less experienced they are, the more guidance they need'. In accordance with the early childhood pedagogical models presented above (e.g. Wood, 2010 – see 4.3.1), however, I would argue that it is possible to balance in different and flexible ways the degree of guidance on part of the teacher, irrespective of the age and expertise of the group. Indeed, the contrasting poles between which the teacher's choices may be positioned according to the circumstances can be described as follows: leading the group vs following children's contributions, directing the activity vs fostering autonomy, having control vs sharing responsibility (this also has to do with classroom management, authority, and power relations), and scaffolding vs fading (as in the cognitive apprenticeship approach, see Collins & Kapur, 2014). The teacher can proactively support, guide, give indications, even play along with the children – in order to scaffold from inside the music making process – or rather they can step back, just watch, and let children self-direct their own creative process. Chappell (2007b) defines this tension in terms of varying degrees of proximity and intervention, ranging from close proactivity to distanced reactivity. Whether the teacher's guidance really facilitates children's creative involvement depends on how it is contextualised in the learning situation; in itself it is neither 'good' nor 'bad'. The fundamental principle underpinning the teacher's action is the centrality of the learner. Children do not need to be guided in order to be (just) encultured into practices and to enact the adults' plans for them. They need the opportunity to act back on their learning contexts and to create their own contexts for learning and development. Asking them to be creative means wanting them as powerful agents (Wood & Attfield, 2005).

Individual learning vs Group learning

A last tension regards the focus on the individual vs on the group, and concerns the extent to which learning should take place as an individual, small group, or whole group activity, the assessment of creative learning, and in an 'inclusive' perspective the differentiation and personalisation of learning opportunities for children with different abilities. Ideally, effective creative group activities should allow all children to participate each at their own pace, accommodating different learning styles and developmental levels (Sawyer, 2006a). Also relevant seems to be the role of conflict in group creativity – when appropriately dealt with – as a potentially positive stimulus for creative learning even for primary age children (Chappell, 2007a). As a last remark, an interesting observation of Sawyer (2006b) is that many educators, in a restrictive application of sociocultural theory, mistakenly believe that it is the teacher that scaffolds the child. Yet, one should also take into account the role of the collective practice itself in scaffolding the individual member's learning. The teacher's task is to favour these interactive, reciprocally supportive behaviours amongst children and, as an attitude, to trust the self-organisational skills of the group as such.

Concluding, these tensions constitute 'pedagogical spectra' (Chappell, 2005, 2007b) along which the teacher has to situate their decisions, not based on the application of a set of established rules as in a technical rationality approach, but relying on critically questioning their own practice by reflecting-in-action and reflecting-on-action (Schön, 1983, 1987). In this sense teaching for collaborative creativity is a form of reflective practice in which the teacher has to act flexibly, sensitively and responsively, according to the unique circumstances in which each creative act takes place. It requires theoretical knowledge and continuing professional development, pedagogic expertise, a sufficiently wide repertoire of teaching routines, and the skills to evaluate where and when to appropriately interject the right strategy in relation to the pedagogical goals and the improvisational flow of the learning process (Hämäläinen & Vähäsantanen, 2011).

6.4.5 Assessment and evaluation of creative work in music

In addition to what has already been said about assessment of play (4.3.2) and group work (5.2.5) some further points need to be raised specifically in relation to the assessment of creative work in music. In my role as teacher in this research study, I am interested in a variety of issues related to assessment, because this is an integral part of the teaching/learning process (see as a reference Glover & Young, 1999; Hennessy, 1998a; Hickey, 2012). With regard to my role as researcher, however, the specific focus

that I have here is on how children creatively interact with one another in music. Thus, the attention is primarily on the assessment of the quality of children's creative activity and of the processes of interaction and collaboration among them (and with the teacher), as well as assessment of the teacher's actions as facilitator.

For the assessment of children's creative musical products based on tasks with precise guidelines, Hickey (1999, 2012) suggests the use of 'assessment rubrics' as lists of descriptors or criteria according to which pupils' works are to be evaluated. Assessment rubrics may be used as scoring tools for measuring the quality of children's achievements as well as a way to sensitise them to particular musical concepts or compositional techniques. This research project, however, employs less 'tight' tasks and more qualitative and conversational forms of assessment (Ross & Mitchell, 1993). However, the idea of defining and categorising, at least in loose terms, different levels of performance in relation to the given assignment may be of help for the teacher in identifying what 'could be expected' given the task at hand, though this is not necessarily what might actually emerge. On a different line, Mellor (1999), in relation to secondary school students' compositions, cautions that an objective assessment based on an 'expert' and technical view of the musical features of the piece may lose sight of the broadly personal value of the music, which is conversely what novice and non-expert teachers more intuitively feel as the most relevant point of assessment (and, in this, novices are probably more closely connected to children's authentic voice).

A range of literature on assessment in music stresses the importance of the teacher's feedback, talk and dialogue with children as a kind of formative assessment which is central in teaching for creativity. Different intervention strategies can be adopted with regard to pupils' creative group work: the teacher may sensitively choose not to intervene as this might be felt as intrusion, or instead elicit information from the group by asking transactive questions and engaging in dialogue with them (Fautley, 2004). Freed-Garrod (1999) gives a detailed account of the qualitative forms of evaluation used with a group of third-graders in a primary school, which included informal comments, oral critiquing, reflective discussions, and written evaluation forms of both one's own and the peer's work. Reese (2003) provides rich indications about possible teacher's responses to pupils' compositions. From the least to the most directive, these include: trying to grasp the overall character of the music and the composer's intention, acknowledging and verifying students' work, encouraging or motivating them, analysing and describing their work in order to build a shared understanding of it with the students, asking about the feedback that they wish to receive, facilitating reflection and supporting decision making,

pointing out critical issues, providing suggestions for possible choices, up to giving direct examples. Younker (2003) views teacher-directed feedback as a form of assessment and in particular stresses the strategical role of questions as tools for involving students in thinking about their works. She refers to 'Socratic questions' which are aimed to guide students in the process of exploring different solutions and evaluating the most effective ones, without actually telling them what to do and thus enabling them to maintain control over their choices.

Both Webster (2003, 2012) and Wiggins (2005) advocate the use of revision in compositional processes. Revision is here meant as a 'style of interaction' with children, which aims to value their voice as composers and at the same time to support them in the process of reviewing and refining their ideas. Without depriving children of the ownership of the process and the pleasure of self-discovery, in revision the teacher may challenge children's ideas or present alternatives, but will not impose his own ideas onto them. Major and Cottle (2010), too, found that the teacher's focused questioning is highly significant in engaging children as young as 6-7-years in effective evaluative and problem-solving discussions about their composing processes. In Vygotskyan terms, by being involved in a critical dialogue with the adult children practise higher-order thinking skills and meta-cognitive skills which help them reflect on their creative work. The findings of the study confirm that young children are able to self-evaluate their own and their peers' work, to discuss ideas with each other, and to negotiate solutions. Most importantly, the study points to affective engagement as a relevant condition for children to activate higher-order thinking processes. Indeed, when the children were fully involved, i.e. cognitively interested, motivated, and emotionally captured by the task, they were also more likely to demonstrate more analytical and critical thinking strategies.

6.4.6 Interrelatedness of the dimensions of creative group work

This section has given an overview of the dimensions and component aspects which influence children's creative collaborative work. As anticipated at the outset, these are not to be thought of as factors which can be isolated and observed independently of each other. Rather, a systemic perspective has to be adopted in considering them as interrelated characteristics of a complex situation which is open to different planes of analysis. These dimensions represent different foci for the examination of children's creative interactions in group music making.

Thus, out of the literature reviewed in this section an array of deepening questions related to RQ2 can be derived, which can guide the observation and analysis of the data:

- What are the personal and musical characteristics of individual children which are relevant for their interactive behaviours when engaged in creative activities? What are group-dynamic aspects which condition the ways they collaborate together?
- How do the features of the creative task and the sequences of tasks within the activities affect children's involvement in creative collaborative work?
- How can the different group creative processes as enacted in the classroom be conceptualised? How are they structured?
- What is the role of the teacher in supporting children's ability to interact with each other? Where and how do different pedagogical tensions in creative work become visible in the teacher's choices, and how are issues addressed? Importantly, how are these tensions perceived by children themselves?
- What is the role of assessment – primarily meant here as formative assessment, feedback, and dialogue with children – in facilitating creative work and the acquisition of a deeper awareness of their own potential as creative collaborators?
- How do all these component aspects concur and mutually condition each other in giving shape to the context in which children's creative interactions emerge?

6.5 Children's meanings

The third research question in this study concerns the 'meanings' that children attribute to their experience of creating music as a group. The focus is in this case on the learners themselves and how they live, feel, understand, and conceptualise their creative experience with others, and what is significant to them and why. Based on a vision of creative learning as implying relevance, control, ownership and innovation, Jeffrey's (2008) study about primary school children's experiences of creative pedagogies reported that the meaningfulness or value that children assigned to their engagement in creative activities was intimately connected with their developing identities as persons and learners. Thanks to the high quality of their relationship to creative learning situations (involving music, theatre, dance and other curricular subjects), they could experience learning as meaningful in terms of a *redefinition* of one's own self, i.e. stretching the boundaries of their identity, emotionally, physically or intellectually. They had a feeling of *achievement* in inventing novel objects and actions which defined in new ways their personal and social identities. Through collaborative work they experienced a sense of *belonging* and togetherness, and could appropriate new identities through a process of interaction, cooperation, and mutual recognition with others. Their identity as creative

learners was strengthened by their increased awareness of their status as autonomous reflective agents who built up knowledge about how they were learning, what strategies and techniques they were using, and how they could analyse and evaluate their own learning processes. Thus, 'meaning' is strongly to do with 'identity' and with an experience of *becoming*. Meaningful is something which is to do with 'me'.

With regard to children's music making the question is how to let this identity and voice emerge (Stauffer, 2003), both as characteristic musical gestures or structures and as expression, meaning and intentionality conveyed through the music. Basically, "individuals create what is meaningful to them on their own terms" (p.95), drawing from the multidimensional web of cultural, social and experiential influences which contribute to build their identity. Children's creative music making reflects the circumstances of their lives, their interests, motivations, ideas, and affective states. Their works are "significant and signifying to them" (p.106) so that, beyond just listening to the music itself, it is essential to try and understand what they mean through it, or else we may get to misguided conclusions or wrong interpretations. This leads back to the necessity of an attitude as anthropologist or ethnomusicologist in the examination of children's creations, rather than as musicologist – music broadly as culture (and as meaningful lived-experience) rather than just as object (Campbell, 2010; Merriam, 1964; Small, 1998 – see 2.4.1).

This kind of perspective calls for a phenomenological framework and an ethnographic approach to inquiry (more about this in the methodology chapter). In music education research on children's creativity, studies adopting such a theoretical stance are scarce. In a seminal study on 12-year-olds' creative music making, Burnard (1999, 2000a, 2000b) used image-based interview strategies, such as talk-and-draw techniques and critical incident charts combined with naturalistic observation and examination of artefacts, in order to elicit the meanings that children ascribed to their subjective experience of improvisation and composition in terms of the phenomenological categories of time, space, body, and relations. Faulkner's (2003) phenomenological study looked at 11-15-year-old pupils' perceptions of processes, products, meaning and value of group composing in the classroom. Particularly relevant with regard to this study, he also considered the significance that social context and social agency had for pupils' experience of group composition. In the pupils' views, making up music with others was more pleasurable and more effective than composing individually, thanks to the greater availability of a flow of musical ideas and the sense of joint ownership and shared social identity which working as a group can provide. Even where compositional ideas were

started by single individuals either in the classroom or also at home, the function of the group was to develop them in a more productive way, sharing, refining and validating them in the collective process. This, in turn, fed back into individual members' knowledge and understanding of musical composition. Most importantly, the findings of the study show that

the value and meaning of their compositions resides not just in the work itself and in the interplay of its component parts, but at least equally as much, in the social context in which the music is formed, experienced and celebrated.
(p.110)

Thus, beyond valuing the aesthetic qualities of the musical objects they produced, it was the very social experience of the group compositional process and the collective act of musical agency – who they made it with, how they made it together, who they played it for – which was 'meaningful' to these children. With a similar methodological approach, Kanellopoulos' (1999) study examined 8-year-olds' musical improvisations and the ensuing reflective dialogues, attempting to identify abstract principles that underpin children's understanding of spontaneous music making. Themes that emerged out of the interpretation of the data were, firstly, the 'objectification' of the process of creation of an 'improvised piece' as a distinct musical entity and at the same time as a social experience; secondly, the 'thoughtfulness' implied in children's deliberate involvement in improvisational music making, which was never felt as random or arbitrary, though open to aspects of chance, but was always imbued with a sense of conscious organisation of the musical action; and thirdly, the 'shared intentionality' which characterised children's musical interactions within their joint playing and the relationship of mutual attention and listening between player(s) and audience in the production and reception of the improvisations.

Listening to children's voices may yield fundamental information about the meanings they attribute to the music they produce as well as about their personal and social experience in the process. To this regard, relevant questions for this study are: What does the created music – the 'piece', if there is one – mean for them? What thoughts, images, musical or extramusical ideas are guiding their process of impro-composing music as a group? How do they conceptualise what they are doing? How do they experience it? How do they make sense of the overall activity? And, last but not least, how do they share these meanings with one another? Such aspects are still relatively unexplored in the literature on musical group creativity, especially in relation to young children.

A further way of interpreting 'meaning' is in terms of *wellbeing* (Burnard & Dragovic, 2014) and *empathy* (Rabinowitch, Cross, & Burnard, 2013) that are enhanced through collaborative interaction in music – as if to say, the meaningfulness of an activity (also)

rests on the positive socio-emotional state that it generates in learners. The significance of the activity for children is also manifested through the sense of *flow* (Csikszentmihalyi, 1996) that young children may experience in creative music activities (Custodero, 2002, 2005), particularly in collaborative settings where the context of the group scaffolds the emergent understanding of all children and heightens their musical and social experience (St. John, 2006).

6.6 Educational values of creative group work in music

Finally, I get to the educational values which are associated with creative group work activities (this theme is related to RQ4). I examine here what is the significance of the group experience for children's learning, what are the advantages and benefits of opening spaces for collaborative creative work, ultimately what is the rationale for allowing children to interact creatively in music. As a first consideration, creative group interactions imply a two-way relationship between creative and social development (Koutsoupidou, 2007, 2008). By creating music in small groups children can learn fundamental social skills in the same way that the interaction with others potentially enhances the individual's creative music learning. Indeed, having to invent music as a group they need to attune to each other, negotiate, discuss, compromise, decide, and build a shared understanding – both verbal and musical – around what they want to do. In turn, the group as such can generate a richer variety of ideas and members can learn from each other how they can be creative in music, mutually scaffolding their learning (Faulkner, 2003). In a Vygotskian perspective, collaboration in the group benefits the individual because it implies making musical ideas public through playing or talking (Wiggins, 1999/2000). In the dynamic interaction with the ideas of others children's independent and critical musical thinking is nurtured and their zone of proximal development expanded. The group as a community of learners can be a place – both physical, intellectual, and emotional – where children can feel safe and increase their self-confidence in generating novel ideas, taking risks in front of their peers, and developing their (social) identity as musicians and creators.

In a music educational landscape in which still too often learning is understood as acquisition/transmission rather than co-construction of knowledge and creativity is more stifled rather than encouraged, the key challenge for schools and educational institutions at all levels is to provide opportunities for collaborative knowledge building and for joint innovation in creative teams (Sawyer, 2006a). In this sense, I find that the theme of 'creative interactions' has a strong educational relevance, reaching well beyond the domain of music. Further, from a wider perspective, the cultural and ethical values which

creative group learning promotes are democracy, equity, freedom and responsibility (Allsup, 2003). Against a value-free conception of creativity, such an approach in music education can positively contribute to fostering children's creativity with 'wisdom' (Craft, 2006), that is nurturing children's moral development and cultivating an ethical attitude of embracing multiple perspectives, valuing uncertainty and relativism, respecting diversity, asking what ends their creativity serves, and considering the impact that their creative actions have on others and the wider environment, in an ethic of care. Ultimately, opening spaces for children to interact and collaborate in creating their own musical worlds can help them develop competences in "learning how to live together" (Cabedo-Mas & Diaz-Gómez, 2013, p.455).

Questions which can guide the analysis of children's learning processes are: Where are these values affirmed (or disconfirmed) and how? What behaviours (either of the children or of the teacher) embody these values? How is this 'value-driven' practice perceived from children (or from their parents or the wider educational context in which their learning is situated)?

6.7 Conclusion and Research questions

In this review of the literature I have drawn on sociocultural theories of learning as a social phenomenon (ch.2) and on theories about creativity and collaborative creativity (ch.3) as the two main themes around which this study is articulated. I have examined the characteristics of children's play (ch.4) and group work (ch.5) and finally I have focused on children's collaborative creative work in music. In the following, I restate the research questions and discuss the possible contribution that this study can offer to the existing body of knowledge about children's collaborative creativity in music.

The main research question of this exploratory study is:

How do 5-7-year-old children interact when they engage in collaborative creative music making?

Sub-questions which focus on more specific aspects related to creative interactions are:

1. What kinds of musical, verbal and non-verbal/bodily interactions take place among children when they create music together?
2. What component aspects of group work influence children's collaboration on creative tasks?
3. What meanings do children attribute to their experience of creating music as a group?
4. What is the value of these creative interactions for children's learning?

The first sub-question makes clear that the focus is at the same time on different kinds of interaction and different communication media – verbal, nonverbal, and musical. Given the age of the children (5-7), it seems important to keep the whole picture in mind, without dissecting the unity and multi-dimensionality of children's communication.

The second sub-question concentrates on possible component aspects or dimensions that have an impact on children's creative collaboration: setting, children's characteristics, kinds of tasks, and features of the teaching/learning process.

The third sub-question is particularly important from a sociocultural perspective because it introduces as an essential element of the research the investigation of the meanings that children themselves associate to their own creative experience with peers. The idea is that a systematic observation of how children are interacting creatively together should include 'listening to their voices', that is asking them about their lived experience and the value that this experience has for them.

The fourth sub-question examines the educational value that 'creative interactions' represent for children's learning and the ethical values that are affirmed through them. I broadly take this question as a stimulus to critically reflect on the significance of promoting collaborative creativity in (music) education.

The preceding review of the existing literature on this theme has pointed out some gaps which this study may contribute to fill, adding further knowledge to the field. As a first point, though there is some, admittedly not abundant, research on children's group creative music making (Beegle, 2010; Burnard, 1999; Espeland, 2007; Fautley, 2005; Kanellopoulos, 1999; St.John, 2006; and Wiggins, 1999/2000, to mention the main 'neighbour studies' which are an important reference for the present one), the particular target age that this study is addressing (5-7-year-old children) is still relatively unexplored – in particular, the connection to both play in early childhood and group work in primary school enriches the theoretical background of the study. Further, the fact that the researcher here is also the teacher implies an added perspective – 'from the inside' of the educational process, as it were – which is missing in other studies where the researcher is a more detached participant observer. The context of the study, too – a music school which is neither a primary school nor a playground, and represents a particular example of out-of-school yet 'organised' learning – seems to be new if compared to other studies. Finally, the methodological approach to the topic of the research (see next chapter) is a particular combination of practitioner-research and ethnographic methods within an

interpretive approach to enquiry which gives space to children's voices and perspectives, in line with more recent sociocultural research on children's learning.

Having articulated the topic of the study, i.e. the *what* of this research, and the relevant literature addressing it, in the next chapter I am going to illustrate the *how* of the enquiry, that is the methodology and methods chosen to answer the research question of 'exploring how children interact when they collaborate on creative music tasks'.

PART TWO: METHODOLOGY

7. METHODOLOGY

7.1 Introduction

This chapter describes the methodological decisions made in the present study, as well as some relevant considerations about issues of quality/validity and about ethical issues. Prior to this I briefly provide some information about the research setting and the participants, which is necessary for the reader to understand the context in which my methodological choices are situated.

7.2 Research context and participants

7.2.1 A group of 5-7-year-old children in a music school

The research study was conducted in a private music school in a middle-class area in the north of Rome – the CDM Centro Didattico Musicale, established in 1993 – which I have co-directed with two other colleagues since 1999. The Centre offers in its venue individual and group music lessons, and carries out music and movement projects in various nursery and primary schools. Since 2002 we also organise an Orff-Schulwerk teacher education course in collaboration with Rome University "Tor Vergata" (for more information about the CDM see Appendix H).

Thanks to my role in the school, I had the possibility to involve as participants some of the children who are taught there. My role in this study was that of teacher-researcher. My colleague Valentina Iadeluca was engaged as co-teacher. We had two groups which we worked with from October 2013 to June 2014: I initially started to observe the group "Musica & Gioco" [Music and Play], but instead of having 5-6-year-olds, as I would have hoped, the group was made up of 4-5-year-old children, who were too young to generate the kind of creative interactions I was interested in. Working with this group, my research focus should have shifted towards the 'precursors of creative interaction', thus substantially changing the topic of the enquiry. So, in agreement with my supervisors, in December I opted for the second group, "Rhythm-Voice-Movement", which included eight children between 5 and 7 years old. Two 5-year-old children were attending the last year of kindergarten, three 6-year-olds the first year of primary school, and three the second

year (in Italy children enter the primary school when they are 6). I purposively selected this group – and not an older one, which I might also have done – because of the scarcity of research on group musical creativity at this particular age, in which creative and collaborative/interactive skills are still 'germinating'.

The group met once a week on Wednesday afternoons for 60 minutes from the beginning of October 2013 to the beginning of June 2014. We had 30 sessions altogether, of which I video-recorded the sessions from n.12 to n.30, i.e. from January to May 2014. These 19 sessions constitute the main body of collected data in this study. The sessions took place in a 40m² room, sufficiently wide to allow for movement activities and equipped with an electric piano, a sound system, and a wide variety of pitched and unpitched percussion instruments, comprising xylophones, metallophones, glockenspiels, djembes, darbukkas, bongos, other drums, and smaller percussion instruments such as claves, maracas, triangles, bells, and others. An open, emergent curriculum included moving and dancing, singing, other vocal explorations, rhythmic games, learning sequence activities (use of rhythm and tonal patterns adapted from Edwin Gordon's Music Learning Theory – Gordon, 1990, 2012), and playing instruments. Given the focus of the study, the content of the sessions was mainly centred on improvising or composing at elementary levels in music or movement, both individually and in small groups. In the findings' chapter I provide more information about the research group (see chapter 8); for more detail about the musical activities see Appendix B. Although I video-recorded whole sessions, in the data analysis I focus on those activities in which creative actions and interactions were central, considering other activities (e.g. music instruction) only as a background which could be useful to understand the main subject of the inquiry.

A brief consideration of the role of my colleague and co-teacher Valentina. As a teacher and teacher educator, she was interested in the perspectives the study was bringing to our activity. By her very education and professional attitude, she is an independent, critical and open thinker. We have been working with children for years, together and on our own, and we share a pedagogical vision. This time we had a common project, i.e. an early childhood group with a distinct focus on creativity, where she was the teacher and I was both a teacher at her side and a researcher examining what happened in our classes. Her reflections and observations were important both during the teaching process, as we recursively went through the cycle of plan-act-observe-evaluate while conducting the group, and in the later stages of my analysis, where I needed some sort of 'member checking' as validation for my interpretations and, above all, a valuable interlocutor for my ongoing internal dialogue.

In the following sections of this chapter I briefly restate the research questions and, based on these, I describe the philosophical stance informing the study, the research design and methodology, the data collection and data analysis methods, the issues about quality and trustworthiness, and the ethical issues.

7.3 Research purpose and questions

The purpose of this study is to document the creative interactions of a group of 5-7-year-old children and to investigate and understand the phenomenon of children's creative music learning in groups, i.e. to identify relevant themes, patterns, or categories of meaning which may be useful to attain an in-depth interpretation of it. I present again the questions here and look at the challenges they pose in terms of the kind of methodological approach and methods required to answer them.

The main research question is:

How do 5-7-year-old children interact when they engage in collaborative creative music making?

Subsidiary questions are:

1. What kinds of musical, verbal and non-verbal/bodily interactions take place between children when they create music together?
2. What component aspects of group work influence children's collaboration on creative tasks?
3. What meanings do children attribute to their experience of creating music as a group?
4. What is the value of these creative interactions for children's learning?

Following Robson's (2002, p.59) classification of the purposes of enquiry, this study has a primarily *exploratory* character, in that the questions aim to understand a relatively under-researched phenomenon, to interpret what is happening in a specific situation, to seek new insights about it, and possibly to generate new ideas and questions for future research.

Subsidiary question 1 ('kinds') has a descriptive aim – I need to know what I am talking about when I say 'creative interactions' – but at the same time it raises the issue of categorisation, i.e. how it is possible to identify different kinds of 'creative interactions' according to different criteria. This question implies a close observation of the

phenomenon, possibly informed by previous categorisations of other researchers, but still open to identifying new ways of sorting, classifying, and labelling the diverse manifestations of this phenomenon as a starting point for an interpretation of it.

Subsidiary question 2 ('component aspects of group work') aims to identify different characteristics of the educational context, including their reciprocal influences, as they impact on the resulting quality of the interactions. These characteristics are not treated as 'factors' (i.e. as a closed set of rigorously defined features which have to be measured in a quantitative study), but as qualitative dimensions in a rather fluid, real-world situation where there seems to be a large variety of particular and unique aspects. Here, given the complexity of the overall picture, an interpretive attitude does seem most appropriate. Concurrently, the insider perspective of the teacher-researcher, in spite of the research methodological pitfalls that it implies, can be of considerable help in sensitively reading the situation.

Subsidiary question 3 ('meanings') focuses on the perceptions and conceptualisations of the children themselves. Given the age of the group this question, though opening a perspective on children's own experience of the phenomenon, raises numerous methodological difficulties about how to gather and interpret the data.

Finally, subsidiary question 4 ('value') calls for a systematic and critical analysis of the pros and cons of children's creative interactions in the teacher's view. The danger here, given the perhaps too wide focus of the question, is that of falling into 'general considerations' which may not be strictly rooted in the findings of the study. However, the very fact of posing this question in a sort of *so-what?* attitude seems highly relevant from an educational point of view, as it introduces an evaluative perspective on the role of creative collaborative learning in children's musical growth. Indeed, the study is not just about describing and analysing the *nature* of creative interactions, but also about identifying their *value* and *significance* for children's learning.

In the following, I present the theoretical and methodological approach that I have chosen for answering these questions. Here, as Cohen, Manion, and Morrison (2000, p. xvii) suggest, "*fitness for purpose* must be the guiding principle: different research paradigms are suitable for different research purposes and questions". The quality and consistency of a research study also depend on the interrelationships between the questions, the theoretical perspective, and the research design and methods.

7.4 Theoretical framework

At every point in our research – in our observing, our interpreting, our reporting, and everything else we do as researchers – we inject a host of assumptions. There are assumptions about human knowledge and assumptions about realities encountered in our human world. Such assumptions shape for us the meaning of research questions, the purposiveness of research methodologies, and the interpretability of research findings. Without unpacking these assumptions and clarifying them, no one (including ourselves!) can really divine what our research has been or what it is now saying. (Crotty, 1998, p.17).

The significance of making explicit the philosophical assumptions (as well as the ethical and political values) which frame the technical-methodological procedures of a study is more and more emphasised in educational research (Burnard, 2006a; Paul & Marfo, 2001; Pring, 2000). However, given the growing variety of genres of enquiry and particularly the complexity of the associated vocabularies – often not fully consistent among different authors – it can be problematic to define what particular stance to adopt and especially how to label it through a well-organised set of related concepts. In order to describe my own approach, therefore, I will derive my terminology from the literature on methods, conscious of the fact that certain key words may have been used differently by other authors or that different frameworks may have been proposed to illustrate the heterogeneous landscape of research approaches in education. My aim is here to make my own methodological position clear, trying to avoid simplistic labelling but also not drowning in overly subtle and unpractical distinctions.

This section presents a rationale for adopting an interpretivist-constructivist paradigm and a qualitative research methodology. Denzin and Lincoln (2005) claim that "the constructivist paradigm assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent co-create understandings), and a naturalistic (in the natural world) set of methodological procedures" (p.24).

The ontology of the present study – i.e. the kind of reality that is investigated here – is that of the creative musical interactions of a group of children who are learning as a group within a local, particular, and culturally situated context. A word of caution for the label 'relativist ontology' is offered by Denzin and Lincoln (as opposed to the critical realist ontology of postpositivist research): I use it here to indicate that the focus is on actions and practices that, even if objectively performed in the real world, assume different cultural, social, and personal meanings for the participants involved, so much so that they are not 'facts', but rather 'intentional actions' that have a distinct significance in the lived world of each member of the group (including the teacher-researcher and the co-

teacher). In sociocultural terms, the learning processes that constitute the object of this study are not viewed as the acquisition of musical skills and knowledge that can be quantified and measured by an external and neutral observer. Rather, following Rogoff (2003), learning is seen as transformation of children's participation in the sociocultural activity of a music educational community led by a teacher-researcher and a co-teacher. There is not one reality here, rather there are multiple realities and multiple perspectives to be understood and, in this sense, the ontology of the study is relativist.

The epistemology of the study, i.e. the nature and the extent of the knowledge generated by it, is subjectivist (as opposed to objectivist) in the sense that the questions raised will produce knowledge that is largely co-constructed by a practitioner-researcher and his colleague through the encounter with a group of children. This knowledge is context-based and not generalisable (though to some degree transferable to other contexts), and expressed and communicated through analytic frameworks and interpretive models rather than statistically significant results. The research questions aim to describe and understand, rather than explain, what happens when children interact creatively together and how they make sense of it. I want to look at something 'complete', which is children working in a real-world situation, experiencing and inventing music together through a range of different creative activities.

With regard to subquestion 3 (about children's meanings), a relevant theoretical perspective is offered by phenomenology. The point is that, in order to understand the nature of children's experience of creatively interacting with one another, I need "to look more closely at not only what children actually do but also what they have to say" (Burnard, 1999, p.59). Indeed, to the extent that I am looking at children's experiences and the meanings they ascribe to them, I am also adopting a phenomenological perspective.

According to van Manen (1990, p.9-13) hermeneutic phenomenological research is:

- *the study of lived experience and of the meanings associated to it*
- *the explication of phenomena as they present themselves to consciousness.*
'Phenomenon' refers to appearance, i.e. that which shows itself and appears in consciousness. There is no subject-object ontological dichotomy, rather an object is 'real' in that it is embedded in consciousness. What is of interest here is the "significant world" (p.9) of the human being

- *the study of essences*, the nature or essence of a human experience.
"Phenomenology is the systematic attempt to uncover and describe the structures, the internal meaning structures, of lived experience" (p.10)
- *the description of the experiential meanings we live* as we live them in our everyday existence, in our lifeworld
- *the human scientific study of phenomena*, whereby 'scientific' is broadly intended as systematic, explicit, self-critical, and intersubjective (i.e. dialogic).
- *the attentive practice of thoughtfulness*, in order to be better prepared "to act tactfully in situations, [...] to produce action sensitive knowledge" (p.21)
- *a search for what it means to be human* "as a man, a woman, a child, taking into account the sociocultural and the historical traditions that have given meaning to our ways of being in the world" (p.12)

Thus, the breadth of issues that the research questions raise and the theoretical perspective I am assuming call for a qualitative methodology and a naturalistic approach. In the following, I further discuss the reasons for this choice.

7.5 Methodological approach

7.5.1 A qualitative approach

In considering the merits of qualitative research in music education, Eisner (1996, p.11-13) claims that the world can be known in multiple ways, that all knowledge is a constructed form of experience, and that different forms of representation influence both what we are able to say and what we are able to see. Qualitative research has the capacity positively to expand the ways in which we can represent the educational world and, consequently, the questions we can ask about it. Indeed, it can produce "empathic forms of understanding" and give a privileged access to the meanings experienced by the participants involved, offer "a sense of particularity that makes people and situations palpable", and provide a kind of "productive ambiguity ... [in which] the meaning of the conclusions, in a significant sense, are developed in the context of interpretation, debate, deliberation, and dialogue". Qualitative research is holistic (Bresler & Stake, 2006, p.278) and case oriented, in that a specific and naturalistic context is studied in depth. More than making comparisons across large samples, it seeks to understand a single case by taking into account many different sources of qualitative data. "Researchers interested in the uniqueness of particular teaching or learning find value in qualitative studies because the design allows or demands extra attention to physical, temporal, historical, social, political, economic, and aesthetic contexts" (p.273). Given the sociocultural orientation of this

study, and the attention given in sociocultural research to different planes of analysis – individual, social, institutional, cultural (Rogoff, 2008) – such a holistic character and openness of the qualitative approach make it convenient for the questions I am posing.

A comparison between the main characteristics of quantitative and qualitative research can confirm that a qualitative approach is best suited for the kind of enquiry I am carrying out (see Table 9, elaborated from Suter, 2011):

Table 9. Key Differences Between Quantitative and Qualitative Approaches and why this study should adopt a qualitative approach
(adapted from Suter, 2011, p.347, and further elaborated)

Quantitative Research	Qualitative Research	<i>Why this should be a qualitative study</i>
Tests hypotheses built on theory	Generates understanding about complex, multiple realities	<i>Purpose: understanding the phenomenon of children's musical creativity, in particular their creative interactions and the meanings associated to their experiences</i>
Focuses on control to establish cause, permit prediction, or identify exact relationships	Focuses on interpreting and understanding a social construction of meaning in a natural setting	
Favours the laboratory (as in experimental research) or uses large sample sizes (as in surveys)	Favours fieldwork and studies in depth single cases or small groups	<i>Setting: a group of children in an educational context (a music school in Rome)</i>
Deals with statistical complexity	Deals with conceptual complexity	<i>The study is not looking at quantitative relationships, rather it explores how creativity can be conceptualised with regard to this particular situation.</i>
Uses designs (and research questions) that are fixed prior to data collection	Allows designs (and, to some extent, also research questions) to develop during the research process	<i>Emergent, flexible design: the research process is largely open, and both the ongoing review of literature and the practical conduct of the study contribute to progressively define the focus of the inquiry.</i>
Attends to precise measurements and objective data collection	Attends to accurate description of process via words, texts, etc., and observations	<i>Data collection: the research questions require rich information to be gathered from an array of different sources (musical processes and products, talk, nonverbal behaviour, documents, drawing, teachers' notes, etc.)</i>
Favours standardized tests and statistical instruments that measure constructs	Favours multiple sources of evidence (interviews, observations, and documents)	
Uses instruments with psychometric properties	Relies on researchers who have become skilled at observing, recording, and coding	<i>Researcher as instrument: I, as the teacher-researcher, am immersed in the process and am the main instrument of data collection and analysis</i>

(continued overleaf)

Quantitative Research	Qualitative Research	Why this should be a qualitative study
<i>(continued)</i>		
Conducts analysis after data collection	Conducts analysis along with data collection	<u>Recursive character of data analysis:</u> the analysis runs parallel to the data collection and may feed back into it, in that the teacher may be stimulated to try out new ideas, or the researcher might find some issues worth of further investigation. Also, the longitudinal character of this research allows for a mutual influence between data collection and analysis
Performs data analysis in a prescribed, standardized, linear fashion	Performs data analysis in a creative, iterative, nonlinear, holistic fashion. Draws meaning from multiple sources of complex data	
Conducts analysis that yields a significance level	Conducts analysis that seeks interpretation, insight and metaphor	<u>Findings:</u> based on the interpretation of the data, some form of conceptualisation, framework or model for understanding children's group musical creativity should eventually emerge out of the research process.
Generates a report that follows a standardized format	Generates a report of findings that includes expressive language and a personal voice	
Bases its quality on criteria of validity and reliability	Bases its quality on criteria of credibility, transferability, dependability, and confirmability	<u>Quality:</u> This will be a 'good' study if it offers a trustworthy representation and interpretation of these children's creativity and if it can be relevant and useful for others in similar circumstances.
Generalizes from a sample to the population	Applies ideas across contexts	

Having concluded that this study is rooted in the constructivist-interpretive paradigm and adopts a qualitative approach, in the following I examine which research design(s) are consistent with the research questions.

7.5.2 A combination of qualitative research designs

A research design is the overall strategy that guides the procedures to conduct a study. In practice, it is the detailed plan – and the rationale for it – about how data are going to be gathered and analysed. The type of design to opt for depends on the kind of problem that the research addresses, and is tightly connected to it. The research design is "the logic that links data to be collected (and the conclusions to be drawn) to the initial questions of the study" (Yin, 2009, p. 24), and therefore it has to be coherent with those questions. In this sense, each research study has to develop its own distinct design, consistently integrating the issues raised with the methods aimed to tackle them. Among the more common designs used by qualitative researchers in music education, Roulston (2006) mentions ethnography, case study, document analysis and historical study, life history and autobiographical method, autoethnography, narrative inquiry, participatory approaches, action research and teacher research. In order to get an orientation and define my own design I contrast my research questions with these different possibilities

as well as with similar or further methodological approaches as described in other texts (e.g. Cohen, Manion, & Morrison, 2000; Creswell, 2007; Crotty, 1998; Robson, 2002; Suter, 2011; Wellington, 2000). It should be noted here that, once again, there are quite a few differences among these authors on how the overall landscape of research is presented and sub-divided into research streams, what terminology is exactly used, what approaches are defined as 'methodologies', or 'designs', or 'styles', and similar blurred uses of words and concepts. For this reason, I will try to relate the labels I am using to specific authors, in order to avoid inaccurate, questionable, or inconsistent use of terminology.

While describing a variety of qualitative designs in the published literature, Suter (2011, p.371) introduces the concept of "blended research designs" (her specific example is 'ethnographic case study'), i.e. designs which include methodological elements from different but related approaches (not to be confused with 'mixed methods', i.e. combining quantitative and qualitative methods). This idea of combining diverse procedures appears to be useful here as a way to define what I am doing, and especially what I am *not* doing. Looking at my questions, in fact, I can try to identify a number of approaches which may be best suited to answering them. My starting point is that this study will employ a combination of qualitative approaches, namely a case study approach and an ethnographic approach. Given my role as a teacher-researcher it will be important, as well, to consider what this study draws from practitioner research and action research and, in particular, for what reasons this is not a 'proper' action research study.

In relation to investigating collaborative creativity Grossen (2008), too, talks about an 'original and adventurous blend' of different methods which are used to capture collaborative creativity as a dialogical process. Creative interactions are a 'place of tensions' between different temporalities (*now and then*), spaces (*here and there*), learners' identities, third parties (e.g. the teacher or the researcher), objects and symbolic tools, discursive processes and contextual or non-verbal elements in a multi-modal communication, cognitive and emotional-relational aspects, observable behaviours and internal psychological functioning. Further, the characteristics of the creative task (in this case musical tasks) impose very specific constraints on the ways partners interact and organise their joint work. Such a multidimensional and multiform phenomenon as creative collaboration can be studied by means of an expanded set of methods which can interpret it in a comprehensive – I might say 'holistic' – way. The complexity of the very object of study, then, makes it legitimate to use a range of methodological strategies which are tailored to the unique conditions of the particular context.

7.5.3 Case study approach

According to Creswell (2007, p.73) "case study research involves the study of an issue explored through one or more cases within a bounded system (i.e., a setting, a context)". A case study is an in-depth investigation about a particular group, institution, or event through accurate and extensive data collection involving multiple sources of information. Cohen, Manion, and Morrison (2000) describe case study research as exploring "the complex dynamic and unfolding interactions of events, human relationships and other factors in a unique instance" (p.181). Bassey (1999) offers an extensive definition of case study (p.58), which I rewrite here, adapting it to my context. The present study can be seen as an educational case study which is

- conducted within a localised boundary of space and time and in a naturalistic setting (a group of children participating in weekly sessions over a school year in a music school)
- into interesting aspects of an educational activity (understanding creative music making)
- with the aim of exploring significant features of the case (how children interact creatively and how this is significant for them), creating plausible interpretations of what is found and relating them to relevant research in the literature, testing the trustworthiness of these interpretations and providing an audit trail for validating or challenging the findings, and constructing an argument to be convincingly conveyed to an audience
- in order (ultimately) to inform the judgements and decisions of practitioners, (teacher educators), or policy-makers.

Yin's (2009) definition highlights the fact that such an empirical inquiry takes place within a natural setting because there are no evident boundaries between phenomenon and context, and context is a determining factor in shaping the phenomenon. In relation to the topic of my research, a real educational context is needed to understand the natural unfolding of events and relationships in children's creative learning processes.

In relation to what exact type of case study this is, it must be taken into account that in the literature case studies are classified and termed in different ways, depending on the general purpose of a study (Baxter & Jack, 2008). In Merriam's (1998) terms, this is an *interpretive case study* (as opposed to a descriptive or evaluative case study) as, beyond producing rich description, it aims to analyse, interpret, theorise, and develop conceptual categories in relation to a phenomenon. Following Bassey's (1999) categorisation, the present enquiry can be defined as a *theory-seeking case study*, in that it is centred on the in-depth understanding of a general issue based on an interesting instance which

represents a relevant illustration of it. This is what Stake (1995) defines as an *instrumental case study*, i.e. the exploration of a particular situation in order to get insight into a wider issue or concern. The single case in itself is of secondary interest – if it were central, instead, this would have been an *intrinsic case study*, where the topic is exactly *that* specific case or situation, as it would be for example in an evaluative study about a programme. Rather, my focus in this study is on collaborative musical creativity as exemplified in a group, and not on *this* particular group.

Two further specifications are necessary about methodological characteristics of this research which are not fully aligned with a typical case study. Firstly, for the purposes of the study my 'case' is not the whole activity in a session, but more specifically those parts of the lesson in which children are interacting creatively. In fact, a good part of each session is not (and could not be) focused on creative interactions, but is devoted to music instruction, organisation, discipline, and other activities which are not directly related to the topic or at best are preparatory to it. In Yin's terms (2009, p.50), therefore, the study does not adopt a *holistic design*, as it does not address the global nature of the music programme. Rather, it adopts an *embedded design*, in which only specific sub-aspects constitute the real focus of the analysis, such as creative phases, single children's creative actions, pair or small group interactions, possible outcomes, etc. Secondly, the most relevant disconformity is probably that in this study the researcher is also the teacher, and not just a respectful observer trying to preserve intact the reality of the case. Stake's (1995) definition of case study includes 'noninterventionism' as a very important feature of this qualitative approach, whereas here there is a teacher-researcher massively intervening and intruding in the field. So, the broad frame and the main characteristics of this enquiry are those of a case study, but it is an atypical kind of case study, due to the focus on just a sub-part of the whole and especially to the active presence of the teacher-researcher.

7.5.4 Ethnographic approach

"Ethnography is a qualitative design in which the researcher describes and interprets the shared and learned patterns of values, behaviours, beliefs, and language of a culture-sharing group" (Creswell, 2007, p.68). Ethnography has its roots in anthropological research where the researcher, through prolonged engagement in the field, observes and participates in a cultural context. Typically, ethnography is non interventionist and interpretive, and makes use of a large variety of data collection methods, among which observation, participant-observation, interviews, and analysis of artefacts. Its goal is to examine the cultural practices of a distinctive group and to identify their meanings by

balancing the participants' insider (emic) perspective and the researcher's outsider (etic) interpretation of it. As mostly happens in qualitative research, data collection and analysis are tightly intertwined, with issues and specific foci progressively emerging during the research process. Triangulation, i.e. cross-checking of multiple data sources, is usually used to confirm possible convergences of the data and thus enhance the credibility of the findings (Bresler, 1995; Cohen, Manion, & Morrison, 2000). The final product of ethnographic analysis is a "holistic cultural portrait" (Creswell, 2007, p.72) which represents through 'thick description' (Geertz, 1973; Jorgensen, 2009) the behaviours and meanings of the observed cultural group. Characteristic of ethnography and of Geertz's thick description is the "move towards meaning" (Stauffer & Robbins, 2009, p.84), which impacted not only on anthropology, but on the whole field of the social sciences, including education. In psychology a striking parallel to Geertz's emphasis on meaning is to be found in Bruner's (1990) work.

In relation to music education research, ethnomusicology provided relevant models about how to understand music in its cultural context (Blacking, 1973; Bresler & Stake, 2006; Merriam, 1964), that is considering music not only as product, but primarily as a social and cultural experience. Ethnographic approaches have been used in music education research at least since the 1980s with the aim of exploring issues specifically concerning the teaching and learning of music. The range of field applications is fairly wide, including children's learning practices in diverse natural settings (Bresler, 1995; Campbell, 2010; Marsh, 2008) up to the adoption of ethnographic tools in pre-service teacher education for the analytical and critical observation of classroom activity (Miranda, Robbins, & Stauffer, 2007).

The main reason why I should be using an ethnographic approach in this study is that I am interested in the meanings that children give to their creative music-making experiences (subsidiary question n.3). I find it important not just to observe children's interactions, but also to ask them in some way about what they mean to them. I might confidently claim that, to the extent that I am observing a group of children in an early childhood music education setting as a particular *micro-culture* with its own particular behaviours, practices, beliefs, and values, an ethnographic strategy and its related methods are relevant for me. In this sense, I am adopting the role of a "researcher / anthropologist" (Kanellopoulos, 1999, p.177) who attempts to describe and interpret the creative activity of a group of young children, including their own insights about their collaborative musical experience.

For the sake of clarity, however, this cannot be a 'purely' ethnographic study, as for example in Kanellopoulos' (1999) study, where the enquiry was about the spontaneous music making of a group of 8-year-olds and the researcher was no more than a keen observer and listener, and only sometimes a co-player. In this case, instead, I am the teacher-researcher, and therefore I take on a different role, where the outsider/insider dynamics are present at different levels. As a researcher I am looking 'from the outside' at what is happening in the classroom – especially in the phases of analysis. Through my teacher eyes, too, I might observe this group of 5-7-year-olds as if they were a particular cultural group with their own distinctive traits, worldviews, and modes of acting in life, and I could 'just' observe them when they are engaged in some small group work. At the same time, however, as a teacher I steer the process 'from the inside', I am a declared interventionist in the process and I play other roles as well, such as guide, active source of stimuli, moderator, coach, even instructor. Moreover, as a teacher I am cognitively, emotionally, and relationally fully immersed in the situation. Nor could I claim that this is a piece of 'authoethnography', as this would imply a focus on my own subjective experience as an insider, whereas here the focus is primarily on the children. For these reasons I can cautiously say that as a teacher-researcher I am using elements of an ethnographic framework.

7.5.5 Practitioner research

7.5.5.1 Emphasis on understanding rather than action and change

As a teacher researcher, I am conducting a study which concerns my practice. As already said above, the study's main aim is to observe practice and understand what happens, more than to improve or change it. Despite this, however, some of the issues and features of practitioner research (and to some extent, also action research) are relevant here, and an analysis of these may be helpful in clarifying the methodological approach of the study.

Practitioner research (Burton & Bartlett, 2004; Center for Practitioner Research, 2012; Dadds, 1998, 2006; Fox, Martin, & Green, 2007) is a form of research carried out by a practitioner in their own working context (a teacher, but also some other kind of professional, usually within educational, social or health services) with the purpose of developing deeper understanding of that practice, improving upon action, solving practical problems, and facilitating change in themselves, in others, or in an institution. Practitioner research often has a collaborative and emancipatory nature and is committed to empowering (a group of) practitioners and promoting their professional development.

Closely related to practitioner research is action research (Cain, 2008, 2011; Carr & Kemmis, 1986; McNiff, 2002; Rusinek, 2012). Action research is ethically-informed inquiry undertaken by practitioners into their own practice with the aim of changing it. It usually begins with the question: "How do I improve my work?" and it involves identifying an interesting or problematic issue which is worth researching, devising a possible solution, implementing it, evaluating it, and changing practice in the light of the evaluation. This action research cycle can be applied only once or, possibly, more times in the research process, as a flexible spiral of successive choices, actions, and systematic reflections. Action research is preferably collaborative, involving a number of practitioners working on their own or with a researcher. Its validity as research does not only rely on the correctness of the methods used, but also on the degree of reflexivity that the researcher demonstrates and on the values and ethical intentions underlying the research. Educational values, aspirations to social transformation, empowerment, and social justice are essential for this kind of engaged research. Though usually regarded as providing weak evidence in comparison to 'proper' research, action research can generate practical knowledge that is useful for practitioners working in similar contexts (Cain, 2010).

With regard to the present study, I claim that there surely is an 'action research component' in what we did as teachers. The role and contribution of the teacher in this study was to plan, implement, observe, and reflect on the pedagogical process so as to create situations where lots of creative interactions between children could emerge. So, there was an 'evaluative element' in what we were doing ("how does it work?"). As teachers we were thinking about our decisions and actions and the impact that they had on children's learning over time. The advantage of being the teacher here was that I/we could intervene directly in the teaching process in order to provide the researcher with relevant and possibly abundant data to collect and analyse for the research aims. However, in the context of this study change and improvement were not the main focus of the investigation, no more than a secondary perspective – though of course a valuable by-product of the research. In this sense, therefore, this is not 'action research'. Moreover, I think it would not be strategic to adopt an action research approach at this stage, for a simple reason. Before concentrating on my own practice I need to understand what is there. I need to look at the situation first, to focus on what children do, how they behave, and what they experience. My investigation is situated more in the observe and reflect phases, rather than in the plan and act ones.

If this had been an action research study, the research questions would have been phrased differently. The main research question might have been: "How do I foster creative interactions in children's music making?", and the sub-questions might have been: "How can I structure the learning process in such a way as to effectively involve children in a group creative process? What kind of initial stimuli can I offer to children? What kind of guidance is more effective to have children develop their own creative ideas and interactive skills? How can I evaluate the outcomes of the creative learning process?" These questions are implicitly contained within sub-question n.2 ("What component aspects influence children's collaborative work on creative tasks?"), which among other dimensions takes into account the active role of the teacher in guiding the learning process. Part of my job has been to answer those questions, of course, because I was teaching and I needed to look at the whole situation, yet the focus of this study is on the children themselves, not on my action as a teacher. The main issue is now not how to do it best, rather to see what happens there. At this stage it is more important to investigate children's learning than to improve the teacher's teaching, in other words I want to understand rather than to problem-solve. So, in this sense this is not 'proper' action research.

7.5.5.2 Benefits and pitfalls of being an insider

Carrying out the study as teacher-researcher entails a number of advantages as well as challenges which are important to be aware of in order to avoid methodological mistakes. Insiderness may well provide the researcher with an intimate knowledge of the situation which may be precluded to an external observer, yet a certain distance is also necessary to obtain a more complete and less partial picture of the context. The issue here is that of *involvement* versus *detachment*, and about how the teacher researcher is able to negotiate and come to terms with both in the attempt to produce valid knowledge.

In analysing the dilemmas of being an insider participant observer, Labaree (2002) points out that an insider, thanks to his long-term experience within a community, has a privileged access to contextual information and participants' perspectives which may not as easily be achievable by an outsider. Sharing a common cultural background with participants – being 'one of them' – facilitates the insider in building trust, in establishing a more intimate relationship with them, and in better understanding their meanings and behaviours. However, insiderness is not an all-or-nothing matter. Rather, it is achieved at different degrees in different moments, just as building and nurturing trust is an ongoing commitment for the researcher. In relation to the present study, if on the one hand I had a strong working relationship with my co-teacher, on the other hand I could not take for

granted that I would develop a good rapport with a new group of children just because I was the teacher. In my relationship with them, I had to gain and maintain my insiderness. Perhaps the most critical aspect of being an insider is what Labaree (2002) defines as the "insider's dual role as both object and subject" (p.109) of the study, which is highly relevant in my case, as I was both the researcher and part of the researched. This poses problems of accuracy and objectivity in the representation (or better, neutrality, disinterestedness, dispassion, or detachment), and calls for reflexivity. "Possession of advanced knowledge should not lead to a disregard for questioning one's own insider knowledge" (p.108). In fact, familiarity with and full immersion in the context can also be a trap, which can induce different forms of bias towards what is being researched, resulting in the researcher's distorted interpretations, omission of relevant data, or over-identification with participants' emotional dispositions.

With specific regard to practitioner and action research, Lytle and Cochran-Smith (1992) claim that the advantage of the teacher researcher is that of being a "native inhabitant of the research site" (p.465). In comparison to university-based researchers, a teacher researcher investigates his own context from an emic perspective, and has the potential to generate a different kind of knowledge – potentially more significant for the practical concerns of teachers – and even to disclose new areas of study. In addition to that, the richness and complexity of teacher researchers' analytic frameworks, deriving from the long-term, direct experience of many learning events, may enable them to perceive things that an outsider may not notice. Along the same line, Hammersley (1993) acknowledges the plausibility of the methodological arguments according to which practitioners are best able to understand their own intentions and thoughts, have first-hand knowledge about the educational setting, and can rely on close relationships within the field. At the same time, however, he calls attention to some countervailing arguments that critically reconsider the position of the practitioner researcher. I mention here those that I think are relevant for this study. Firstly, a teacher may be wrong or self-deceptive about his own motives and may unwittingly be biased in the evaluation of a situation. An external observer, instead, might have a wider or different perspective on what is happening, which takes into account further issues that the teacher, being so personally involved, might overlook or not be aware of. Thus, familiarity is a double-edged sword: as a teacher researcher I may see things which outsiders cannot see, but – due to a selective, restricted, or even prejudiced gaze – I may also not be able to see things that an outsider can see. Secondly, the knowledge of the teacher is often developed implicitly and in function of the specific role and concerns they have in that context. This again places constraints on the kinds of understanding they of a situation. Interestingly, Hammersley

(1993) does not resolve this tension between being an insider or an outsider in the research, and leaves the solution to be found in relation to the characteristics of each specific study.

7.5.6 Attempting a definition of the methodological approach of this study

Admittedly, this study is from a methodological point of view a kind of hybrid which is not easy to label. This is an unusual kind of case study which involves a teacher-researcher using elements of an ethnographic approach to investigate and interpret a particular learning situation (a *quasi-ethnographic approach*, I might say). As a piece of practitioner research the enquiry is not pragmatically focused on the teacher's actions and his problem-solving for change and improvement, but in the first place it aims to develop a deeper understanding about how children learn and are creative together. Allwright (2005), with regard to the field of second language teaching, defines a similar kind of approach to practitioner research as 'exploratory practice'. So I might methodologically define this study as *exploratory practitioner research for understanding*. Indeed, I set the priority here on the exploration of the complex phenomenon of children's creative collaboration in music, rather than on a potentially shortsighted and premature attempt at improving my own pedagogy. From an epistemological point of view, I am looking at the phenomenon first – asking how I can make sense of what happens there – and later on (in future research) I will inquire about how I/we can best deal with it.

The following table shows how these different but overlapping perspectives come together (see Table 10):

Table 10. Exploratory practitioner research for understanding: a 'combined approach'

emancipatory participatory	practitioner research	for change/improvement
exploratory	practitioner research	for understanding
interpretive	case study / ethnographic research	for understanding

The use of the colours intends to represent the main characteristics which the study shares with the established forms of practitioner research (typically emancipatory / participatory and aimed to improve or change a situation) and interpretive / ethnographic research for understanding. In my definition (see the middle line of the table) I prefer to

use 'exploratory' instead of interpretive because interpretive implies 'contemplation' rather than action, whereas exploratory might refer to an exploration in meaning and vision as well as to an exploration in practice.

7.6 Knowledge between theory, research, and practice

An issue raised by my role as a teacher-researcher in this study is that I am connecting theory, research, and practice, and I am handling multiple kinds of knowledge which are variously interrelated. I attempt to represent these different ways of knowing in Figure 14. In the following I make explicit how they interact with each other in the context of this enquiry.

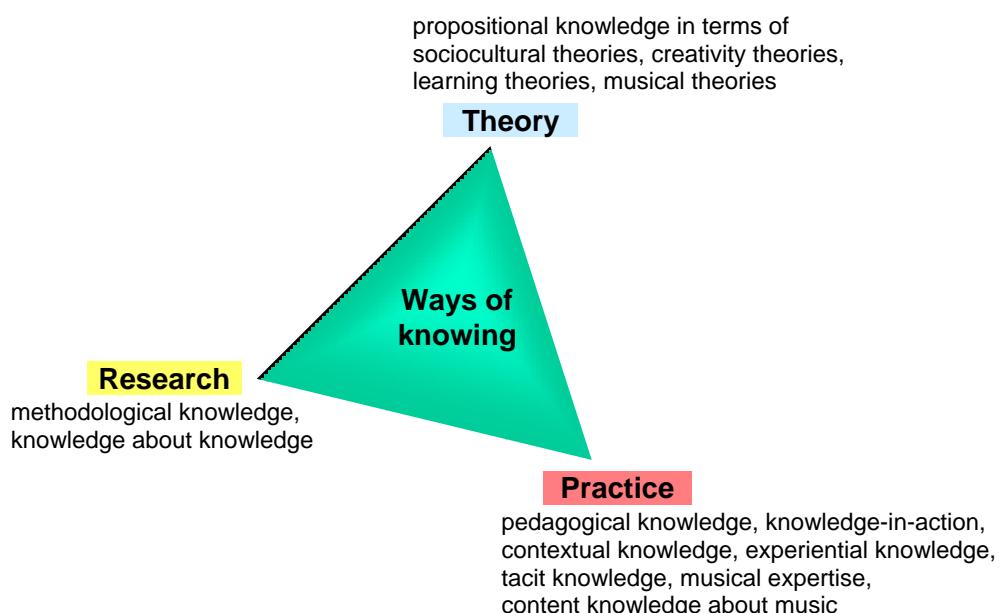


Figure 14. Kinds of knowledge between theory, research, and practice

7.6.1 Theory in relation to research and practice

In this study I am applying existing theories as a tool to interpret a practical situation (children's group creative learning in music), proceeding in a sort of deductive, top-down way, from the abstract to the concrete, from the general to the particular. I am selecting those theories (e.g. sociocultural or creativity theories) that can help me understand an aspect of my own pedagogical practice by naming processes or events and placing them within an illuminating perspective. In other words, I am using conceptual frameworks that have been created by scholars, researchers, or theorists at a higher level of abstraction, adapting them to a specific music educational context. In this sense, a merit of this study is in identifying propositional knowledge which can enlighten practical knowledge.

7.6.2 Research in relation to practice

In considering the gap between the knowledge that mainstream educational research produces and the kinds of knowledge that teachers need to use, McIntyre (2005) claims that the problem lies in the profound difference between them. Research-based knowledge is propositional (*knowledge that*), often abstract, impersonal, rigorously organised, strictly focused, reducing complex phenomena to a limited number of patterns, and not easily translatable into practice. Teachers' knowledge, on the other hand, is only to some extent a form of propositional knowledge (e.g. knowledge related to subject matter, curricula, learning and teaching). More importantly, teacher's knowledge is primarily pedagogical knowledge (*knowledge how*), that is pragmatic, context-specific, highly personal, multidimensional, partly tacit, partly inconsistent, immediate, intuitive, deliberative, holistic, and oriented to action within unpredictable and unique situations. McIntyre sees these two forms of knowledge as the extreme points of a continuum ranging from teachers' craft knowledge, to reflective thinking, to classroom action research, to research-based suggestions for teaching, to reviews of research focusing on particular themes, up to research findings and conclusions. Fostering dialogue between the two ends of the continuum is the main strategy proposed by McIntyre to bridge this gap. In this picture, the figure of the teacher researcher, I would argue, is that of a mediator, an intermediary between two worlds that often speak different languages. The present study could be situated halfway along McIntyre's continuum, and represents the attempt of a practitioner who moves towards the world of research, learning its syntax and formalised ways of thinking and knowing, and connecting it to practice.

7.6.3 Practice and research in relation to theory

This study aims to develop new knowledge that is rooted in practice and grows towards a more systematic, in-depth, and articulated vision of a phenomenon, that is how children learn creatively in music. It has the potential to generate knowledge that is beneficial to others beyond my own particular context – whether in terms of theoretical conceptualisations or practice-oriented recommendations for music teachers, or maybe both. Using Cain's (2010) terms, it is likely to generate 'little k' knowledge, perhaps less 'worthy' than academic 'Big K' research, but perhaps more directly helpful for teachers and teacher educators interested in nurturing children's musical creativity – a feasible bridge between basic practice and high theory.

7.7 Methods of data collection

The study integrates a variety of data collection methods in order to obtain a rich and detailed picture about how children interact creatively in music. The use of multiple sources of evidence was mainly intended to check through triangulation (see below 7.10.1 and 7.10.3) the convergence of possible interpretations as they emerged in the course of the study, supporting the credibility of possible conclusions (Yin, 2009).

7.7.1 Participant observation

7.7.1.1 Direct Observation and Participant Observation

My role as teacher researcher implied looking at children in the normal flow of a session. My action ranged from a full involvement and participation in leading the activity to a more unobtrusive observation, for example when children were absorbed in autonomously collaborating on a task (though, even there, sometimes I deemed it necessary to intervene in the process). In other cases I could just observe from the outside how children responded to my colleague's guidance. In the teaching process, where action and observation are strictly intertwined, it was important to maintain a sort of double attitude of closeness and distance. As van Manen (1990) describes it:

close observation involves an attitude of assuming a relation that is as close as possible while retaining a hermeneutic alertness to situations that allows us to constantly step back and reflect on the meaning of those situations. [...] The method of close observation requires that one be a participant and an observer at the same time. (p.69)

7.7.1.2 Video-recordings of processes and outcomes

In this study the main bulk of collected data is the videos of the sessions, as there are no interviews or focus groups providing further data beyond what happened in the classroom. Thus the videos play a central role here. Recording the sessions provided the opportunity to repeatedly watch a sequence, to examine it in detail, and to grasp events, fragments of talk or behaviours that might have gone unnoticed during the class. I excluded using an assistant-operated camera in order to avoid further distractions for children, but I chose to use two HD cameras placed on stands in two different places in the room, in order to cover (almost) the whole area and to capture most of the action. This way I had the possibility, in the analysis phase, to check whether an episode or detail was better visible through one or the other camera. During the sessions I also became increasingly aware of where the children and we teachers were standing or sitting in relation to the cameras, which were fixed on the stand, and could arrange the spatial position of the working groups in order to have good recordings (and without

disrupting the normal flow of the activity). Occasionally I took one camera in my hand to record the Gestaltungen at the end of a group work phase, so that I could have a high quality detail of the performing group and, through the other camera, the wider picture of the whole group in the room.

From a methodological standpoint, the video was a second observer, a further eye, in some respects more reliable than I could be, in other respects not. I see the camera and myself as together, combining to generate the data. Video-recordings were integrated and triangulated with other data sources, such as my memos and systematic reflections. In the analysis process the videos were in the first instance a help to remember. But even the videos missed things, because the cameras were fixed and in some cases a very particular visual angle would have been necessary to record some micro-events, or the action in the classroom was quite fluid and physical, with children moving, singing, and playing all over the room. Despite the use of a participant observer and two cameras, then, I could not claim that I was an 'all-seeing' eye, and the data I have is inevitably a partial view of an unattainable 'whole'.

As for children's relationship with the cameras, two considerations must be made. Firstly, though at times they initially 'played to the cameras', in the course of the data collection they progressively got used to them and ultimately did not notice their presence any longer. Further, children are nowadays more and more used to being video-recorded, especially by parents, so this did not seem to be much of an issue here and ultimately did not prevent them from behaving naturally. Secondly, video-recording was integrated into the pedagogical process when, at the end of a small group work phase, I often took one camera in my hand to record their performance (I did this to obtain the best possible recording of the end result). The presence of the camera, as a further observer along with the other children attentively watching and listening, reinforced this 'staging' process, by which we deliberately created an ideal space divided into an audience area and a performance area.

A relevant technical problem in relation to small group work was that I was able to collect good videos but the audios in the recordings were often indecipherable, due to the presence in the room of two to four groups of children talking and working next to each other with percussion instruments. This was also a problem for the children themselves, too, and in some cases they were complaining about the high levels of noise in the room which did not facilitate their communication within the groups (this is one of the most significant practical issues which teachers face when managing group work in music –

see Odam, 2000). I considered that for the research purposes advanced solutions such as the use of directional microphones or a single microphone for each small group would have been technically impracticable or simply too laborious and time consuming both at the stage of data collection and data analysis. Unfortunately, this meant that the gathered data, especially with regard to small group work, was at times partial and incomplete.

7.7.2 Documentation

Further data was collected in form of:

- *visual data*, such as graphical scores, children's drawings, other visual or written materials used in the classroom
- *music pieces (audio files)* used in the classroom as initial stimuli for some activities
- *musical transcriptions*: in some cases I used a variety of notations (graphical, non conventional, and conventional) to jot down broad structural features of created music or to analyse in depth exact sequences of rhythms or pitches as well as whole pieces
- *teacher's reflective journal, planning ideas, and hand-outs*, which went along with
- *researcher's memos*, aiming to record the researcher's thoughts on the process. Memos had a variety of foci – observational, theoretical, methodological, or analytical – and represented a bridge to data analysis (Bazeley, 2013). They were written during or immediately after the data collection, as first-hand comments on what had been observed and experienced. In this case they had the value of field notes and were part of the collected data, as my own reactions and reflections as a researcher. Memos were also an essential part of the phase of analysis, where ideas or meaningful patterns slowly emerged from the data, and fed into the findings.

7.7.3 Methods for eliciting children's meanings

In order to strengthen the trustworthiness of the findings it was important to gather children's insights on their experiences, so that their voices, too, and not just that of the researcher could be heard (Mauthner, 1997). Van Manen (1990), describing close observation, points to a variety of ways for eliciting meanings from children: "to gain access to the experience of young children, it may be important to play with them, talk with them, puppeteer, paint, draw, follow them into their play spaces and into the things they do while you remain attentively aware of the way it is for children" (p.68). Beyond

participant observation, a number of strategies to gain children's perspectives about their own collaborative and creative experience were adopted:

- in the first place, there was on the part of us teachers an *ongoing engagement with children at a verbal level*, attempting to stimulate their reflections and verbal responses within the unfolding activity itself – what Kanellopoulos (1999, p.178) terms the "emergent interview format". Single words, comments, longer statements, or any kind of non-structured, half-elicited and half spontaneous responses provided important pieces of information about how children were experiencing the activity and how they looked at it in their perspective. Our goal was to "create a culture of giving and receiving feedbacks" (as my colleague Valentina phrased it)
- particular attention was also given to children's *nonverbal responses and expressions* – as their meanings were often conveyed through the body, not through words
- some *ritual activities* gave individual children the chance of expressing their thoughts and feelings about particular issues. At the end of the sessions we frequently asked children what they had particularly liked about it. Also, we once had a "flower / microphone game", in which each child could talk about their overall creative experience, "remembering the things we did", i.e. mentioning what activities had most struck them over the year, and a "final interview" in the second-last session about how to creatively collaborate in music.

In the course of the study, I realised that the issue of eliciting children's views about their lived experience had to be solved both at the research-methodological *and* the pedagogical level. Thus, the research focus on meaning affects the researcher as well as the teacher. This resembles what Kanellopoulos (1999) remarked about his own way of using talk as the methodological means to gather 8-year-old children's views: "What started off as a research technique for eliciting the children's conception of their own music making was transformed into an aspect of the children's practices themselves" (p.178). Likewise, in this study as a teacher I accepted the pedagogical challenge and opportunity for these children to focus on their own experience, to become interested in and aware of what they feel, think, and do, and to express it and share it in the group. Thus, talking, discussing, reflecting on their own music making became an essential and valuable part of the learning process of those children. Such a focus on the learners' meaning-making had, in my view, a high pedagogical significance: in my experience as a music educator and teacher educator this represents a sort of paradigm shift, from the focus on the mere musical product to the awareness of the learners' lived experience. In

this sense, this piece of research has the potential to be 'educational' in the full sense of the term, because it enriched children's experience. It was not *on* them, treating them as 'respondents', but it was *for* them, empowering them as conscious musical beings.

7.8 Research design

Figure 15 shows the research design of the enquiry. I conducted two pilot studies in 2011-12 and 2012-13, during which the research focus became progressively clearer and the review of relevant literature began. The data collection of the main study took place in the second part of the school year 2013-14 and consisted of 18 weekly sessions of 60 minutes. As is typical of qualitative research, the identification of the research questions and the construction of a conceptual framework proceeded in tight connection to the field experience. The first stages of analysis were carried out concurrently to the data collection phase, and some first themes began to take shape already at this point. As the arrows in the figure show, the conceptual framework, the research questions, and the methods of data collection and data analysis mutually influenced each other through a recursive spiral process, eventually leading to the findings and conclusions of the study.

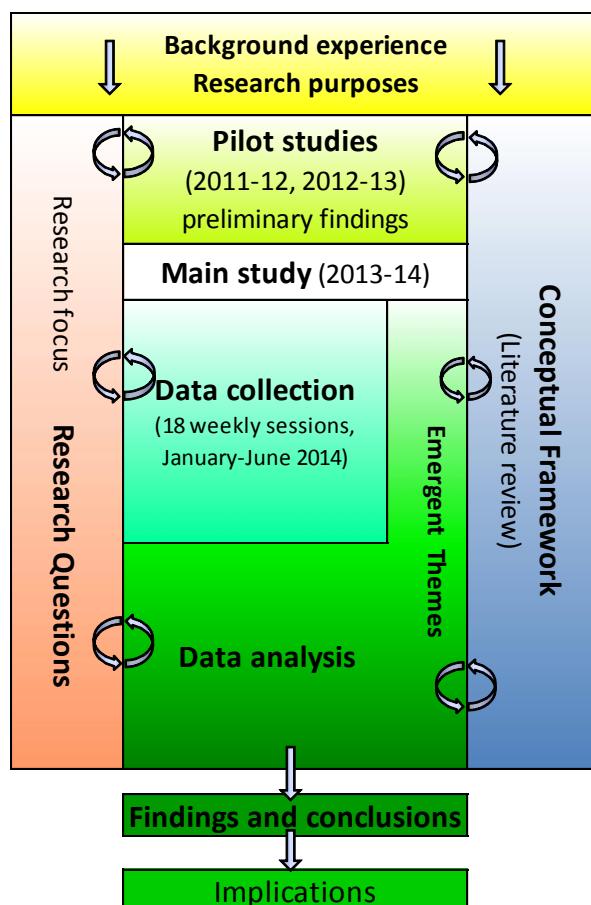


Figure 15. The research design

7.9 Methods of data analysis

The goal of data analysis was to process the collected data through interpretation by uncovering essential relationships, concepts, and understandings in order to construct a consistent portrait of the phenomenon under investigation (Bazeley, 2013). The process of data analysis in this study could be considered as analogous to "assembling a jigsaw puzzle" (LeCompte, 2000, p.147), comprising the following series of steps:

- organising the data into a research database;
- identifying relevant items or issues;
- sorting them into conceptual categories or taxonomies by comparing and contrasting them and using specific sets of criteria;
- creating meaningful patterns, by looking for similarity or analogy, co-occurrence, temporal sequence, or triangulation with other data sources;
- assembling patterns into conceptual structures in order to build an overall description and interpretation of the object of the research.

Another metaphor for describing the analytical process employed here is that of a 'kaleidoscope' (Suter, 2011). Raw data were drawn together to form categories based on explicit rules, these were then iteratively refined and clustered to let patterns emerge, until an organised constellation was eventually achieved. Actually, the process involved both analysis (etymologically 'loosening' or 'breaking up' something complex into constituent elements) and its opposite, synthesis ('putting together', 'combining'), as the body of collected data was literally torn apart, dissected, and reduced into chunks, and then creatively rebuilt into a meaningful web of conceptual linkages. In this inductive, 'bottom-up' approach the data was flexibly explored to build constructs through a recursive process. Repeated cycles of analysis, which initially ran parallel to the data collection phase, were tightly intertwined with the ongoing review of relevant literature, following a spiral, rather than linear, progression. Thus, the analysis evolved along the whole research process, with interpretations gradually making sense of the data and ultimately building a conceptual framework, i.e. some coherent understanding of the issue of children's creative interactions in music. In the following I illustrate the strategies I adopted in the successive stages of the analytical process.

7.9.1 Early stages of analysis: organising, transcribing and open coding

7.9.1.1 Organising the data files

Having recorded each session, I imported the video-files onto the computer (two files for each session, as I used two cameras), and then I imported them into NVivo 10 (Bazeley & Jackson, 2013), along with audio files which we used in the sessions, drawings made

by children, or any other kind of relevant material. I decided to use this computer package for the analysis because it facilitated the management of multi-modal data.

7.9.1.2 Transcribing the sessions

While transcribing the videos I built rows (time spans) according to the structure of the activity, i.e. I chunked the continuous flow of the action into fragments of content, isolating single episodes and sub-sets of the episodes, cutting short slices within a same portion of activity or dividing a longer activity into identifiable sub-phases. The advantage of using this procedure was that, thanks to the characteristics of the program, I could later on retrieve specific moments of an activity very easily or also run queries of various kinds within the whole body of collected data. Most of the spoken words in whole-group phases of work were almost literally transcribed and concurrently translated into English. I left out the portions of the activities which I did not consider relevant, either directly or indirectly, for the purpose of the research.

Transcribing independent small group work, on the contrary, was an issue. Talk is almost indecipherable especially when three or four groups are working parallel in the same room, and the noise of the percussion instruments makes it very difficult to grasp the exact words children are saying. I employed different strategies to get to grips with this problem:

- in many cases I just gathered fragments of data, and some parts were really not accessible
- whenever possible I asked children about how they had decided, trying to put these questions not just as my personal interest as a researcher, but as an important aspect of the learning process. The disadvantage, however, is that this subtracted time to the flow of real communication going on in the learning process, or sometimes children just did not say much or wanted to comment on other things.
- after the session, I took notes about the process based on my (again partial) observation during the teaching
- while examining the videos, it was also important to observe children's nonverbal behaviour during group work as a useful, though again limited, source of information
- in some cases knowing in retrospect where children would eventually get to give me a hunch about what to look for in the group work process, going backwards from the final outcome to the beginning of the activity and tracing where particular ideas originated, who introduced what contents, or how these gradually developed in the interaction among the children.

So, by integrating these different strategies the best I could get was only a partial view of the whole picture (if there ever is any 'whole' picture). Unfortunately, I must admit that there is a loss of significant data regarding the talk in the group work process. In many cases, in spite of my laborious efforts, I could not get to their dialogue, and could only follow parts of it. This is a technical limitation of this study.

7.9.1.3 Using headings and sub-headings to categorise and structure contents

After having transcribed the session, I created headings and sub-headings in the text to chunk the flow of the activities into organised sub-sets, giving a hierarchical structure to the various parts of the activity (see a sample of a session transcript in Appendix F). Interestingly, in some cases the structure and the logic of the learning pathway emerged for me only later, as I retrospectively analysed what had happened in the sessions. Indeed, being some of these creative processes really open, we teachers were improvising (in the sense of Sawyer, 2004a and 2004b). In the project we were also exploring new teaching/learning pathways and developing them through this open-ended way of working with the group. So I could really understand what had happened only in the phase of the reflection on the transcript. Actually, attributing labels and segmenting the activity was already a first act of interpretation of the data. At the end of the project I organised the collated headings and sub-headings of all sessions into a file which gives a very concise account of what we did over the 19 sessions, a sort of contents list of the overall project (see Appendix C, "Minutes of the sessions").

7.9.1.4 Memo Writing and Research Journal

While transcribing, and also during the subsequent phases of analysis, I kept taking extended notes on specific issues in the memos linked to the session. I also integrated in the memos possible ideas arising from the reflections constantly made with my colleague after the sessions. Memos – as already said above – regard both the data collection and the data analysis phases. In these notes, which I regard as my teacher-researcher's diary, I recorded thoughts, annotated observations, explored and clarified concepts, or identified relevant categories. These memos constituted an initial exploration of the data – a "springboard into ideas" (Bazeley, 2013, p.110) – and formed the basis for my reflection on and interpretation of the data.

7.9.1.5 Coding

The subsequent step of this first phase of organisation of the data was coding, which consisted in applying the codes I had already prepared (derived from the literature, the questions, and the Framework for observation), but also creating new codes from the data. In this phase of the analytical process – which a grounded theory approach would

define as 'open coding' (Bazeley, 2013) – the codebook kept evolving. Most codes had the function of organising and categorising the content so that I could keep track of it. An array of higher-order nodes were already emerging in this phase. Some nodes were refined in the later phases of the analysis, in order to make their use consistent throughout the study. In some cases I merged some nodes together, created new ones or split up some of the nodes into sub-nodes (see the initial Codebook in Appendix E).

7.9.2 Middle stages of analysis: identifying, describing and commenting on the pedagogical activities

7.9.2.1 Selecting, organising and reflecting on the data

After having finished the transcription of all sessions and the compilation of the minutes, the next step in the analysis was to identify fragments of the data which appeared to be significant for the research purposes. My starting point was to look at the outcomes of the processes. The assumption here was a pragmatic one: as a teacher, I would like to know what children eventually achieved, where they got to, and in what ways this could be important. The questions I posed were "is it musically interesting?", "what are children doing here?", "how are they interacting?", or "through what process did they get to this?". Having a good idea of the end-product or the sub-products of creative processes helped me understand the dynamic of a given sequence of action. Thus, I reviewed the sessions again, re-reading the transcripts and repeatedly viewing excerpts of the videos. At this point I still had a teacher's perspective, in that I was describing sets of similar activities, roughly following a chronological order, and describing 'exemplary instances' of children's creative actions and interactions. This was the second iteration on the collected data. Throughout this process I took extended notes about possible 'emerging themes', i.e. aspects not only directly deriving from my Framework for observation, but also coming out of the data as bottom-up 'aggregations of meaning'. Thus, in this phase I systematically examined all the sessions in order to

- refine codes and take further detailed notes
- create a list of relevant outcomes or fragments of process, around 300 items (see Appendix D for the full list of relevant creative processes and products in the sessions)
- select and extract significant video-excerpts. Cutting around 150 videoclips (mostly less than a minute long) was a further occasion to look at them more than once, reflect on them, discover still new particulars, and possibly extend my reflections on them. I posted these clips on a private space on Internet, so that they can be accessed with password by just ctrl-clicking on the link in the text of this thesis (password: res). I assumed that the possibility of watching the videos

could facilitate the reader in following my description and interpretation of the data, as relying only on words would be a very poor and inadequate representation of such a largely nonverbal phenomenon as group creative interactions in music

- build a narrative-descriptive report (35.000 words) which included an account of the rationale, goals, and structure of each activity, analysis of individual and small group processes and outcomes, and detailed description of exemplary instances of children's creative actions and interactions with the related comments by the group. The idea was to gather together the major ideas associated with the activities.

7.9.2.2 Identifying the 'activity' as the unit of analysis

At this point it became clear that the unit of analysis in this study could not be a whole session – as it included much material which was not relevant to the focus of the enquiry and would have been too 'composite' to be analysable – nor single episodes of interaction – as they would have been not clearly identifiable as to where the interaction begins or ends and what its surrounding context is. Thus, I made the choice of taking the 'activity' as the unit of analysis, i.e. the whole of actions and interactions generated and connected to the development of a learning content or pedagogical theme – for example, 'working on rhythm structures' is an activity, or 'composing in pairs based on a postcard', or 'free group improvisation', etc. The structure of an activity usually comprises a preparatory phase introducing the pedagogical theme, one or more phases of individual and/or group creative work, and the resulting presentations of outcomes with related group reflections. An activity might be part of a single session or also extend over more sessions.

Within the learning activities taken as the unit of analysis I could identify relevant phases of creative interaction between children. In some cases within an activity I could find interesting 'critical incidents' (Cohen, Manion, & Morrison, 2000, p.310) or revealing 'anecdotes' (van Manen, 1990, p.119), i.e. moments of major significance in relation to the object of the study. One of the aims of the analysis was (following Kanellopoulos, 1999) to identify those key incidents which were representative 'instances of abstract principles' underpinning children's creative interactions in music. Indeed, my intention was to rise from the local and particular examples towards some more abstract conceptual models about how these interactions work. I looked for both positive and negative examples, as the analysis of counter-examples and 'rival interpretations' might help illuminate further important characteristics of the phenomenon and build a coherent and more valid argument (Yin, 2009).

7.9.2.3 From commented description to interpretation in the light of the research questions

In this middle phase of the analysis I was still working mostly with the description of the pedagogical activities (with some reflective commentary). Bazeley (2013) characterises description as an entry point to the process of writing which is foundational to further analysis and theorising. Indeed, through this extensive report I started to outline some overarching themes which more closely concerned children's interactions. Working with headings and subheadings in Word – I found working with the Document Map in the View Menu in Word more functional than going on with metacoding in NVivo – I started to aggregate ideas into wider concepts and categories of meaning (such as 'collaborative vs cooperative', 'openness of the process and the product', or 'emergence'), relating them on the one hand to selected instances in children's music making and on the other to the theoretical framework I had constructed. Thus, I went through a second phase in coding which Bazeley (2013, referring to Charmaz and grounded theory) calls *focused coding*. This was an important transition towards the interpretation of the findings based on my specific research questions, which was the focus of the third and last phase of the analysis.

7.9.3 Late stages of analysis: interpreting data, identifying relevant categories and themes, and developing theory

The broad strategy for analysing the data adopted in this study can be defined as *thematic analysis* (Braun & Clarke, 2006; van Manen, 1990), beginning with the description and interpretation of single incidents, leading to the emergence of concepts, and ultimately to the construction of broader themes. This process of identifying, analysing, and reporting patterns of meaning within the data involved here both bottom-up, inductive forming of themes strongly linked to the data (akin to a grounded theory approach), and top-down, theoretically-driven analysis based on the specific issues raised by the research questions and the reviewed literature. In particular, in this last phase of work I used the research questions (which at this point had reached a stable formulation) as the wider frame to organise the analysis and present the findings of the study.

With regard to the detailed examination of the selected significant episodes of children's interactions, a first main reference for the way I worked is ethnographic micronalysis of interaction, or microethnography (the approach used by Espeland, 2006; see Le Baron, 2006, and with specific regard to video-analysis of social interaction Erickson, 2006). A second important reference was interaction analysis – as applied, for example, to group

theatre improvisation by Sawyer & DeZutter (2009). The micro-genetic analysis of children's interactions in collaborative creative work allowed me to build a clear picture of the development of musical ideas in the group work. By contrasting and comparing different examples, relating them to theoretical constructs in the literature and to the themes that had emerged from the analysis, I was eventually able to build a coherent account of how children interact when they are collectively engaged in creative music making. My wish is that such 'thick descriptions' can be

[...] relevant to the situations being studied, systematic of their principal elements, faithful to the observations and data gathered, meticulous and detailed narratives, inclusive of all the aspects that are unearthed, even those that seem to be 'outliers' to the general population or sample, analyzed in the context of, and reflective of, what the data seem to suggest, checked with participants, reported dispassionately yet compassionately, clearly articulated with respect to the researchers' perspectives, assumptions, and situatedness, described richly, analyzed rigorously, documented meticulously and written unpretentiously in language that is clear to an intelligent reader who is likely to have an interest in the findings. (Jorgensen, 2009, p.79)

7.10 Trustworthiness and quality

The quality of naturalistic, interpretive research is commonly referred to in terms of 'trustworthiness'. The traditional criteria of validity and reliability in quantitative research have been reconceptualised in various ways in qualitative research, also depending on the specific kinds of approach taken (Creswell, 2007; Creswell & Miller, 2000; Golafshani, 2003; Hammersley, 2007). Lincoln and Guba (1985; see also Guba, 1981; Shenton, 2004) have proposed four main criteria for ensuring the trustworthiness of research, namely credibility, transferability, dependability, and confirmability. In the following, I use these categorisations to illustrate the measures I have adopted in order to enhance the quality and rigour of this study.

7.10.1 Credibility

Credibility in qualitative research is to do with the extent to which a study's findings are congruent with reality, i.e. what its truth value is (Guba, 1981; Merriam, 1995). Roughly corresponding to internal validity in quantitative research (determining whether an enquiry accurately identifies and measures what it purports to measure), the credibility of a study is based upon strong evidence, thick description, adoption of appropriate research methods, prolonged engagement in the field, triangulation across data sources, theories, methods and investigators, examination of disconfirming evidence, member checks, peer review, provision of an audit trail, and researcher reflexivity (Creswell & Miller, 2000;

Shenton, 2004). In this study the following strategies were employed in order to present a truthful and plausible picture of the phenomenon under scrutiny, that is children's creative interactions in music:

- extensive review of the research literature in order to frame the findings – including addressing the issue of construct validity, i.e. defining 'creativity' and 'collaborative creativity' with regard to 5-7-year-old children
- familiarity with the educational context – this, more than a strategy, was an advantageous condition due to my position as teacher researcher
- prolonged engagement in the field – both with the research group, in terms of duration of the study over a whole school year, and with the teaching practice of guiding creative processes in children's groups
- triangulation across data sources (e.g. how different children engaged with a same creative interactive task, including their different conceptualisations of the experience), methods (observation, participant observation, conversations with children, and examination of artefacts), and investigators (juxtaposition of the researcher's own views and interpretations with those of the co-teacher, the supervisors, and of a critical friend)
- member checks – here in terms of in-depth questioning and dialogues with children about their own interpretations triangulated with my own and my colleague's analysis of their creative processes and outcomes
- negative case analysis – looking for contrasts within individual children's and between different children's creative behaviours and products
- use of a researcher's journal
- peer scrutiny of the project – ongoing dialogues and reflections with the co-teacher, tutorials with my supervisors, two meetings with an experienced critical friend, and a few presentations of work related to the research project in the context of conferences and in teacher education initiatives.

7.10.2 Transferability

The findings of interpretive studies are not generalisable in statistical terms in the same way as the findings of scientific experiments or surveys based on large samples can do. Instead of external validity and generalisability, the concept used in qualitative research is transferability, i.e. the fact that the research report provides a sufficiently rich description of the context and nature of the phenomenon to enable the reader to make comparisons with their own setting and to gauge whether those findings can justifiably be applied there. Stake (1995) defines this *naturalistic generalisation*, in that it relies on the

recipient's judgement about the meaningfulness and usefulness of the evidence drawn from a particular situation when transferred to their own context. Thus, the findings of this singular case about a group of children situated in a specific sociocultural context cannot be generalised to all 5-7-year-old children, nor are the ways of interacting creatively in music described here exhaustive of all possible kinds of collaborative creative music making. However, the findings of this study can aspire to illustrate a theoretical perspective and to provide a practice-based, systematic and rigorous view of how children's collaborative creativity may look like, and this has the potential of being relevant to teachers working in similar situations. Following Bassey (1999), this study can produce *fuzzy generalisations*, i.e. a "kind of prediction, arising from empirical enquiry, that says that something *may* happen, but without any measure of its probability. It is a qualified generalization, carrying the idea of possibility but no certainty" (p.46). Transferability can be achieved by relating unique instances to abstract and general concepts, which in turn can be re-interpreted in multiple situations. In order to facilitate this process, it is paramount that the study carefully provide the idiographic details of the context and the procedures through which those theoretical insights were arrived at. The issue of generalisation and transferability of the findings is addressed again in the discussion and conclusions chapters.

7.10.3 Dependability

In quantitative research reliability refers to the ability of an instrument to produce valid scores, that is to say that repeated objective measures of a phenomenon should yield the same results. Reliability in the hard sciences is to do with consistency and replicability (Hammersley, 1987; Winter, 2000). In the social sciences – and in the case of an interpretive study like the present one – the notion of replicability of the results is in itself problematic for a number of reasons. Firstly, human behaviour is not as stable as inanimate matter can be, so that there can be great differences in the results produced not only between two different groups, but even in the same group at different times. Secondly, given the worldview of qualitative research and the existence of many perspectives and possible interpretations of the social world, if the present study were repeated elsewhere by another researcher it would probably generate a different set of results. These would not be 'inconsistent', however, as they would count as a further interpretation of the phenomenon (Merriam, 1995). Thirdly, considering that this study is on creativity – a highly context-dependent, 'volatile' and unpredictable object of inquiry – I would assume as unrealistic that this study could be repeated and obtain the same results.

The corresponding notion to reliability which has been suggested in qualitative research is 'dependability' or 'consistency' of the results with the procedures of data collection and analysis (Lincoln & Guba, 1985; Golafshani, 2003). Thus, the replicability regards not so much the results of the study, but the methodological approach taken. Ways in which the dependability of the study was strengthened were:

- ensuring that the findings of the investigation consistently and accurately reflect the collected data by using different forms of triangulation and overlapping methods (e.g. observation coupled with children's meanings and examination of musical outcomes)
- providing in the report of the study an in-depth description (audit trail) of the methodological choices regarding the research design and the strategies of data collection and analysis, in order to enable other researchers to evaluate the decisions made and possibly to replicate the study, if not necessarily to confirm similar results.

7.10.4 Confirmability

If objectivity, neutrality, and detachment are not possible and not even desirable in qualitative research – as the researcher himself is the main instrument in the investigation – the control of researcher bias, instead, is a fundamental concern. Throughout the process of conducting and writing this study I attempted to enhance the confirmability of the findings and to reduce my own bias as practitioner-researcher by:

- acknowledging my positionality – the assumptions and beliefs that I brought to the research – so that the reader could see the perspectives based on which the findings arose
- using triangulation (see above)
- plainly recognising possible shortcomings in the methodological procedures
- seeking contradictory or alternative evidence, so as to challenge my own presuppositions or hastened conclusions.

Achieving reflexivity was an essential goal in the making of the research. As Fox, Martin, and Green (2007) define it,

reflexivity is about being aware of one's own reasons for constructing knowledge in particular ways. It is about being aware of one's own values and motivations, and the social, cultural and political context in which one makes decisions about what is valid about the research and the way the research was carried out. (p.189)

This process of critical self-reflection – learning to adopt a sceptical attitude towards my own thinking – was directed at making explicit my interests, tacit theories, projections, feelings and wishes as teacher and as researcher. Further, it was important to scrutinise

the influence that I exerted on the situation and the participants, that is how I generated and co-constructed knowledge in interaction with them. The goal, however, was not to eliminate subjectivity, but to be conscious of it, to understand it, and to use it as an effective instrument. Of course, there are limits to the possibility of being self-critical. In this sense, the intersubjective exchange and the continuous consultations with my co-teacher, with the supervisors, and with experienced colleagues were a source of helpful counter-interpretations and a strategic means to attain a more balanced account of the data.

7.10.5 Value for use and capacity building for people

Alongside the epistemic criteria for ensuring the methodological and theoretical robustness of the study, there are two further dimensions of quality which need mentioning here, namely 'value for use' and 'capacity development and value for people' (Furlong & Oancea, 2006). As an instance of applied and practice-based educational enquiry carried out by a teacher researcher, this study is born from practice and ultimately aims to produce knowledge that is directly relevant to practice. I draw from Elliott (2007) some of the 'usefulness' criteria, applicable to my study, which he develops from Furlong and Oancea's framework and refers to action research.

This study

- focused on a problem that is of practical concern to both the teachers involved
- enabled them to call their professional knowledge, teaching strategies, and educational aims into question
- extended their understanding of children's learning and opened up new prospects for future action
- widened the teachers' sphere of personal agency, contributing to their professional growth
- enabled a collaborative process of reflection on and articulation of the complex phenomenon of group musical creativity which is potentially of significance to other practitioners, thereby extending the knowledge-base of the teaching profession
- finally, the present study was profoundly moved by an ethical concern regarding the children (Groundwater-Smith, & Mockler, 2007). Indeed, the enquiry was not only fully compatible with educational aims and democratic human values, but it was also emancipatory and empowering for the children themselves by nurturing their creative potential as musicians and learners.

7.11 Ethical procedures

The research was carried out safeguarding all participants involved, according to the procedures of the Ethics Committee of the University of Exeter and in adherence to the British Educational Research Association (2011) ethical guidelines. In order to assure the participants' rights in relation to the study I adopted the following measures:

Voluntary informed consent - Being the participants children aged 5-7 years, after the beginning of the music course and prior to the beginning of the data collection I invited the parents to a meeting in which I presented the purpose and procedures of the research project, distributed an information sheet, discussed with them possible issues and answered their questions, and eventually asked them to sign an informed consent form (see Appendix A). I was confident enough that the relationship of trust that is usually established with all clients of the music school and the special chance for the children to enjoy a meaningful musical experience would ensure a positive response from the parents. As is the custom of our music school, they had at any time the possibility to attend the activities, to be directly informed about the progression of their children, to talk with us about any problems, and to attend an open session at the end of the school year.

Confidentiality, anonymity, and compliance with the Data Protection Act - Audio or video-recordings, transcripts of talk, and any other form of documentation collected in the study were held in confidence. They were not used other than for the purposes of the research study and third parties were not allowed to access them. All collected data have been held and used on an anonymous basis, with no mention of children's names. The anonymity of the participants was protected by using fictitious names in any written accounts regarding the study. The research was not concerned with personal information about the children. Should any issues have arisen during the study which were deemed 'confidential' by the parent or their children, the publication of the results of the study would have avoided any direct reference to the persons involved. The security of all written, audio and video materials collected during the research was guaranteed by storing them on electronic devices (computer, back up storage) that were protected by passwords and were not accessible to anybody other than the researcher. Parents were also informed that excerpts of the collected materials regarding the purposes of the study could be used in the final thesis and in conference presentations.

It is also important to know that, by law, the music school carries out its activities in compliance with the Italian Data Protection Act (Decreto Legislativo n.196, 30/06/2003 – "Codice in materia di protezione dei dati personali" – full text in English: <http://194.242.234.211/documents/10160/2012405/DataProtectionCode-2003.pdf>). The

music school normally asks all pupils' parents for permission to take photos or videos during the learning activities, with the exclusive aim of using them in the context of teacher education initiatives, publications, conferences and research studies (including this one), and in ways that do not compromise the dignity of the persons involved. According to the above mentioned law, parents are entitled at any time to ask that such images or videos be cancelled or destroyed.

Right to withdraw from the project - Taking part in the research was entirely voluntary. At any time children had the absolute right to withdraw from the project without giving any reason for it and without any kind of penalty.

Assessment of possible harm and benefits to research participants - Given the nature of the research study – a naturalistic inquiry about an educational situation – parents were assured that there would be no danger of harm that might be caused to the children involved. Rather, it was essential to the very purpose of the project that children could gain an intense experience of creative music making, guided by two music teachers who were fully devoted to the success of the enterprise. Thus, every measure was taken to put them at their ease and to reduce a possible sense of intrusion which could have arisen due to the research process. In any case, should the unexpected possibility of detriment or emotional harm of any kind have arisen during the inquiry, the researcher would have immediately desisted from any actions that caused it and would have brought the case to the attention of the children themselves (wherever appropriate) and of their parents.

Declaration of interest - Parents were informed of the exclusively scientific nature of the research study. For their children's participation in the research project parents did not have to pay any added fee (beyond the regular fee for the music course, as foreseen by the music school). No commercial interests of any kind were involved in the study.

7.12 Summary of the chapter

From a methodological point of view, based on the research questions this interpretive naturalistic study adopts a qualitative approach which combines elements from case study approach, ethnographic approach, and practitioner research. The particular methodological orientation of this inquiry is here defined as 'exploratory practitioner research for understanding', in that a teacher researcher is attempting to investigate and understand a phenomenon (children's group creativity in music), rather than to change or

improve pedagogy. The chapter provides details about the ethnographic methods of data collection and about the kind of thematic analysis which were adopted. Further, it discusses how issues of trustworthiness and quality were dealt with, as well as the ethical procedures which were followed.

In the following Part Three, I present and discuss the findings of the study, and finally draw some relevant conclusions.

PART THREE: FINDINGS, DISCUSSION AND CONCLUSIONS

Introduction

The purpose of this enquiry, as already stated in the Introduction to the thesis, was to investigate and understand how 5-7-year-old children interact when they are engaged in collaborative creative music making. Four subsidiary questions focused on specific aspects of children's creative interactions, namely the nature of these interactions in terms of the communicative media employed (bodily, musical, verbal – RQ1), the component dimensions of creative group work which influence children's collaboration (RQ2), the meanings that children attribute to their creative experiences (RQ3), and the educational values that creative interactions have for children's learning (RQ4).

Part Three is structured on the basis of these four foci. After a short introduction providing information about the research group and the pedagogical approach adopted in the project, four chapters present the findings relevant to each question interspersed with the discussion in relation to the literature. At the end of each longer section or chapter more general considerations are made. A summarising chapter at the end of part three will draw together the main ideas and meta-themes which have emerged from the analysis.

In the text, direct quotes of the participants are typed *in italic* or, in case of transcriptions of longer dialogues, are isolated from the text as in longer quotes. The portions of text which describe creative episodes are signalled through a text-box in order to distinguish the findings from the ensuing discussion. The episodes are numbered consecutively (see at the beginning of the thesis the list of all examples). The code at the bottom right corner of each box indicates the session, the date, and the participants involved.

About videos: Videos are an integral part of the data, in that they have the potential to capture something much more effectively than words could ever describe. If the reader is using the PDF file – "00 Thesis" – contained in the Data DVD in the wallet affixed to the inside of the back cover, the video-clips are available through a link to an online database (password: res). Alternatively, if the reader is using the paper version of the thesis, videos are contained in the Data DVD (the videos are numbered consecutively – immediately after the link in the text there is a code "dvd.NUMBER"). The list of the contents of the Data DVD is at the beginning of the thesis.

As anticipated in the methodology chapter, the unit of analysis is the creative activity, based on which I seek to identify overarching themes concerning the interactions. I do not necessarily follow a chronological order in the presentation of the learning episodes, but rather I take out of the body of data those occurrences which are most representative of or in some way relevant to specific aspects of the interactions.

8. CONTEXT: THE PROJECT "RHYTHM, VOICE, MOVEMENT"

8.1 The group of children

The project "Rhythm, voice, movement" involved a group of eight 5-7-year-old children who met to make music once a week from October 2013 to June 2014 in a music school in Rome (see Appendix H for more information about it). The data which serves here as the basis for the analysis was collected in the second part of the year (sessions 12 to 30, from January to the beginning of June 2014).

I provide here a short introduction to the children. I use fictitious research names; children's ages are calculated at the beginning of the data collection phase, i.e. on 2014 01 08. We did not have an initial interview with the children or their parents, so the knowledge we had of them was limited to what we could directly observe in the classroom. The reader may wish to refer to the photos here to more easily identify children in the videos.

Alessandra (7y, 4m) was in the first year of primary school (instead of the second) and had been defined as a child with a moderate learning disability and some socialisation problems. She had no previous formal musical experiences but showed average rhythm skills and a good intonation.



Chiara (6y, 10m) attended the first year of primary school, did not have previous musical experiences. She was perhaps the shyest member of the group. Very close friend of Sandra and Lorenzo.



Fabiana (5y, 2m), the youngest of the group, second year (of three) of nursery, no previous musical experiences, entered the group on the 16th session. Perhaps too young for the kind of things we were doing, she left the group on the 27th session.



Flavio (6y, 0m), last year of nursery school (unlike the UK, in Italy children enter primary school when they are 6 years old). He had had no previous musical experiences. Very curious, inquisitive and reflective.



Giacomo (7y, 5m), second year of primary, had already taken part to CDM music courses in the previous two years. The most rhythmical child of the whole group, perhaps under-stimulated in relation to his skills or interests, not inclined to talk much.



Lorenzo (7y, 5m), second year of primary, previous and current experiences with music at school, not well coordinated in his movements, demonstrated a sensitive, reflective, and sociable character.



Sandra (6y, 8m), first year of primary, was in the same class as Chiara (they were very close friends). She had had previous experiences with music at school. Ordered and collaborative, inventive and open, she entered the group on the 16th session.



Sonia (7y, 6m), second year of primary, previous and current experience of music at school, loved singing and demonstrated high intonation skills. She was also very good rhythmically, and warm in her relationship with the group.



Given the range of ages, abilities, and the different backgrounds of the children, we considered this as a heterogeneous, mixed-ability group, requiring a broadly inclusive approach.

8.2 Sessions and activities

The sessions took place on Wednesday afternoons from 5 to 6 pm. Children would arrive directly from school, accompanied by their parents or carers. The typical structure of a session comprised some movement activity at the beginning, imitation and invention of rhythm patterns, some rote singing, and one to three creative music and movement activities, many of them extending over two or more sessions. The themes we addressed were intended to cover quite a wide range of different approaches to inventing individually and/or in collaboration with others.

For more information about the programme, see:

- Appendix B for a succinct description of the activities realised in the project;
- Appendix C, "Minutes of the sessions", for an account of the structure of the activities over the nineteen observed sessions;
- Appendix D for the full list of relevant creative processes and outcomes in the project.

It is important to note that I have not included all analysed data in this thesis, as not all activities were relevant to the topic of 'creative interactions': among these are teacher-directed rote learning activities and movement exercises for developing rhythm skills. I have focused on instrumental music making because this is more easily detectable and observable than vocal work. I have not included individual creative work, unless specific episodes were important to contextualise interactive creative work.

A note on the (background) role of parents in this study. In the context of the music school it was typically expected that children would share the fruits of their learning with parents through some convenient form of presentation or performance. As teachers of a private music school, we were relatively free to choose what we wanted children to learn and, by effectively communicating about our work, we had a certain power to help them look at their children's learning from our educational perspective, and avoiding unrealistic expectations. Nonetheless, 'what will we show at the end?' was certainly a concern for us, and this had an impact on the pedagogical process, and consequently on the research. Thus, we had ample opportunity to do what we deemed appropriate and significant for the children, but we had to remain within the boundaries of what could be judged as 'good music teaching and learning' by average middle-class parents in Rome. Such were the constraints and tensions inherent in this study, as well as the conditions under which our work as music educators was made possible.

8.3 Pedagogical approach

Our aim as teachers was to engage children in a variety of music and movement collaborative creative activities. The focus was primarily on providing an open structure within which children in an experimental attitude could generate ideas, either individually or mostly collaboratively. The values underlying this child-centred and creative approach were acceptance, respect and promotion of diversity, curiosity, autonomy in thinking, and trust. We used a mixture of pedagogical strategies, ranging from instruction through imitation to self-directed and cooperative/collaborative learning. The structures of the

learning pathways varied from straightforward creative sequences to more elaborated and complex structures encompassing repeated cycles of preparation / invention / presentation / reflection. Creative pair or small group work was the central part of the sessions, and it often represented the culmination of longer processes of preparation to it.

I should introduce here a concept, mutuated from the Orff-Schulwerk, which I find very useful in understanding and describing the pedagogical approach taken in this project, namely *Gestaltung*. Derived from *Gestalt* – in German 'form', 'shape', 'design' – *Gestaltung*, as commonly used in creative music education approaches in Austria and Germany (e.g. Köneke, 1982), refers to both the process and the product of giving form to something, and indicates the phase of designing and structuring an object, as well as the resulting configuration and arrangement of the outcome. With regard to music and movement creative activities, I use *Gestaltung* here to label the result of a creative process. The convenience of using this term lies in the fact that a *Gestaltung* can refer to both improvisation and composition, in that it points to the process of shaping ideas – the fact that some ideas have been worked upon and organised in some way – but it remains open as to the degree of stability and closure of the object itself. Thus, a *Gestaltung* is, for example, what is presented after a group work phase, which could still be largely tentative, in progress, and improvisatory and only partly tending towards a composition in the strict sense of the word. Given the openness of most 'pieces/objects' that these children produced, I think that *Gestaltungen* is the best way to label them, without getting entangled in an unresolvable linguistic discussion about how to exactly define each time such outcomes, whether explorations, improvisations, impro-compositions, or compositions. As a thinking tool – which I extensively use in my work – *Gestaltung* while indicating a product still conceptually retains much of the openness of the process. Indeed, any 'end result' of the processes which I will illustrate below can be seen as a provisional sub-result of a larger evolving process. I do hope that the use of this foreign word – untranslatable, at any rate – will not be a hindrance for the English reader.

The main criterion we adopted here in selecting the activities was that children had to invent 'from scratch', i.e. based on an improvisatory or compositional idea, strategy, or process which had to be substantiated with their own musical choices. My task as a teacher – as I intended it in this context – was to provide the researcher with a rich amount and variety of creative collaborative processes in their early or middle stages of development. In this sense, the work was very much orientated to the process of invention, rather than to the resulting product. The *Gestaltungen* which children produced were more the last stage they achieved during a virtually ongoing generative process,

than crystallised and refined objects well consolidated in their minds. Thus, we guided them through a playful process of ongoing exploration of creative music and movement ideas, which yielded each time new pieces, often largely provisional and improvisational, or at best good second or third renditions of an evolving piece.

9. EXPLORING THE NATURE OF CHILDREN'S CREATIVE INTERACTIONS IN MUSIC

This chapter presents the findings of the study relating to the first subsidiary question, i.e. about the different kinds of interaction which take place in children's collaborative creative work. In the following sections I describe, analyse and discuss a number of creative episodes involving nonverbal, musical and verbal interactions. I then consider the role of interpersonal relationships and power relationships in shaping children's interactions. The chapter closes with the distinction between cooperative and collaborative as functional to identify different kinds of division of labour in children's collective activity.

Of course, each of the reported creative instances can be relevant to diverse standpoints, and in the text I may refer back to some examples previously examined under a different light. The reader may wish to take the following as a 'cumulative picture' (the expression is from Burnard's thesis, 1999) of how these children's creative interactions appeared.

9.1 Communication media (bodily, musical, verbal interactions)

A starting point for categorising different kinds of interaction is to take into account children's observable behaviour and the media of expression and communication they used in their exchanges. In the following I distinguish *body-based interactions* – paraverbal and nonverbal means of communication, embodied interactions in movement/dance, and embodied musical communication – *musical interactions* – different ways of relating to each other in term of musical roles and intentions – and *verbal interactions* – the ways children used talk in the negotiation of decisions and in the expression of ideas and concepts.

9.1.1 Bodily interactions

9.1.1.1 Nonverbal, body-based communication

Perhaps the best example of interaction based on paralinguistic and nonverbal means is 'moon and aliens', where the emotional tone of voice, pitch contour and loudness, together with facial expression, bodily gestures and movement contribute to the liveliness of the exchange. Children were working on 'iconic' improvisations representing with onomatopoeic sounds some objects of reality as a way to introduce the idea of contrasting relationships between purely musical elements. Here I ask Flavio to suggest a

'landscape', and he chooses the moon, on which he puts an alien. After a first trial we decide that some children will make with me the sound of the moon, while Flavio and Lorenzo decide to play the aliens with Valentina. The ensuing improvisation is exhilarating:

N. 1 "Moon and aliens" (improvisation voice and movement)

On the background of the quiet sound of the moon three aliens meet, start communicating, and end up discussing animatedly in their strange language (<https://vimeo.com/104223791>, dvd.01). The emotional impact of the improvisation is so strong that Flavio goes on 'quarrelling' with Lorenzo and Sonia, fully identified with his role as alien (<https://vimeo.com/104223831>, dvd.02)

s.21/30 20140319 F,L,V

There are no spoken words in this improvisation, so the interaction occurs purely at the level of expressions, intentions, and emotional states. Both Flavio and Lorenzo are communicating with their whole body in their vocal/physical interaction. In the swift turn-taking of this 'dialogue' there is a strong dynamic development. Indeed, the unexpected escalation has a theatrical effect and brings the group to laugh. The starting idea was Flavio's and the group has realised it in a funny way – he later mentioned this as a significant moment for him.

A question with regard to this kind of process: whose creativity is this? We – here I mean both children and teachers – are all involved in a group creative process, in which each of us added their piece to a group construction which proved to be enjoyable for all. This is a good instance of 'ideas germinating in the interaction', where novel ideas appear for the first time and are taking shape here and now, and there is a good balance of emotion and cognition, individual and group, structure and free exploration. A collaborative success.

9.1.1.2 Embodied interactions (movement-dance)

In the course of the project children experienced movement in a variety of ways, both as a preparatory and complementary part to creative musical processes. Through movement games they could

- build the group and facilitate relationships
- open or close a phase of work – see for example here an instance of dancing as a joyful outburst of group energy at the end of a session
(<https://vimeo.com/104224012>, dvd.03)

- listen and coordinate their invented whole-body movements with an external source – e.g. 'filling the hole' in a rhythm pattern by improvising body shapes in the rests (<https://vimeo.com/104431255>, dvd.04)
- interpret through movement specific parts within the music, as a sort of Dalcrozian 'active listening' exercise. Here (<https://vimeo.com/104224033>, dvd.05) Chiara and Fabiana as a duo match their movements to the sax melody in the foreground, Giacomo and Sonia independently dance the semiquavers of the rhythmic accompaniment, Lorenzo presumably follows that same part by kicking on the accent, while Sandra and Flavio move to the background string drone. Alessandra appears to be dancing and curiously observing the others.

Many times, single children were asked to present the movement they had invented so that the group could imitate it. This way, different ideas were shared, discussed, made clear or developed, with the added satisfaction of seeing one's own movement acknowledged and performed by the whole group. Thus, interactions among children were occurring also at a higher timescale, as over time children constructed a shared body of ideas and experiences related to movement, music, and individual invention.

An example of embodied interactions in choreographical performance is the following. In session 13 and 14 children worked on composing a movement sequence based on graphic notation. After having analysed the elements of the score drawn by the co-teacher on the whiteboard (see Figure 16), children split in two small groups and translated the graphical structure into a sequence of movements, initially accompanied with voice. Out of the same stimulus two choreographies took shape which interpreted in different ways the visual signs.

I concentrate here on the bodily interactions during the performance. Later on I will come back to this episode to analyse the interactions during the process of composition.



Figure 16. Graphic notation for group movement invention

N. 2 Composition of a movement sequence based on graphic notation

Alessandra, Chiara and Sonia

1) Three dots: Alessandra and Sonia turn around Chiara holding hands, then widening and lifting the arms. 2) Spiral: they turn together holding arms. 3) Five lines ('sun rays'): they move to the wall hitting it with the hands. 4) Little final point: they jump together. (<https://vimeo.com/104223081>, dvd.06)

Flavio, Giacomo and Lorenzo

1) Three dots: They stamp with one foot, then stronger with the other, then jump on both feet. 2) Spiral: rapid turnaround. 3) Five lines: they pronounce rhythmically the five vowels *a e i o u*. 4) Little final point: they go down and roll backwards. (<https://vimeo.com/104223211>, dvd.07)

s. 14/30 20140122 AL,C,S –F,G,L

Many of the features of the interaction in this performance are to do with music and rhythm, as the issue is how to coordinate one's own movements in time with the others. Although this is not a rhythmic activity in the strict sense of the word, the issue of performing together an ordered series of actions implies much synchronisation in the group. In the girls' performance it is evident how Alessandra is scaffolded by Sonia and Chiara, who gently remind her and guide her with whole-body gestures during the execution of the sequence (she was included in their work in the second session, having missed the first one in which the girls had arranged their composition). Slight micro-adjustments in the preparation of each subsequent movement show how they are striving to achieve synchrony. The boys' composition is more clearly based on a duple metre – Giacomo was the one who turned it into a rhythmic sequence and leads the group. Flavio has some difficulties in following and is a bit behind. Being two years younger, he does not have the same motor coordination skills and the same ability to memorise a movement sequence as the others.

N. 3 Composition of a musical sequence based on graphic notation

Having internalised through movement the temporal structure of the movement sequence, children transfer it to the instruments.

The boys' orchestration distinguishes two roles – Lorenzo playing the dots on the claves, Giacomo and Flavio the spiral and the five vowels on the drums, and Lorenzo closing with a stroke for the final dot. (<https://vimeo.com/104223263>, dvd.08)

The girls opt for a mixed solution, where Sonia accompanies Alessandra's and Chiara's movements on claves, chimebells and metallophone – Chiara is the appointed leader. (<https://vimeo.com/104223082>, dvd.09).

s. 14/30 20140122 AL,C,S –F,G,L

I interpret the uncertain synchronisation between Flavio and Giacomo as being due to Flavio's failing perception of an underlying beat, which Giacomo instead feels very strongly. As is evident by the five strokes on the vowels, he cannot anticipate what is coming next, but he is ultimately able to align on the beat already by the forth stroke. I see him as an uncertain follower who tries to cope as best as he can with the difficulty of 'keeping pace' with his more expert partners – a bit frustrating for him. In the girls' group, Sonia gets lost and arrives too late when she has to play the metallophone. Later on she comments that she liked what they invented, but not how she performed it because she made a mistake out of distraction. A major issue, which arises in such examples of aural composition, is that of memory and alertness during the coordinated execution of a jointly agreed sequence of actions (this is valid for music as well as for dance).

9.1.1.3 Embodied musical communication (musical gestures – synchronisation)

A third strand of bodily interactions concerns what I would define 'embodied musical communication', that is the area of those physical, movement-based interactions which have an immediate relation to music, in particular to temporal structures and rhythm.

Musical gestures

Either spontaneously or as a planned device, children used 'musical gestures' and movement cues to signalise a change in the process of performing.

N. 4 "Pedestrian crossing the street": Lorenzo's gesture for the ending

In this short composition I play the zebra stripes on the glockenspiel, while Lorenzo plays the pedestrian walking (note how he has removed every second bar of the xylophone so as to represent the steps on them). The important detail in this performance is the movement cue for the ending: we stop playing as soon as Lorenzo kicks away the beater he placed on the floor next to him.

(<http://vimeo.com/104224514>, dvd.10)

s.25/30 20140416 L,A

The group took a while to notice what kind of signal Lorenzo and I were giving each other, and we had to repeat it more than once – Chiara laughed a lot when she eventually realised it. Finding an ending had definitely established itself as an important decision to be taken in the creative process. This episode further highlighted the necessity for one of the players to give some kind of nonverbal signal to the others in order to get to the planned conclusion.

At other times children made up special gestures to communicate to the partner a change of roles.

N. 5 Pair improvisation "Do it like me"

Flavio and Lorenzo decide to present an improvisation which, as they explained to the audience (this was the 30th session, which was open to parents), is based on the following rule: Flavio begins by playing something on the drum and Lorenzo matches his movements. Then at a certain point Lorenzo touches with his left hand the side of the bongos (so swiftly that it is almost imperceptible in the video) and they swap roles. The ending is a tremolo crescendo which should culminate in a last stroke together (<https://vimeo.com/104224800>, dvd. 11). I did not have the impression that their performance was clear enough, so I asked them to repeat it, trying to make things more obvious and visible for the audience. In the second version (<https://vimeo.com/104224745>, dvd. 12) Flavio finds a new movement pattern, i.e. playing only with one hand, and Lorenzo promptly imitates him. After they swap roles, Lorenzo's new ideas are to stop suddenly, which Flavio picks up immediately, and to try out a pianissimo (where he also uses his facial expression to mean to his partner that he should pay attention). In both renditions the final stroke is not synchronous – they still have to learn how to give each other a correct signal for the beginning or ending.

s.30/30 20140604 F,L

The rule they have given themselves implies a fundamental interactive behaviour – 'do it like me', i.e. synchronous imitation – and, although seemingly simple, it can be played in many different and surprising ways. It is a rule based more on the kind of movement which one does on the instrument rather than on the kind of sound that is intentionally sought. I appreciate the high level of attentiveness, eye contact, engagement, and attunement that both children showed in this piece.

Synchronising

At this age the ability of synchronising one's own movements within their own body, with an external sound source, with a partner, or with the group is still forming. The acquisition of entrainment skills marks a significant developmental transition in children's musical growth in that it opens up a new world of musical possibilities. In the project these children experienced different ways of achieving synchronisation through a variety of movement and rhythm activities, both instructional and creative, and both individually and in collaboration with others. I report here a selection of moments (out of the many) in which they were facing the challenge of coordinating their physical and musical actions in time with others.

To begin with, the idea of two children for dancing rhythmically together:

N. 6 Synchronising as a pair with an external beat: "Sword fight"

Given the task of finding a movement with a partner and performing it to the rhythm played on the drums by the teachers, Giacomo and Lorenzo pretend to have a duel. Here (<https://vimeo.com/104223718>, dvd.13) the whole group replicates their idea, accompanying the movements with voice. Some children then suggested having only the two of them fighting in the middle while the rest of the group is sitting (some start clapping, too), as in a sort of ritual warrior dance. (<https://vimeo.com/104223720>, dvd.14)

s. 19/30 20140226 G,L

Perhaps thanks to the image used – very present especially in males' imaginary world – it is remarkable how intense, whole-bodily, and effectively synchronised their movements are.

In many cases, however, the synchronisation was more unstable. Synchronising implies anticipating what is going to happen next and continuously checking the correctness of one's own movements in relation to the given beat/rhythm (either internalised or external). The following episode is a very clear instance of an uncertain synchronisation with a group rhythmical action, where a child partly 'fluctuates around the beat'.

N. 7 Uncertain synchronisation with the group: performing a rhythm structure with body percussion

Chiara shows with great sureness the rhythm pattern with body percussion which she has invented (three patsches, rest, and three claps, rest: OOO . XXX .). In order for the group to imitate it and repeat it four times, she gives the rea-dy-go-and to the others. In the group performance she begins well in time and

synchronous with the rest of the group. By the second repetition she has a light initial delay on the first stroke, which becomes more evident in the third repetition. In both cases she re-absorbs the delay by accelerating the following strokes. By the fourth time, however, she begins really too late and loses the synchrony: instead of three patsches she performs only two, because she realises that her second patsch is already with the others' third one, and then she 'hurries up' performing four claps instead of three, but ending exactly on time with the last one, so that eventually she recovers the alignment with the group.

(<https://vimeo.com/104222835>, dvd.15)

s. 13/30 20140115 C

The question is 'what is happening here?'. It is apparent that Chiara has internalised the movement sequence well – she has invented it – and that overall she connects to the group rhythm, so she is also listening well. To understand what is the origin of her uncertainty, then, it could be helpful to distinguish two parallel systems, i.e. the 'voice/thinking system', and the 'motor system' concerning whole body or limb movements. The latter appears to be slower, or less responsive and the developmental goal is to learn to coordinate the two systems, with the thinking pulling the motor action. Also, another reason for the delay might be that Chiara perceives each repetition as an isolated musical structure, and does not perceive the continuous flow of beats underneath, in particular the silent beats after the three patsches and the three claps. This could be the reason why she 'stops' every time, does not anticipate the next repetition and only 'reacts' to the group who have gone forward. In my view, this basic example makes clear what often happened in creative group situations where the children knew what they had to do because they had planned it, but due to uncertainty they did not achieve synchrony as a group. This kind of mechanism is recurrent throughout the body of data and raises the issue of a knowledge-base as a prerequisite for being successfully creative together (the reasoning being: the better we can synchronise, the more we can do in music).

An example of the challenge of synchronisation distributed in a group of three children occurs immediately afterwards:

N. 8 Synchronising to a (shared) internalised beat sequence: "Circus horses"

After having imitated the ideas of each individual child, the group split in two subgroups who had to put together their movement ideas. Chiara, Flavio and Sonia (<https://vimeo.com/104223079>, dvd.16) followed the image of circus

horses to arrange their spatial position, and divided the rhythm structure into two parts, Chiara and Sonia performing the tum tum tum (OOO .), and Flavio responding with three claps over his head (XXX .).

s.13/30 20140115 C,F,S

In order for the group to perform the four repetitions in a fluid way, each child has to maintain an internal perception (an 'internal voice') of how the rhythm goes and has to micro-adjust to the unexpected variations generated either by themselves or by the others. Again, Chiara has some difficulties in being in sync with Sonia – for the reasons explained above, with the added difficulty that children's relative positions make it difficult to establish visual contact – while Flavio performs his *cha cha cha* with enough precision to allow Sonia to rhythmically connect with him. In spite of the imprecision, the group performance holds well (though Chiara does not perceive the fourth repetition as the last one, and would go on, as being now in the flow). The solution children found through division of labour represents a good instance of positive interdependence in cooperative work (Johnson & Johnson, 1999): everybody performs a part of the sequence, together we do the whole.

As a comparison to the two examples of 'creative synchronisation exercises' above, the next episode shows how more complex the rhythmical interaction among children can become when they perform together a 'real' composition of their own with a more intricate musical texture. Alessandra, Chiara and Sonia perform their free composition in the last session (n.30):

N. 9 Trio 'free-metrical melody on unstable ostinato'

Alessandra and Sonia use material they have developed in the preceding session: Sonia starts with her rhythm | Du Dude . de Du |¹ on the darbukka and Alessandra with her repeated tremolo sequence *cf df ef* on the alto metallophone. Chiara, who was not present the previous time, makes her best to follow Sonia with the triangle, struggling to grasp the 'difficult' rhythm played by Sonia, especially because of her irregular performance of it. Alessandra gives the cue for the ending by playing an ascending glissando and then a stroke on the wooden side of the metallophone. Sonia concludes with two big strokes on the darbukka (<https://vimeo.com/104224743>, dvd.17).

s.30/30 20140604 AL,C,S

¹ See the conventions for the transcription of rhythms at the beginning of the thesis.

When it comes to such complex material (it would be interesting to regularise the whole and write it down) the rhythmic synchronisation is very difficult to achieve. Both Alessandra and Sonia are too immersed in their own part to have enough attentive resources to connect, and proceed almost parallel to each other. In the group Chiara is the most interactive, closely watching and trying to match Sonia's strokes, though she in a way cannot succeed. A question is whether they can perceive themselves from the outside, probably to a low extent here (but this may at times also occur among more expert musicians). However, this is very much the evaluative perspective that a teacher can have. For them the meaning of the experience is probably elsewhere, more in the action of doing it together, of inventing music and having ownership of it, rather than in the search for rhythmic exactness (more on this in chapter 11).

The issue of synchronisation arose in many other interactions during the project, while children were inventing or performing pieces which involved some kind of rhythmic texture. In some cases children were successfully synchronising – I report some of these examples in the following sections – but in many others the synchronisation was only partial or missing. Based on the data of this project I can tentatively provide some reasons for synchronisation failure:

- *no internal alignment with a beat*: one out of the two children is not playing based on the beat, so that the pair cannot be in sync, either because the child is not yet able to coordinate their movement with an internal beat or because the child, though able, is not actively and attentively aiming for synchronisation
- *no active coordination with the partner*: children do not look at nor listen to each other and consequently they do not adjust to micro-variations in speed and regularity. They rhythmically 'drift away' from each other without even realising it. The crucial point is how fast an internal control system is (a feedback cycle 'play-control-adjust') in alerting the child that adjustment is necessary – and how much the effort is sustained over time
- *multiple variables in group situations*: if in the group there are three or more children it can happen that there are some dyads or subgroups correctly synchronising, but as a whole the group is not in sync. A reason for this is that the number of one-to-one relationships in a group, i.e. 'me listening to you and you to me', increases very rapidly with the number of group members. For example, in a group with just four children the web of inter-relationships is already rather complex for children of this age, as the network consists of 6 different connections. Thus, the more children who are playing in the group, the more likely it is that some of these single relationships are not rhythmically aligned, with the

result that the group as a whole is *not* in sync. This is a reason why it can be very difficult to find synchrony in a bigger group and more generally, why it would make more sense to reduce the complexity of the group interaction by having groupings of at best two or three, maximum four children (this resonates with Baines, Blatchford, Kutnick, *et al.*, 2009).

A helpful construct which helps conceptualise the varying degrees of being together in rhythm is "synchronisation bandwidth" (Allgayer-Kaufmann in Clayton *et al.*, 2004, p. 46), which refers to the fact that perfect synchronisation is rare and that real-world group playing, even among good musicians, involves a fluctuating regularity, not an absolute simultaneity. In this perspective, the issue is to what extent this vagueness can be acceptable (for children themselves and for an outside listener) and, most importantly, to what extent children are able at each point in time to recover a shared beat and keep the music going.

9.1.1.4 The primacy of the body

These children's experience of group creative music making was strongly 'embodied'. Interactions occurred as acts of nonverbal communication (including voice!), generation of coordinated sequences of movements and patterned motor actions on the instrument, improvised or agreed-upon physical gestures for musical communication, or entrainment to a shared beat. Based on the observation and analysis of the above mentioned examples – as well as of many other instances throughout the study – my argument is that the foundation of musical interaction, communication, and collaboration is in the body, that is in the lived, bodily-emotional-cognitive experience of being in contact with a partner. Musical intersubjectivity is grounded on bodily relationships. For these children, interacting creatively in music was a multi-sensory experience involving kinaesthetic, vestibular, aural, and visual senses (Burnard, 1999, 2002). These findings resonate with discourses about embodied cognition in music (Bowman, 2004; Phillips-Silver, 2009; Walker, 2000 – see section 2.1). They also support Young's (2008) claim that in the investigation on collaborative music making the emphasis should be placed, rather than on linguistic structures, on the nonverbal, body-based, and inherently musical processes that constitute children's relationships through music (see section 6.3.2).

9.1.2 Musical interactions

9.1.2.1 Interaction with the musical instrument

Prior to examining the ways in which children interacted with one another, it is important to point out that the first interaction is with the instrument itself, which the child chooses, explores, or uses for their musical purposes. An interesting example about Alessandra and the alto metallophone:

N. 10 Free solo exploration on metallophone: "Chattering frogs"

Working individually on making music to a picture, Alessandra imagines "seven chattering frogs" in Monet's painting "Nymphéas à Giverny". The image is for her just a background scenery of an imagined event taking place in it ("you can't see them there", she explains later). She plays an uninterrupted flow of different gestures – a chat, indeed – that combine playing the metallophone with or without sticks, shaking the maracas, and hitting the claves on the metallophone's bars. (<https://vimeo.com/104223261>, dvd.18)

s. 15/30 20140129 AL

This is not a composition, nor is it an improvisation with a pre-conceived structure. Rather, Alessandra appears to be freely exploring different ways of using the sounding objects she has in her hands, and the starting point, rather than some kind of 'plan', is the manipulation of the instruments and the discovery of how they sound. Eventually we had to stop her (we were running out of time), as she would have gone on much longer, fully absorbed in her play and unmindful of the context. Later on in the project the metallophone became her preferred instrument and she developed a whole vocabulary of sound-movements and a surprising dexterity in playing it. This episode marked the beginning of this stable relationship. An outstanding example of the kind of technical skills she developed over time is the following:

N. 11 Composition for metallophone with accompanying drum

While Sonia accompanies on the small ceramic drum with a roughly rhythmical ostinato, Alessandra plays an ascending scale, symmetrical glissandos, descending scale, and then symmetrical glissandos with the beaters' sticks. An ending formula *bc'd'e'f'c.* closes the piece. Alessandra is very present and plays with a sense of mastery as a soloist, but does not seem to connect to Sonia, who has a less powerful instrument. (<https://vimeo.com/104224666>, dvd.19)

In the second rendition of the composition, it is Sonia who observes Alessandra and matches her last glissandos with a tremolo on the drum.

(<https://vimeo.com/104224642>, dvd.20)

s.28/30 20140514 AL,S

Alessandra's pattern of behaviour is here 'playing side by side', without really looking at her partner or attempting to relate to her playing. Indeed, what she is doing with Sonia would also perfectly stand on its own as a solo composition. Sonia, on her part, did not seek to have a more relevant role in the piece or to discuss with her partner some 'intertwined actions' in the music. Whether this can be attributed to Sonia's lack of self-confidence or to a real difficulty in engaging Alessandra in a negotiation – which emerged elsewhere, too – or to some other reasons, is an open question of interpretation. What is striking here, at any rate, is Alessandra's increasingly wide vocabulary of musical gestures on the metallophone and the precision with which she performs her composition two times in an almost identical way.

The instrument is in itself an important source of generative ideas for children's music play (Young, 2003). In the "dialogical process between sound and action" (Burnard, 1999, p.291), as exemplified above, the interaction with the instrument is shaped on the one hand by the physical layout of the object, which induces certain kinds of motor-musical actions and "idiomatic gestures" (Claudio Dina, personal communication), and on the other by the child's expressive and communicative intentions, which guide her in selecting a particular way of playing it because it is functional to the idea they have in mind. So, both the actual and the perceived properties of the instrument matter, both 'what the tool can do' and 'what I can do with the tool' (Wood & Attfield, 2005). And, in this sense, the alto metallophone represented for Alessandra a high-affordance tool, offering to her a host of creative possibilities to be perceived, invented, or exploited (Glăveanu, 2012).

9.1.2.2 Interaction and collaboration in improvisations vs compositions

The way children interacted and collaborated varied also according to their approach to the creative music making process and to the kind of musical task given by the teachers. In some cases it was the rule of the musical activity that explicitly prescribed some form of improvisatory here-and-now interaction or, alternatively, of musical creative problem solving with a definite composition as end result. In other cases it was the children themselves who chose differing approaches to free creative tasks, with some children opting for what in music-technical terms is called an improvisation and others for a composition. In the following, I briefly describe three types of Gestaltungen, ranging from extemporary improvisation, to planned improvisation, up to a finalised composition, and comment on the different kinds of interactions that they imply, both in the process of musical construction and in the performance.

Based on previous attempts about how they could imitate or contrast what a partner was doing, children engaged in a series of pair improvisations based on the following rule: along the circle, A begins with an idea, B joins in and they play something together (usually 20-30 seconds), then A stops. B invents a new idea, is joined by C, and so on. Here are some examples:

N. 12 Extemporaneous improvisation in pairs: "Dominoes"

Giacomo and Lorenzo (<https://vimeo.com/104223319>, dvd.21): Giacomo starts playing a random series of high notes on the xylophone, I ask him to find and repeat something, and he stabilises on a sort of melodic ostinato ('e'ad'ac'a, unwittingly going minor). On this Lorenzo starts improvising single slow notes on the macrobeats, which could be interpreted as a melody on the ostinato. Giacomo at the end does not play what he has in mind and says he 'made a mistake', interrupting the improvisation (nonetheless the fortuitous outcome is a concluding phrase). I would define this a 'proto-minor-ostinato-with-melody', the sprouting of a potential piece.

Valentina and Chiara (<https://vimeo.com/104223369>, dvd.22): Valentina plays three slow pairs of peaceful notes on the metallophone and a rest (an extended | du du du . |). Chiara finds a way to 'get in' by playing a single stroke on the darbukka, initially positioning herself after or on the first macrobeat. Scaffolded by a gentle nonverbal cue of Valentina, she eventually lands on the fourth macrobeat, where there is a rest to be filled, and they repeat this a few times. Valentina leads the ending by slowing down and Chiara closes with the last stroke. I would term this interaction strategy 'complementing', i.e. filling empty spaces in what the other is doing, concurring to form a consistent and fluid whole. Potentially, what the two are doing here could become the basis for a third player to invent something on it.

Flavio and Andrea (<https://vimeo.com/104223214>, dvd.23): Flavio is excited to be allowed to play what he wants, and declares he will "*do it loud*". He begins with an energetic pulse on the bongos, I join in by playing a | dude du | on what I take as a 4-beat ostinato. He plays some variations, keeps well anchored to the common beat, and leads the ending by imperceptibly slowing down, stopping and then giving an assertive concluding stroke. His role here is that of a 'leader', taking decisions for both, confident that the partner will follow.

Sonia and Fabiana (in a different session – <https://vimeo.com/104223762>, dvd.24): this is an example of 'no apparent relationship'. Sonia plays a wobbly ostinato | dude dude dude du | on the darbukka, which she cannot repeat with sufficient stability to possibly enable Fabiana to enter in rhythmical relationship with her. Fabiana is almost on her own, exploring the possibilities of her tambourine, hitting it or shaking it, staying musically 'alongside' and not in direct contact with her partner, even though they sit one beside the other and at times even look at each other. Sonia does not modify the course of her idea to adapt it to what Fabiana is doing. After a while Sonia just stops, and Fabiana stops a few seconds after her. There is not a clear and intentional ending in this short interaction, which is interrupted rather than concluded.

Lorenzo and Giacomo (<https://vimeo.com/104223676>, dvd.25): Lorenzo begins with what I could define as a non-beat-based drone/melodic ostinato (c ggg, which could rhythmically be assimilated to a | du daka di |), which he repeats with some variations/mistakes. Despite the irregularity of the ostinato, Giacomo succeeds in synchronising with Lorenzo's left hand, which is the first beat of the sequence. Here the more expert child, the swifter in terms of observation and synchronisation skills, follows the other by coordinating with the beginning of his partner's supposed cycle of action. This way there is a form of synchronisation and connection, even though there is not an underlying metrical grid.

s.19/30 20140226 wholegroup

These are all examples of 'free improvisation' in which there has been no preparation at all, so the partners have to build on the spot a shared and possibly coherent idea of what they are doing. Repetition of a rhythmic/melodic pattern was a first-hand strategy of the first player to provide a sufficiently stable and clear idea for the partner to position herself in relation to it. In spite of the lack of technical skills, they were learning to play the instruments at the same time they were learning to improvise and compose together – there is a remarkable effort on their part in establishing 'musical intersubjectivity' in these improvisations. As Burnard (1999) points out in her study with 12-13-year-olds, the intention in improvisation as a performance-oriented form of music making is to 'get in' (gaining access or an entry point), 'carrying on' (maintaining continuity in the flow of playing), and 'stopping' (finding an ending).

In the examples above the immediacy of improvising is evident in how the children were attentively trying to take decisions during the musical dialogue with the partner, as there had been no possibility to make up a plan in advance. In some of the group work phases, instead, some of the children opted for what Beegle (2010) calls a 'planned improvisation', i.e. a piece of music in which the basic traits are drawn in the preparation phase, but in the performance there is still place for new material emerging within the agreed structure. Here is an example with Flavio and Lorenzo:

N. 13 Planned improvisation: "Robot and sharks"

Lorenzo plays a roughly regular beat on the triangle and represents a robot walking on water, while Flavio scratches or hits the reco-reco to represent the sharks who are quarrelling and swimming under it.

(<https://vimeo.com/104224060>, dvd.26)

s.23/30 20140402 F,L

In the subsequent comments Flavio also explained that by hitting the reco-reco he was pretending that the sharks say "what a traffic today!". He will later on mention this piece as significant to him. The pattern of meaning making here is that of associating some form of imagery or narrative with the structure of the music. The strategy they are using is that of finding a rough idea or plot of what they want to do and then dive into the action without verbalising too much. This way they have a frame of reference which is sure enough to hold their playing together, but at the same time open enough to allow for extemporary digressions or unexpected ideas coming up during the performance.

Children did not have the same preferences as to the kind of strategy they adopted for working together: whereas Lorenzo and Flavio clearly preferred to intentionally improvise, other children were more inclined to fix ideas in the group work phase so that they could have a secure base and a detailed shared understanding of what they were going to do. Here is an example of pair composition with Sandra and Giacomo, which illustrates the interaction between them both in the process and in the resulting product:

N. 14 Pair composition "layered rhythm ostinato": planning and performing a piece

During the group work phase Sandra had initially found the rhythm | ka|du du | (handing: rr – /), backed by Giacomo with a pulse on the macrobeats | du du |.

Then Sandra transformed her rhythm into | du .kadu de | (r // r – / rr / – the handing turns), and Giacomo supported her with microbeats | du de du de |. Giacomo synchronised with Sandra, adjusting his strokes to possible

uncertainties in her playing. Sandra had also found a tremolo as an ending formula.

In the first rendition of the ostinato (<https://vimeo.com/104224413>, dvd.27), however, they happen to begin together and the rhythmical Gestalt resulting out of their attempt to synchronise anyway is a different ostinato, which takes shape in the first few seconds: Sandra gets to a | du dude | and G to a | du de du de | with a slightly faster tempo than before. After a while, perceiving that this is not what they intended to do, Sandra seeks to recover her initial idea, but does not succeed and is forced to go back to the other rhythm. Also their ending is not effective and they appear to be a bit disappointed. Having noticed that something had gone wrong, I invited them to play it again, but leaving Sandra enough time to play her rhythm alone a few times. Giacomo had to wait and then adapt to her. As the more expert player, he has the scaffolding role of establishing and maintaining the synchrony. The second performance (<https://vimeo.com/104224435>, dvd.28) is the 'correct' one, exactly what they wanted to do. After a while Sandra gets lost for a moment – the handing which turns at each time is technically not easy – but they soon recover rhythmical unity (they change phase, though). They react very quickly to each other and both contribute to re-establishing contact. They also perform well the ending they had planned: Sandra plays | dude dude du | nonverbally signalling it to Giacomo, and they close together.

s.23/30 20140402 G,SA

Giacomo's and Sandra's piece deserves particular attention, because it was the first example in this group of a truly rhythmical, i.e. pulse-based, instrumental interaction between differing rhythms – it marked the breakthrough for the group in progressing towards parts-playing. The issue for the children here was to correctly perform the musical ideas they had previously generated, refined and confirmed. It is an issue of memory and control. As this piece is an 'aural-based composition' (Burnard, 1999; Hickey, 2012), there is no notation supporting the process of exactly replicating the ideas they have fixed, so they have to rely solely on their ability to remember things in order to perform them correctly. The problem of 'keeping to the plan' arose in many other cases through the project, where children had to cope with unexpected mistakes due to uncertainties in the technical execution or in the memorisation of the music.

The focus of the study and of our pedagogical approach was on moments in which children jointly generate ideas, and not so much on finalising reproducible pieces. As

teachers we did not 'push' for replicable compositions to be worked out over time, revised, and then practised enough to be performed as a closed work. In this project children mostly made up new pieces each time, so that their Gestaltungen were always to some extent open and maintained some improvisatory traits, even in the case of 'planned and rehearsed' pieces. Towards the end of the school year children began to consciously use the words 'improvise' vs 'compose' and to differentiate between the process of interaction in group improvisation as opposed to that in group composition. Perhaps the clearest expression of this awareness was provided by Lorenzo in the context of a dialogue/interview in the second-last session in which we also talked about improvisation and composition:

L: [improvising is] to take one thing and... and... change it, the pieces, while you do it before an audience.

Then, comparing his own group's way of working in composition with that of an improvising group, he says

L: we have been preparing this performance for some time

A: uh, uh

L: we have done it this way. Instead F and G have done it with the drums but they have improvised. So, in the session for the parents they can change everything

Thus, the difference that Lorenzo sees between improvising and composing as a group is the possibility of changing something in the performance. Lorenzo represented in this group the member who is best able to put his reflections into words. Based on the data, I would claim that for the rest of the group this difference was only intuitively understood and practically experienced, but by no means as well articulated as, for example, the 12-13-year-old children of Burnard's (1999) study were able to do. A finding of this study is that these 5-7-year-old children were at best beginning to conceptualise creative music making as distinguishable in improvisation vs composition. Their way of creating and playing music was largely processual, to a certain extent based on an invariant framework which had been agreed upon, but on the whole still very open. It was more the process of giving form (Gestaltung) that was the important thing, the process of manipulating the material and playing with it. With regard to understanding children's creative actions and interactions in music an adult-musicological perspective might miss the point (this resonates with Burnard's conclusions). In my view, the perspective of early childhood research is much more appropriate in grasping this kind of 'musical play' as based on children's ownership of it, on their active emotional and relational engagement, on the activity in itself (rather than the product) as the significant core of the experience, and on the open-ended process of interaction among co-players as fostering high levels of shared understanding, reciprocity and cooperation (Broadhead, 2010; Wood, 2010; Wood & Attfield, 2005 – see chapter 4).

9.1.2.3 Musical roles in the interaction

In improvisation and, more broadly, in all creative music making the fundamental interactive behaviours between players are modelling, imitating, varying, and contrasting (Globokar, 1979; Meyer-Denkmann, 1970). I use these as a framework for describing and discussing the ways of relating to a partner or to a group that children experienced in the course of the project.

Modelling and imitating: doing the same

A strategy children practiced through movement, voice, or instrumental play was that of an individual member of the group (be it other children or the teachers) modelling an idea and the whole group reproducing it. Over time the group invented and imitated a vast number of individual ideas. Imitation thus became a first important way of learning and being connected in music. During the collaborative creative work with instruments it often occurred that children used the strategy of doing the same thing in the interaction with a partner, especially in the groups of three or four children (one child doubling another).

Here is an example in which Alessandra chose Sandra as partner and, as her two brothers (5-year-old twins) were also in the class this time as guests, they decided to include them in the piece and to give them instructions to play together:

N. 15 Group composition: Solo metallophone with drums and bell accompaniment

In the first performance of this piece (<https://vimeo.com/104224600>, dvd.29) Sandra plays the accompaniment with one of her brothers on drums (she plays the rhythm | du dude |, not actively looking and synchronising with him, so they are not together), while the other brother plays a bell background supporting Alessandra. She plays symmetrical glissandos with both beaters on the alto metallophone and then the notes cc' as an ending. At this point of the performance (children will explain later) she stops, thinking it is finished, but Sandra feels it is too early to finish and goes on playing. Alessandra repeats her planned structure again, playing glissandos and then cc' two times. Sandra closes with a short tremolo on the drum. Alessandra plays cc'a last time with the finger tips. In the second version of the piece (<https://vimeo.com/104224622>, dvd.30) they roughly play the same, but with some significant improvements. First of all, they are positioned in space so that they can see each other. Sandra and her brother on the drum are now much better in synchrony with their rhythm accompaniment – the quick reaction of the brother at the end and the eye contact reveal how connected they are now. It is interesting to note the micro-

adjustments of the brother in his successful attempt to synchronise with Sandra. Alessandra adds some improvised melodic phrases on the metallophone both at the beginning and at the end of the piece, enriching the structure she has previously played. The cc' is again the closing formula, repeated two times.

s.27/30 20140507 AL,SA, and SA's brothers

In terms of musical roles, Sandra is playing the background accompaniment and Alessandra is the soloist. There is not a direct rhythmical relationship between the two – Alessandra does not connect with Sandra's ostinato – but I find that the combination of the timbres of the instruments is successful. Further, Alessandra's technical mastery of the metallophone continues to grow, and she looks more and more confident and agile. The two brothers are involved in the group action (as legitimate peripheral participants, Lave & Wenger, 1991) through the strategy of imitation. One has to follow the sister and her rhythm, the other 'plays together' with Alessandra in that they share a common timbre of metal. Sandra's role as leader for her younger brothers becomes evident through the fact that at the beginning she gives them the entry with a glance, having the power to allow them to play. The musical group result is in my view well integrated and fluid, with a quiet and dreaming aesthetic character.

Varying and contrasting: doing something different

The other fundamental interactive behaviour in music is 'varying and contrasting', which can be developed along two axes, horizontal (producing something different in the linear succession of musical events, such as in taking turns or alternating between two players) and vertical (juxtaposing something different, such as in layered ostinatos or wherever two elements are taking place at the same time).

An example of horizontal variation and contrast is in the activity "Frogs' dialogues", in which children engaged in brief paired interactions using reco-recos.

N. 16 Pair interactions (taking turns): "Frogs' dialogues"

A child-frog is the leader and calls each time in different ways a partner, who can answer by imitating or by doing something different. Children found many ways to vary the calls – scratching or striking the instrument, a few or many sounds, loud or quiet, sometimes even with an emotional meaning attached to the musical utterance. The frog who answers, as well, has much freedom about how to relate to the call and what kind of answer they can give. See, among other leaders, Giacomo (<https://vimeo.com/104223418>, dvd.31) and Sonia (<https://vimeo.com/104223417>, dvd.32).

s.16/30 20140205 G,S,group

The variety of the musical utterances appears to be occurring 'naturally', perhaps due to the metaphor of dialogue itself (Giacomo later commented: "This is like having a chat"), which facilitates interlocutors to 'say' different things in turns. Here the metaphor is interaction as conversation. Also, the fact that children were all improvising on recos, which do not offer too large a range of musical possibilities, constrained the production of ideas to an ideal level, where the game afforded enough space to invent something new but not so much freedom as to become disorienting.

Children often used this strategy of 'taking turns' as a way to structure the pieces they cooperatively invented, as in the following example:

N. 17 Taking turns in cooperation: "The bear"

Chiara and Sandra represent a bear walking and sleeping by differentiating their roles, Sandra playing a sort of not-beat-based | du dude dude du | on the drum, and Chiara playing fast glissandos on the glockenspiel, then some random notes and a concluding stroke on the floor. The structure of the whole piece is that of a rondo, ABABABA. Both will mention "the bear" among the things they most liked and, indeed, the piece is well constructed and performed.

(<https://vimeo.com/104223535>, dvd.33)

s. 18/30 20140219 C,SA

Contrast in the vertical superimposition of musical events is something more complex (see Figure 17).

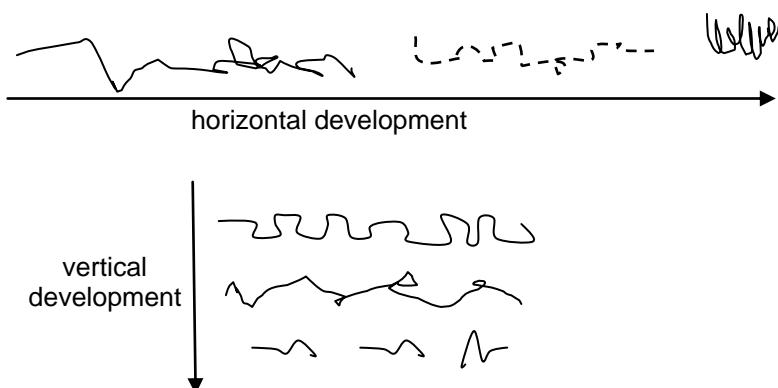


Figure 17. Horizontal and vertical development of musical material

A short digression is necessary here to introduce a pedagogical idea which was intended to guide and enrich children's collaborative creative endeavours, that of "figure-ground relationship". In the last part of the project, children engaged in a longer series of different activities centred on the idea of interaction as co-presence of two contrasting elements,

namely a background and a foreground figure standing against it. The concept of figure and ground is drawn from Gestalt psychology (Wagemans, Elder, Kubovy, *et al.*, 2012) and refers to a fundamental principle of perception according to which our mind processes visual data in such a way as to distinguish between a figure and a background. This ability to organise the percept, create a visual hierarchy, and identify a main object within a context is based on the key principles of proximity, similarity, closure, symmetry, common fate, continuity, good Gestalt, and past experience. These principles describe (rather than explain) the way in which we perceive things, and are extensively used as criteria in presenting visual information of any form (from cartography to design, to visual arts, etc.). Thus, to effectively differentiate a figure from its background it is important to intervene in appropriate ways on their respective size, shape, contour sharpness, texture, articulation, colour, and brightness. The Gestalt laws of perceptual organisation can be expanded from the visual domain to other sensory modalities, including the auditory (Spitzer, 2002). Pairs of concepts such as melody / harmony, solo / accompaniment, or main rhythm / background metre can be understood as types of figure-ground organisation of the musical material.

In the context of the research project we introduced this concept to children both as a perceptual principle – a way to listen to music – and as a constructive principle – a way to invent music. Our goal for children was to analyse music as a whole made of interrelated parts, instead of just listening to it as an undifferentiated flow (mainly a melody), which is what many children and unexperienced people do. In addition to that, we wanted children actively to create musical structures made of two distinct elements, a figure and a background, by taking on opposing roles in terms of timbre, pitch, texture, and duration, and integrating them as parts of a unitary action. Our hope was to go beyond musical interaction as linear succession of isolated elements ('taking turns', as had often occurred in many sessions) to get to interaction as relationship of contrast between contemporary elements within a whole (playing together two different, hierarchically ordered objects). An example of a vertical interaction of contrast is the following, in which Chiara and Sandra engage in a simple but effective rhythm ostinato:

N. 18 Vertical interactions: two-voices layered ostinato with bells and drum

Sandra on the darbukka repeats a regular rhythm | du du du dude | and Chiara follows her first two macrobeats with two bells with a right-left movement, which due to the bouncing pitched sounds of the bells casually generates interesting variations of a melodic phrase on two tones. Sandra has a closing formula, too:
| du du du dukade |. (<https://vimeo.com/104224513>, dvd.34)

This is one of the most crystal clear examples of a figure-ground relationship, in my view really a precious little gem, and a very good instance of creative interaction. It is a rare example, relative to this project, of a finished and well performed piece of rhythm polyphony (it flows well, it 'grooves'!).

'Just music'

It is important to note that this way of thinking in terms of musical roles implied for children the fact that they had to think in terms of "just music" (as Giacomo defined it). Whereas children often used imagery or narrative to attribute meaning to what they were doing in music – music as standing for something else (see 11.2.1) – in this case Sandra was indeed representing the 'sun hitting hard and setting down', but Chiara, instead, did not know 'what' she was doing. As Fabiana expressed it in the same session with regard to another Gestaltung:

we don't know what we are. We don't have an image.

This was a new theme emerging in the group, that of music *per se*, music which is not justified by its reference to some non-musical entity, an image or a story. I suppose that the emergence of this way of conceptualising music was also a consequence of the particular approach to creative music making taken here: by working on figures and backgrounds children were learning to conceive of music in terms of purely intra-musical relationships. Thus, the vertical interaction of two lines which are grounded on the same metrical structure and which are not associated to any imagery but exist on their own as 'just music' marks a major shift in thinking: a 'threshold concept' (Meyer & Land, 2003) functioning as a "portal opening up a new and previously inaccessible way of thinking about something" (p.1) and transforming the ways these children could understand, interpret and experience creative music making.

9.1.3 Verbal interactions in group work

So far I have been considering the kinds of interaction that occur among children when they were presenting the outcomes of their creative group work. The focus has been mainly on the end product, and specifically on the different ways children interacted, either physically or musically, when they performed their pieces. However, with regard to the compositional process, i.e. to the group work itself, a relevant role was also played by the verbal interactions which accompanied the physical and musical interactions examined above. Indeed, the negotiation of solutions was at least partly mediated by talk and the ways children established a shared understanding of the task was crucial to the effectiveness of their collaborative effort.

In the course of the project children were presented on more than one occasion with models of productive vs ineffective communication in group work. Though we, as teachers, could not have much time to devote to this specific aspect (we met the group just once a week for an hour), the basic principles of good communication and interaction or some kind of ground rules for collaborative creative work were for us always in the background as an important aspect of the curriculum. One of our aims was to raise children's awareness of the quality of their dialogue and overall communication during group work. This aspect of the pedagogical approach was informed by research on exploratory talk conducted by Mercer, Wegerif, & Dawes (1999) and Dawes, Mercer, & Wegerif (2000), and on group work by Blatchford *et al.* (2003) and Baines *et al.* (2009).

As already anticipated in the methodology chapter, an issue of the data collection was the substantial indecipherability of talk in the video-recordings, due to the presence of more subgroups working simultaneously with instruments in the same room. This was not just a research methodological problem, however, as it is a real-world problem, which any teacher working in the same conditions would face. In that noisy environment it was difficult to understand what they were saying (and at times children themselves were complaining that they could not hear what was being said in their group). Having children work in pairs on collaborative creative tasks at the computer (as in Hewitt, 2008, for example) would have made things much easier. However, in spite of this difficulty, during the sessions I could at least partly infer the nature of the developing group process by looking at children's body-language and overall behaviour, and later on the repeated viewing of the recordings enabled me to 'analyse backwards' from the Gestaltung to where those ideas had been produced for the first time.

Based on the data, a general observation is that these 5-7-year-old children used language to a limited extent (as Wallerstedt, 2013, also reports in relation to children of the same age). The primary role in communication was taken by the direct demonstration of what was meant, while verbal language had a complementary role in proposing and exchanging ideas. Lots of the words used were deictics – saying "Let's do this" or "this way" while practically performing the action – as already observed by Green (2008) with regard to collaborative work of older children. Given a shared commitment to solving the task, often only a few utterances were enough to indicate an elaborate set of musical actions (see also Young, 2008, in relation to 3-4-year-old's use of talk in musical play). Further, musical actions had to be shown because the necessary technical vocabulary to label them was largely missing. Thus, communication of meanings and intentions occurred at musical, nonverbal, and verbal level.

With regard to the literature on talk in collaborative work (see section 6.3.1), a challenging finding of this study on children's creative collaboration in music is that, though talk did have a role when they worked in small groups, words were no more than a subsidiary support to their musical decision process and, in comparison to sound and nonverbal language, words were probably the least powerful form of communication. In addition to this, it was also observed that, with regard to the kinds of talk children employed, in the instances of transactive dialogue (Miell & MacDonald, 2000) where these children were positively building on each other's ideas, there were more statements and cumulative utterances rather than critical questions or argumentations aimed at explicit reasoning (see also Hewitt, 2008). Creative activities require a different set of categorisations than those of exploratory talk (Mercer, Wegerif, & Dawes, 1999), as the goal of talking is a different one. Children were not discussing solutions to problems, rather they were collectively imagining and giving shape to something new. The best moments of children's interactions in this study could be characterised as 'co-constructive' talk (Rojas-Drummond *et al.*, 2006) or, perhaps better in the case of music creative activities, 'co-constructive communication', as children's ideas were expressed and conveyed as a mixture of nonverbal communication, musical and verbal utterances aiming to creatively build something together. This leads back to Miell and MacDonald's (2000) notion of 'transactive communication' (more on this at the end of this section).

9.1.4 Summary: Media and kinds of interactions

In this section I have analysed different ways in which children were creatively interacting together. I considered three main media through which communication occurs – movement, sound, and language. The diagram below represents their relationship (see Figure 18): the three circles are largely overlapping to signify that these media of interaction (verbal, nonverbal, musical) are, in practice, mostly combined. The verbal circle is smaller, because verbal interactions seem to be less relevant than or secondary to the musical or body-based interactions.

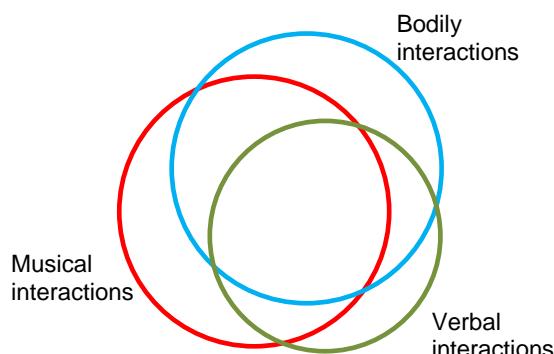


Figure 18. Media of interaction in creative group work in music

Table 11 further details the different kinds of interaction, as they have been identified and categorised in this study. It is important to note, as trivial as it may sound, that there is a difference between the observable behaviour (which can be described) and the internal states associated to it (which have to be inferred). This is to say that one thing is *what I see* – children moving, playing, or interacting in certain ways – and something else is *what interpretation I can give of it*, i.e. of the thinking, feeling, and perceiving of the individual or of the group which motivates that behaviour. In this sense, in order to gain a more comprehensive view of what is happening in the interaction, I had to go beyond the mere observation and description of the events, and verify my understanding (or conjectures, often) based on what participants/children said about themselves and their experience in relation to the interaction (which is a tenet of ethnographic approaches in qualitative enquiry – Stauffer & Robbins, 2009).

Table 11. Media and kinds of interaction in creative group work in music

Media of interaction	Kinds of interaction
BODILY INTERACTIONS	<i>Nonverbal, body-based communication</i>
	<i>Embodied interactions in movement / dance</i>
	<i>Embodied musical communication</i>
	Voice: paralinguistic features which accompany speech (emotional tone of voice, pitch contour, loudness, prosody, rhythm, intonation, stress) Nonverbal language: facial expression, quality of eye contact and gaze, gestures, touching, body posture and movement Movement interactions for contact, trust, and team building Movement interactions for musical/rhythm skills Musical gestures: movement cues to signal beginning, ending, or a forthcoming event/change Synchronising: within one's own body, with an external beat, with a partner, as a group, regulating one's own motor-musical patterns to those made by partners
MUSICAL INTERACTIONS	<i>Musical interactive behaviours</i>
VERBAL INTERACTIONS	<i>Task-related verbal interactions</i> <i>Off-task verbal interactions</i>

An example for different types of interaction: "Volcano"

As a conclusion to this section I present the experience of the three male children in an instrumental group composition as an instance of how the different kinds of interaction examined above coexist in the group process.



Figure 19. J. Martin, "The great day of His wrath" (1853)
(starting point for group composition "Volcano")

In the course of the project the group engaged in a series of improvisations and compositions based on the musical interpretation of art works (this is a strategy which is often used in creative music making, recommended among many others by Hickey, 2012). In the following I describe and comment on the work of Flavio, Giacomo and Lorenzo responding to a painting (see Figure 19). The strategy they used in relating to the picture was to identify and represent relevant elements of it through an articulated sequence of corresponding musical events.

N. 19 Vocal group composition based on imagery: "Volcano" (1)

In their first rendition of the piece (<https://vimeo.com/105333814>, dvd.35) the three boys have roughly agreed about the overall structure of the piece: Flavio begins with a '*shhh*', then Lorenzo announces the four phases of the catastrophe they have identified in the picture: *the volcano explodes* (Giacomo plays a tremolo with the hands on the floor) / *big stones fall down* / *the smoke goes up* / *and eventually lava destroys everything*. Lorenzo pronounces the words and indicates the corresponding points in the picture. They do not have a clear sign for the ending, Giacomo tries with gestures to suggest to Flavio that he should do something, but Flavio does not know and says "what's there?", they giggle, and then conclude in a sort of embarrassed silence. There is not much sound, rather almost only words.

Commenting on the performance, we discussed with the group about how to expand the material, for example by not just mentioning the event, but representing it with various onomatopoeic sounds with the voice. Through two subsequent performances the group worked on how to differentiate the sounds for each phase, presenting them one at a time, finding more details for each, and participating with the whole body in association with the voice. The aim was to 'make things bigger', in order for the audience to more easily grasp the meaning of what was being shown.

N. 20 Vocal group composition based on imagery: "Volcano" (2)

In the fourth (!) Gestaltung they have reached a much higher level of definition in the organisation of the musical material (<https://vimeo.com/104223514>, dvd.36). Lorenzo introduces each phase verbally, and they comment on it with different vocal sounds. Their global nonverbal expressions are much more intense and energetic. In particular, Flavio is now fully involved in representing the images through his body and voice.

s. 17/30 20140212 F,G,L

In comparison to Giacomo and Lorenzo who stay sitting, Flavio's participation is really with the whole body. Lorenzo and Giacomo 'represent' the volcano, describing or reproducing the sounds it makes, whereas Flavio 'is' the volcano, thoroughly shaken by its tremendous energy. The issue is to become one with the image, perceiving and feeling it 'from the inside' rather than 'from the outside'. The verbal and nonverbal expression of Giacomo at the end of their best vocal performance ("ok, let's stop it", with a cutting gesture) denotes a minor engagement with the activity. He is the least involved in it and appears not to believe in it or enjoy this way of making music.

N. 21 Instrumental group composition based on imagery: "Volcano" (3)

In the next session they transfer their vocal composition on to the instruments (<https://vimeo.com/104223585>, dvd.37). In the group work phase they choose which instruments to use and – scaffolded by my questions – associate them to the four phases of their Gestaltung: *the volcano explodes* (everybody energetic tremolo on drums), *rocks fall* (high-pitched sounds with castanets), *smoke rises up* (Lorenzo glissandos on metallophone, Flavio and Giacomo brushing on drums), and *lava destroys everything* (chaos on all instruments). Lorenzo closes with a gesture to the others the irregularly declining turbulence of the destruction.

s. 18/30 20140219 F,G,L

Their bodily participation in playing the instruments is remarkable, eventually here they are really at one with what they are playing – they seem emotionally attuned. Their

nonverbal expression at the end of the piece, in particular Giacomo smiling and clapping, denotes satisfaction and enjoyment. This piece is an exemplary instance of what I define as a 'top-down' activity: a beginning skeleton is progressively enriched through iterative phases of planning-performing-evaluating, in which children's thinking is scaffolded to find possible developments. Ideas take shape and are gradually clarified, elaborated, and diversified. I contrast this top-down strategy with the 'bottom-up' procedures of combining building blocks into more complex structures (which I describe in section 9.3.1.2a).

Different kinds of interactions took place in this process:

- *verbal interactions* in the small group work to decide how to interpret the picture and arrange the performance (which in itself includes the four utterances leading the actions); the discussion involved the teachers as well as the other children of the group, who gave comments and suggested ideas;
- *bodily interactions* in the physical and vocal representation of the events in the picture; this is really embodied music making; what I think is striking here is the sharing of a group energetic state, especially in the instrumental performance (which, I find, is contagious for the observer, as well); at different points both in the performances and in the preparing phases, gestures and eye contact were used to convey meanings about the group action; and
- *musical processes* of mutual listening and alignment; the interactive strategy is here 'doing the same', as there is no division of musical roles. Rather, the three children are playing in a sort of timbral and textural unison where they become one with the emotional force of the image they are depicting through sound and movement.

An analysis of only the audio-recording of this piece or the viewing of just the final instrumental performance would not have captured the full meaning of this process. Such can be the richness of children's interactions in group creative music making.

9.2 Interpersonal relationships: emotional and relational aspects of creative collaboration

9.2.1 Choosing partners for group work

In the project children had the possibility to freely choose their partners to work together (as suggested also by Baines, Blatchford, Kutnick, et al., 2009). Each time a preparatory phase to small group work was devoted to having children express their wishes regarding with whom they would work (or not). Though this process required at times long negotiations, eventually it proved a good strategy and overall there were no real problems

of social interaction within the groups. By contrast, we had a clear confirmation of how critical these choices were in setting a conducive context for children's collaborative creative work in session 16. After other pairs had been formed for a cooperative work (putting together two postcards and the musics they had already invented for those) Alessandra and Flavio remained unchosen, so we asked them to work together. But they just did not talk to each other. The reasons for this 'failed interaction' (actually, not even started) could be many: children not knowing each other at all, the gender mix, or both children's difficulties in establishing new relationships. In spite of our numerous interventions they just kept silent and did not interact. Probably it would have been better to ask them whether they would prefer working each on their own.

Based on the data, I could say that the (implicit) criteria children used to choose each other were:

- *friendship*. Chiara and Sandra, for example, were close friends and worked very well together. The observation of their joint work supports the findings of Miell and MacDonald (2000): friendship implies an already existing relationship of mutual trust and familiarity in taking decisions together about play situations, resulting in an increased facility in establishing a shared understanding, which non-friends have to build anew;
- *gender*. A recurrent feature of the groupings is that children usually chose to work with same-gender members – in my experience, this is typical of this age – though there were some mixed-gender groups in the study (gently 'pushed' by the teachers);
- *skills*. Towards the end of the project, however, Giacomo and Sara chose each other two times, and they produced a more complex composition than the others. I would assume that, beyond the above mentioned criteria, a further reason for choosing a working partner is the perception of their skills in relation to the given task – a good partner is one that enables me to achieve more.

In spite of the fact that allowing for freedom in the partner's choice has numerous advantages, however, as a teacher I see that there is a tension between what children would 'naturally' do, i.e. unconstrained, and an issue of inclusion and circulation of ideas within the group. A certain flexibility in the groupings, in fact, avoids the formation of rigid subgroups and the danger of isolating some children. Further, stimulating children to meet new partners enhances the possibility for cross-fertilisation of ideas within the group and, importantly, can contribute to their social development.

9.2.2 Power relationships

Another relevant aspect of children's interactions is that of power relationships. With respect to the different types of relationship children have with adults and other children, Blatchford, Kutnick, Baines, and Galton (2003) claim that

adult child relations are more likely to be hierarchical and involve assertion of power [...] while child-child relations involve more mutuality, and power [...] is more likely to be shared by equals. (p.161)

The findings of this study point to the fact that the issue of hierarchy and power is present in the teacher-child relationship (though it might also be reversed, with the adult being at the service of children's creative processes). However, there are power relationship issues among children, too.

Through collaborative activities children create their own meanings and understandings of their sociocultural worlds. They also create their own group cultures which involve affairs of power, status and position in the group. Research on play (Wood & Attfield, 2005) indicates asymmetrical power relationships as children assert control and status in the activity.

If 'power' is to be intended as 'leadership', in a positive sense, there are in this study many instances of children 'taking the lead' and scaffolding other children's efforts. Being more expert means having more power. But this power can also be exerted as a way to dominate. I compare two examples from the group work process on the 'composition of a movement sequence based on graphic notation' (see N. 2):

N. 22. Power relationships in the group: composition of a movement sequence

In the girls' group, Chiara and Sonia have worked out a four-phase sequence in the previous session, and now have the task of integrating Alessandra into their work. Both girls actively guide her in understanding and performing the movements, nonverbally reminding her what she has to do. She follows them and is successfully integrated.

In the boys' group the dynamic is different. Giacomo is the one who has had the idea, slightly expanded by Lorenzo. Flavio, who is younger and less able to grasp the whole movement sequence, barely keeps pace with his older mates. I ask Giacomo to slow down the movements so that Flavio can understand and be with them, but then Giacomo performs them very fast, correctly, very well on the beat, as a demonstration of competence. Giacomo is here proudly showing that he is able – and in fact he is – but I feel that in his action there is also an intention of

asserting his power in the group. At other moments in the group process, the interplay of eye contacts indicates that both Lorenzo and Flavio follow him as the reference for the group – he is the leader, because he is undoubtedly more skilled. However, Flavio is often confused and has difficulties up to the last Gestaltung in being in sync, pressed by Giacomo's dominant model and requests to 'be concentrated'. I think that the dissonance here is that Giacomo's power is not at the service of Flavio's learning, and this is in conflict with an ethical foundation of collaborative work: we help each other be better.

Espeland (2003, 2006) reports on a similar case in his study in which expertise provides power and dominance. His findings suggest that

the role of power is closely connected to the production of knowledge, i.e. composing music, and this power exertion can be direct as well as indirect, and productive as well as repressive. (2006, p.200)

In this episode, the girls' "personal actions" (in Espeland's terms, the private intentions and motivations connected to the person's social role) were more productive, whereas in the males' group the way of exerting power through expertise was more repressive. In the girls' interaction there was more 'emotional scaffolding' (John-Steiner, 2000), because they were taking care of the less expert member, being supportive. I do not want to get entangled here in the question whether this is a typical gender-related difference or not. I am just reporting this episode as an instance of how nuanced the issue of power can be in practice. A related issue, not irrelevant, is whether and how the teacher should intervene in such an interaction, and how their (supposedly 'right') ethical stance could be affirmed, but for the time being I leave this open.

9.3 Cooperative and collaborative interactions

9.3.1 Division of labour and decision-making strategies

A further way to characterise the nature of the interactions in creative group work is the distinction 'cooperative – collaborative'. As has been seen in section 5.1, group work encompasses diverse ways in which children can work as a group. Some authors (Dillenbourg, 1999; Galton & Williamson, 1992; Ogden, 2000) distinguish 'cooperating' as opposed to 'collaborating' in order to make clear the kind of division of labour and the decision-making strategy that the group adopts in tackling the task. I take these as two polarities that define a continuum of possibilities ranging from working separately and then assembling the parts into a whole to jointly generating and developing ideas all along the process. This distinction can be an effective conceptual tool to better identify and understand the different strategies that the children of this study used in working

together. In the following, I present some exemplary episodes of cooperative and collaborative interactions in creative group work in music.

9.3.1.1 Cooperative interactions

a) Taking turns (one after the other)

In the context of a work on 'postcards' children had previously individually invented music to an image/painting. In the following two examples, children were asked to work in pairs and 'put together' their respective compositions to create a new piece.

N. 23 Taking turns: pair composition "Flower of light"

Working on two paintings of Kandinsky ("Milder Vorgang") and Klee ("Tief im Wald"), Fabiana and Sonia repeatedly alternate between Fabiana's sun (random successions of notes or glissandos on the soprano metallophone) and Sonia's flowers (short a-metrical groups of strokes with beater on darbukka). The musical transposition of the images is rather simple and iconic – each musical sign corresponding to an element of the picture – and there is no apparent relationship between the two ideas in the horizontal development of the music.

(<https://vimeo.com/104223511>, dvd.38)

s. 16/30 20140205 FA,S

Chiara and Sandra, engaged in the same task, also choose the strategy of 'taking turns':

N. 24 Taking turns: pair composition "Bear and sun"

Sandra interprets Klee's "Blühendes" as a bear, which she depicts here as alternately stomping (strokes on the wooden part of the xylophone) and roaring (random notes on the bars), and Chiara adds exactly the same structure of the essential piece she has composed in the previous session (sea and sun, based on Turner's "The scarlet sunset"), i.e. a gesture with maracas to refer to the waves and a stroke with a wooden instrument to represent the red circle of the setting sun. (<https://vimeo.com/104223444>, dvd.39)

s. 16/30 20140205 C,SA

In this piece there is not much interaction, but only a succession of two unrelated musical chunks. The cooperative aspect of the activity lies, then, in what they have done in the previous group work phase, that is developing their own ideas, sharing them with each other, and deciding in what order to put them. In the presentation they have to remember the choices taken and perform them correctly, i.e. they have to coordinate their actions. Interestingly, at the end of the piece there is a moment of misunderstanding, because

Chiara just grasps the castanet to play it once (the sun setting), but the sound of taking it is confused with the musical sound she intended to produce. Sandra does not see this, as Chiara has done it behind the xylophone, and she nonverbally asks Chiara to play her last sound. Chiara does not react to her gesture and instead looks at Valentina to signify that the piece is finished. I take this as an evidence that Sandra had well in mind what her partner was due to do, expected it, and consequently urged her to complete her part. She behaves here as responsible not only for her own contribution, but also for that of her partner. In many other instances in the project children supported each other in executing previously planned actions, thus scaffolding the partner. Seen from the perspective of the group, the issue here is 'distributed memory': the group works better if everybody remembers and is also accountable for the others' subtasks (Johnson, Johnson, & Holubec, 1994).

I would define this way of working as 'cooperative', in that in these examples children tend to put in sequence what each of them has done on their own, and take turns in playing it – 'together' means here 'on a line one after the other'. However, the assigned task of combining their distinct musical ideas and creating a new one which includes both of them would have implied working on the material as a set of musical elements ('just music') and not on their association with extra-musical events. It may not be straightforward to fuse together two unrelated pictures, and it may be easier to just put them one after the other. So, in this example the cooperative organisation of the process and of the content may also depend on the task itself.

b) Playing in parallel (alongside each other)

The strategy of 'taking turns' regards the horizontal organisation of the children's contributions as a line of distinct chunks (often unrelated). A cooperative strategy in the simultaneous/vertical performance of music is 'playing in parallel', where each child plays their own thing without a clear connection to what the other is doing. By working on figure-ground compositions our pedagogical intention was to bring children to interact with one another while playing, based on a visual or narrative relationship between two different elements. In quite a few examples, however, children did not go much beyond deciding what each should do and playing it alongside each other, as in the following episodes:

N. 25 Playing in parallel: pair composition "Teacher with children and school bell"

Chiara and Sonia very synthetically represent a scene of their everyday life. Chiara plays the school bell and Sonia represents the teacher accompanying children downstairs. There seems to be no real sense of a figure against a background, as both parts are equally present in terms of loudness and duration, though they are timbrically different. A musical relationship between the players is established only at the beginning and the ending.

(<https://vimeo.com/104224414>, dvd.40)

s.23/30 20140402 C,S

Something similar happens in this other example:

N. 26 Playing in parallel: pair composition "Moon and stars"

In another figure-ground composition, "moon and stars"

(<https://vimeo.com/104224552>, dvd.41), Sonia begins with a light background of maracas, on which Alessandra plays soft, random tones on the odd bars of the alto metallophone. It is worth noting that Alessandra improvises an ending, *gbd'c*.

s.25/30 20140416 AL,S

In their joint work they have decided together what to do, but then, while playing it, each of them goes their own way, and there is no direct, interactive relationship between them. They simply co-exist and play alongside each other, except for a sign for the beginning and one for the ending. In this case, as their material is a-metrical, there is not much to interact beyond choosing what each will do and playing it one beside the other. In this sense, their joint work is more cooperative than collaborative.

Other examples of 'playing beside the other', already examined above, are N. 11 "Composition for metallophone with accompanying drum", N. 13 "Planned improvisation: Robot and sharks", and N. 15 "Group composition: Solo metallophone with drums and bell accompaniment".

9.3.1.2 Collaborative interactions

As I am using it here, the term collaboration implies that children jointly generate and develop an idea, which they perform in tight interconnection with each other. This happened both as a horizontal string of events which are performed in unison, and as a

vertical superimposition of different rhythms in a layered ostinato, as illustrated in the two examples below.

a) Planning and doing the same thing together

The following episode illustrates how the girls worked as a group to shape the idea of a metrical structure. The group had been working for a while on 'rhythm structures', i.e. strings of timbrically different strokes on a pulse which generate metrical patterns (e.g. OOXX, OXX, OOO, XXX, etc). By placing different combinations of objects on the floor (e.g. O=triangles X=castanets) children could build a notation and perform it with the voice, body percussion, and instruments. In my view, this is a 'combinatorial' or 'modular' approach to rhythm, in which basic elements are combined and permuted in various ways to form higher level structures. In this sense, this is a 'bottom-up' approach, leading from the parts to the whole. Prior to this episode children had already explored a number of rhythm structures. This time, the task was to decide together a structure with the objects/notation, then play it with voice and gestures or body percussion, and eventually perform it four times.

N. 27 Planning and doing the same thing together: group composition

"rhythm structure" (voice and movement)

In the small group work phase, Sonia initially proposes OOOO.XXXX., but Chiara then takes the lead and decides to change it, removing the triangles and castanets to form the new structure OOO. XXX. Sonia reads it and finds the syllable association ("*glin glin glin toc toc toc*"). Sandra specifies that the hand gesture should also be different, i.e. flat hand on *glin* and knocking fist on *toc*. They have now fulfilled the task and rehearse it four times. Chiara, who seems here to be the 'kind leader' of this group, gives the signal for the beginning.

(<https://vimeo.com/104223586>, dvd.42)

s. 18/30 20140219 AL,C,S,SA

This could be taken as an instance of collaborative group work, in which the members build together the group composition, each of them adding different elements to it, and integrating in the final Gestaltung the contributions of everybody. Only Alessandra seems to play more the role of a participant-observer, in that she follows well the activity, but does not take any initiative. Thanks to the scaffolding role of the notation with objects, children can literally manipulate signs and concepts and it is always very clear for the group what the common focus is. The interaction, so to say, is centred around the objects and what they mean. Further, by using their voices children synchronise better – in fact, though at the beginning they are not really together, the common rhythmical

pronunciation of the speech helps them gain a precise alignment already by the third repetition of the sequence. After this first performance with voice, children transferred their Gestaltungen onto the instruments:

N. 28 Planning and doing the same thing together: group composition

"rhythm structure" (instruments)

Based on this preparatory work with voice and movement, the next step is then a further group work phase aiming to transfer this voice/body percussion sequence onto the instruments. The girls re-arrange their string to OOO.OOO.XXX., adapting it to the instrumental actions they have found. Interestingly, their initial 'rhythm structure' has now turned into a proper rhythm phrase, in which each player plays in turn a part of the whole sequence. (<https://vimeo.com/104223674>, dvd.43)

s. 18/30 20140219 AL,C,S,SA

This division of roles in the Gestaltung makes it quite difficult for the girls to keep in time (However, given the richness of the group collaboration, this is not an issue here). They were obviously very happy with their composition. I do not take this as a 'piece of music', but rather I would call it a bottom-up 'composition exercise' (or a creative problem solving exercise – see Morgan, 1998) in which children collaboratively apply a generative rule in music and, specifically, a way of thinking rhythm in terms of combination of elements into extended structures. The process balances well the challenge of the task with the skill level of these children. This kind of content lends itself well to a collaborative creative task, as it provides enough structure to channel a series of group decisions leading to a unison performance, with the whole group working together on the same musical idea. Other instances of children collaboratively 'planning and doing the same', already examined above, are "Volcano" (N. 19) and "Composition of a movement sequence based on graphic notation" (N. 2).

b) Planning and doing together different but related things (weaving polyphonic textures)

The last and most complex form of musical interaction consists in building a polyphonic texture in which different simultaneous parts are intertwined to form a coherent musical structure. I have already analysed above two examples of rhythm ostinatos (N. 18 "two-voices layered ostinato with bells and drum" and N. 14 "Composition: layered rhythm ostinato"). To these I add here Giacomo and Sandra's free composition in the last session, which represents perhaps the peak of rhythmic complexity that this group was able to express:

N. 29 Free pair composition: "The musical wood"

In Giacomo and Sandra's free composition, Sandra begins on the hand drum with a | du du dude . | or more or less that kind of figure. Giacomo on the bass xylophone joins in with a repeated motif on the notes *dc* on microbeats. They do not succeed in repeating a fixed module always in the same way, either because Giacomo irregularly prolongs or shortens his pattern or because they start at different places (my impression is that in reality they had in mind a precise rhythmical figure, see 00:12). However, they clearly refer to a common implicit pulse. It is relevant that they introduce a short B part (Valentina gave them this idea during the group work): G plays two glissandos up and down and Sandra a tremolo on the hand drum. They conclude by briefly reprising the motifs of part A. The ending seems not to be clear. (<https://vimeo.com/104224727>, dvd.44)

s.30/30 20140604 G,SA

They have internalised some fundamental rules about how to build a music piece (this is an ABA structure, a breakthrough!). They have constructed two different musical objects and put them together, connecting them rhythmically – in spite of a few uncertainties, which they control well. They deeply listen to and closely watch each other throughout the performance. Such effective behaviours may be related to Black's (2008) characterisation of 'listening' among jazz musicians as 'interactive attentiveness', and to Gratier's (2008) notion of 'grounding'. Indeed, in the process of moment-to-moment monitoring of their 'common ground' during the performance Giacomo and Sandra use eye contact, head-nods, and gestures alongside the playing to display their mutual understanding and confirm the shared plan they have fixed in advance. The small uncertainties they have bring about improvisational moments in which they readjust to the plan or negotiate in time (i.e. through the music making itself) how to proceed forward. They continually and improvisationally update their musical actions according to how the interaction evolves (as in a conversation – see Sawyer, 2006b). I regard this as a very mature outcome and an example of shared understanding in performing a complex planned action.

9.3.2 Cooperative vs collaborative as a conceptual tool to observe interactions

The idea of different degrees and qualities of interaction – more detached and superficial vs more reciprocal and close – has been supported in the views of other researchers. In the creativity literature there can be found similar categorisations to the one used here

and, actually, they were directly or indirectly the source of my own conceptual distinctions applied to the analysis of the data. Glover (2000), for example, defines 'parallel composing' the situation in which individuals in the group are working *alongside* rather than *with* each other. The findings of this study corroborate her observations with regard to 6-7-year-olds' group instrumental work:

Centred as they still are very much in their own music-making activity, there is some variability in the degree to which they are able to manage their own music at a genuinely interactive level with another player. Music can arise which is genuinely co-operative in intent, but with each player pursuing his or her own musical structuring *in parallel to*, rather than *interaction with*, the others (Glover, 2000, p.70 – italic mine)

What I am doing here is considering these two categories as opposed polarities of a continuum of possibilities in the degree of 'togetherness' in the creative interaction. Such a distinction recalls, in a wider perspective, John-Steiner's (2000) differentiation between 'complementary' and 'integrative' forms of eminent adults' creative collaboration (see 3.4.1.1), where in the former each of the partners makes a specific contribution to a shared task (which she finds more typical of scientific collaborations), and in the latter there is a much stronger sense of mutuality and joint engagement in the task (as in artistic collaborations). In research on play, Broadhead's (2010) social play continuum organises the observation and interpretation of interaction in young children's cooperative play along a continuum of four categories (see 4.4), from the Associative Play and Social Play (characterised by low levels of shared understanding and little development of play ideas, which I relate to my 'cooperative') to Highly Social Play and Cooperative Play (characterised by stronger shared understanding of goal orientation and extension of ongoing play, which I relate to my 'collaborative').

Concluding this section, a few observations can be made.

- First, the distinction between a cooperative and a collaborative approach to creative group work regards both the process of building up a *Gestaltung* (the group work phase), and the product (how children interact together when they are performing their pieces).
- Second, a cooperative vs collaborative way of working together can be induced both by children's learning styles and by the features of the task. The children of this study showed different preferred modalities to interact with partners: Alessandra, for example, was more inclined to work cooperatively, finding her own place in the group situation and doing her own thing, without seeking a deep connection with the partners. However, the kind of interactions that are established in the group work also depend on how the task is designed. As has been noted above, asking children to put together two ideas which they have

previously invented each on their own is more likely to produce a cooperative outcome in which the single contributions are simply put one beside the other. Conversely, the prescription to work as a group on one common idea tends to generate a more collaborative dynamic.

- Third, from the presentation of these findings it may appear that there is a progression 'from cooperative to collaborative' and that the latter is somehow 'more advanced' (and in developmental terms I would claim that this is true). In practice, however, I think that these are just distinct strategies of interacting in the group, which can be appropriate or possible in different moments and contexts, also in relation to the pursued goals of an activity.

Table 12 summarises the main traits of children's cooperative vs collaborative interactions in creative group work, as identified in the findings of the study. The arrow and the use of a nuanced colour point to the fact that these concepts represent two polarities between which an array of varied and intermediate situations characterised by different degrees of interactivity can be positioned.

Table 12. Characteristics of cooperative vs collaborative interactions in creative group work

Creative Group Work	
Cooperative work	Collaborative work
Working one <i>beside</i> the other	Working one <i>with</i> the other
Children put together distinct ideas within a common project	Children generate ideas together from the very beginning
Division of labour and responsibility	Shared endeavour and responsibility
Separate ownership	Joint ownership
Complementary	Integrative
Individual invention, then assemblage of the parts ('musical jigsaw')	Dialogic processes of co-construction of a whole
<i>Taking turns</i> (one after the other)	<i>Playing the same</i> (e.g. omo-rhythmic synchronisation)
<i>Playing in parallel</i> (alongside each other with limited interaction)	<i>Weaving different but related ideas</i> (e.g. polyphonic structures and layered rhythm ostinatos)

9.4 Summary: A holistic view of the interactions

I go back to the main question and the first subsidiary question of the study (RQ1): How do 5-7-year-old children interact when they are engaged in collaborative creative music

making? and, more in particular: What kinds of musical, verbal and non-verbal/bodily interactions take place between children when they create music together? I summarise here what emerged from the study and relate it to the literature.

The findings show that children's interactions occurred at different levels and through different communicative means. In their joint work on creative music making children engaged in nonverbal, body-based communication, in embodied interactions in movement games, and in embodied musical communication such as synchronising or using musical gestures. This study strongly supports views of music as an embodied practice (Bowman, 2004; Elliott, 1995; Gratier, 2008; Walker, 2000), and musical thinking as embodied cognition (Westerlund, & Juntunen, 2005).

In their musical exchanges children adopted different interactive strategies, ranging from modelling and imitating to varying and contrasting. This resonates with what has been observed in other musical fields (Bruscia, 1987; Globokar, 1979; Meyer-Denkmann, 1970) and in creativity research with older children (Burnard, 1999). Children's ways of interacting differed according to the kind of creative work they were engaging in, with more immediate and spontaneous interactions in improvisatory activities and more planned and pre-ordered interactions in compositional tasks – as observed by Burnard, 1999, too.

In spite of the focus of much research on talk in group work in the primary (e.g. Blatchford, Kutnick, Baines, & Galton, 2003; Mercer, 1996; Wegerif, Mercer, & Dawes, 1999) which informed this study, the findings here see children's verbal interactions as playing a secondary role in their communication during the small group work phases. Musical and bodily interactions seemed to have the priority in conveying children's musical meanings and ideas. These findings are corroborated by those of early childhood studies, claiming that in young children's interactions the element of the musical and the kinaesthetic overrides the verbal (Young, 2008).

To these observable forms of interaction the interpersonal – emotional and relational – interactions in the group have to be added. The findings of this study are consistent with the conclusion that affective relationships (such as friendship – Miell & MacDonald, 2000) or power relationships (Espeland, 2006) have to be taken into account in considering the dynamics within a group, as they profoundly influence the quality and effectiveness of group work.

Finally, children's interactions can be classified as cooperative vs collaborative, depending on the kind of division of labour and decision-making strategy employed by the group. In agreement with similar distinctions in the literature relating to adults' creative collaboration (John-Steiner, 2000), early childhood play (Broadhead, 2010), or musical composition (Glover, 2000), this study has identified the polarity cooperative/collaborative as a helpful conceptual tool to interpret how children organise the process and the product of their collective work.

Given the above, I claim that in order to understand children's creative music making in groups it is crucial to take a 'holistic' perspective on the multimodal interactions that emerge. Limiting the investigation to just one media of interaction (be it the analysis of either talk or music) would mean separating what is inextricably connected as one whole act of communication. The importance of a parallel analysis on both the musical and the verbal content has already been noted by several researchers (e.g. Miell & MacDonald, 2000), but the finding that has emerged from this study goes further to maintain that also nonverbal, body-based means of musical communication and interaction have to be included in the picture, as is demonstrated by different lines of research on synchronisation (e.g. Clayton, Sager, & Will, 2004) and professional musicians' bodily interactions in collaborative creative music making (e.g. 'grounding' in jazz, in Gratier, 2008). Music is an embodied practice and a multi-sensorial experience, and this is even more true for children. In this perspective, then, Miell and MacDonald's (2000) notion of transactive communication should be expanded to include nonverbal aspects of children's communication. And, given that the theme here is collaborative creativity, 'co-constructive communication' (based on Rojas-Drummond *et al.*, 2006) might even render better the meaning of a communicative interaction oriented to a creative goal. This recalls the *yes, and...* rule of theatre improvisation (Sawyer, 1999; Holzmann, 2009), which is interestingly based on a similar multimodal mixture of verbal and nonverbal communication, plus action on stage.

Taking a holistic view on children's interactions takes the focus a bit further than just the observable interactive behaviours (verbal, nonverbal, musical), and seeks to understand as a whole the mixture of ideas, motives, intentions, feelings, actions, and perceptions that children bring to their joint creative efforts. Achieving this is in research-methodological terms a real challenge. The goal, however, is to get to the basic characteristics of music making as a form of human interaction with its distinct ways of defining intersubjectivity and shared understanding (Rogoff, 1990; Wiggins, 1999).

10. COMPONENT ASPECTS INFLUENCING CREATIVE COLLABORATIVE WORK

This chapter analyses and discusses the findings relevant to the second research question, about the component aspects of creative group work which can facilitate or undermine children's creative collaboration. Based on the data and informed by the literature on group work (chapter 5) and collaborative creativity (chapters 3 and 6), I have identified the following component aspects: children's characteristics, context and setting, pedagogical approach, task design, emerging processes in the group, underlying tensions in creative learning, reflection on and evaluation of creative work, and time. These aspects are strongly interrelated and concurrently contribute to form the complex conditions under which children's collaborative work can be enhanced or impaired. In the discussion I refer to the examples presented in the previous chapter, though in some cases I present some new episodes.

10.1 Children's characteristics

The focus of this study is not on the characteristics of single children, but on the interactions among them. In methodological terms the design of the study did not aim to ascertain, compare, or measure children's individual traits related to musical creativity (see section 3.2.2). However, my participant-observation as a teacher in the classroom, including the personal relationship I built with children, enabled me to develop a strong familiarity with the idiosyncratic ways of being of each of them (this is one of the advantages of being the teacher-researcher). This contextual knowledge was in the background of the subsequent in-depth analysis of the video-recordings. Relevant aspects which I took into account in the examination of episodes of interaction as illustrated in the preceding chapter were: age, gender, stage of conceptual development (also with specific regard to music), musical skills, creative skills, communication skills, relational skills, metacognitive skills, and motivation.

In relation to the ways these children approached group creative music learning, a useful distinction could be between cooperative and collaborative learning styles. I draw the concept of 'learning style' from Green (2008, 2010) as the relatively 'inbuilt', spontaneous or preferred way an individual approaches learning (this is applied in her research to identify different approaches to auditory copying in informal learning practices). With regard to this study, children's learning styles can be located along the continuum

between two poles: cooperative and collaborative (I introduced this distinction in section 9.3). Distributing children's behavioural traits along this dimension helps to identify differences in their approaches to inventing music in groups. I give some examples, based on the data: Alessandra tended to work cooperatively, *beside* the other, almost on her own. At repeated points, once a rough framework for the joint composition was established, she was more attentive to her own processes than to what the other was doing. Giacomo was a quick-solver, but tended to impose his ideas on the group ("he [Flavio] does not do what I tell him to do"), thus not being fully collaborative. His high motor and rhythm skills, however, did not find an interlocutor at the same level in the group, which was at times frustrating for him. Flavio, probably due to his young age, was often striving to follow his partners and could contribute little, until he discovered that he could find his own place in improvisation, which gave him the possibility to be in contact with himself and the other. Lorenzo, at times involved in a competitive dynamic with Giacomo, was more collaborative, talkative, asked questions, and took care of Flavio. Chiara covered the whole spectrum between cooperative and collaborative – at times interacting in a limited way and 'playing safe', more often co-constructing ideas with her partners. Sandra, too, could range from cooperative to highly collaborative and, in my view, was perhaps the most able to work with others, based on her relatively solid musical skills and her relational and collaborative attitude.

As opposed to learning styles, Green (2010) also introduces the concept of 'learning strategy' to refer to the set of conscious tactics to accomplish a music learning task, not present at the outset, which are acquired by children through experience, and which are susceptible to change and development. Over time, indeed, the children of this study learned much about the strategies they could use in order to effectively interact in music. As the instances in the preceding chapter show, children's ability to establish a connection to a partner progressively grew. Through the project they witnessed, appropriated and reflected on a number of strategies relevant to how to initiate a musical dialogue, how to mutually scaffold each other in the music making process, how to respond to somebody else's contributions, how to give shape to a musical idea as a group, how to enhance musical intersubjectivity, in short how to creatively interact with a partner.

In relation to the spectrum of cooperative/collaborative behaviours that children may show, an implication regarding music teachers would be to offer a variety of opportunities for children to choose the kind and degree of engagement in their joint work with others, so that they can interact in ways that suit them best - and starting from there, expand their vocabulary and attitudes in the interaction.

10.2 Context and setting

In relation to the context in which these children were learning, two observations have to be made regarding the physical environment and the availability of time:

- spaces – although there was a great availability of resources in terms of musical instruments, the fact that children had to work in only one room was at times a problem due to the noise levels (with a bigger group this would have been a real impediment): having one or two adjacent spaces would have allowed for undisturbed small group creative phases of work, and in research methodological terms there would also have been a possibility to gather better decipherable data about their interactions;
- *time* – having a slot of time of just one hour per week was in some cases a constraint impeding the natural flow of the interaction in the group. Sonia, for example, on more than one occasion complained about the fact that they did not have enough time to complete their task. Creativity needs time – freedom is also a sufficient freedom from external pressures – and trying to concentrate it in a handful of minutes was at times detrimental to the quality of their creative group work.

Both issues are, in my view, common to most music teachers working in similar conditions. In spite of the aspects above, at any rate, I would judge the overall context of this study as an effective 'creative learning environment' (Davies, Jindal-Snape, Collier, Digby, Hay, & Howe, 2013) for children's creativity to unfold.

10.3 Pedagogical approach

10.3.1 Basic traits of the pedagogical approach

In this section I illustrate what the study's findings are with respect to the pedagogical approach and how it influences children's creative interactions. The basic features of the teaching-learning processes that contributed to facilitate children's creative involvement can be summarised as follows:

- *global/holistic learning*: the ways children worked included different media of expression and communication (movement, voice, instruments), different learning approaches (only minimally rote learning, and much creative learning), different social forms (teacher-led and teacher-moderated whole-group activities, and individual, small group, and whole-group activities), and a balance between action and reflection, doing and thinking. These characteristics are in line with educational approaches advocated by the Orff-Schulwerk approach (Haselbach, 1990, 2011; Haselbach, *et al.*, 1985 and 1990), but also with what I would define

- as 'comprehensive approaches' like the ones portrayed by Glover and Young (1999) and Young and Glover (1998);
- *conducive relational atmosphere*: in the project children's psychosocial wellbeing was the foundation on which creative activity was based. As increasingly emphasised by creativity research, the emotional and relational aspects constitute an integral part to the cognitive activity implied by creative and collaborative creative work (Eteläpelto & Lahti, 2008; John-Steiner, 2000; Moran & John-Steiner, 2004; Vass, Littleton, Jones, & Miell, 2014, just to mention some – see sections 3.4.1.1 and 3.4.1.2);
 - *play-based approach*: characteristics such as active involvement and emotional engagement, enjoyment, focus on the process more than on the product, imaginativeness, intrinsic motivation, and group activity (Wood, 2010; Wood & Attfield, 2005, see section 4.1 and 4.2) make this a play-based approach to musical creativity in educational contexts. With respect to definitions of musical play (as provided, for example, by Marsh and Young, 2006, see 4.5) the approach taken here might be termed as a form of 'guided creative musical play' where children are assisted in channeling their creative impulses through structured activities;
 - *enhancement of children's control, agency, and ownership of the learning processes*: as suggested by the line of research on pedagogies for creativity (e.g. Craft, Cremin, Hay, & Clack, 2014, see section 6.4.4.1), this study placed a high value on the autonomous, co-constructive, and meaningful creative activity between and with children. The balance between adult-directed activities and child-initiated activities (Wood, 2010), and between an adult-led programmed approach, an open-framework approach, and a child-centred approach (Siraj-Blatchford, 2009) made this project an effective example of an 'integrated approach' to a play-based curriculum in creative music making (see section 4.3.1);
 - *fostering interactions at all levels*: An explicit goal of this pedagogical project was to stimulate and support creative interactions in many different ways and through a variety of activities. Contrary to what often happens in music teaching – where the main focus is on the transmission/acquisition of musical content and skills by means of teacher-centred, imitation-based, reproductive and thoroughly structured activities – the emphasis in this project was on the 'space-in-between' children themselves and how they could possibly explore the landscape of potential discoveries implied in the encounter with the other;
 - *team-teaching*: in relation to children's learning about how to interact, the advantage of working with a colleague was that we could provide children with

expert models of the kinds of interaction required by the activities, for example by showing how to effectively (or unproductively) negotiate ideas in the dialogue with the partner, modelling how to play together based on an improvisational rule, or offering differentiated examples of the phases of a paired composition process. In addition to this, the co-presence of two adults tacitly reinforced the idea of a multiplicity of perspectives – which is also in line with the epistemological stance of this study. Indeed, the fact that we could agree or disagree, or that the one could bring a further idea complementing and expanding what the other was saying, was a model of intersubjective thinking which, in my view, constituted a relevant part of the micro-culture in which children were immersed.

In the following section I briefly illustrate the pedagogical strategies used in guiding children's creative phases of work.

10.3.2 A cognitive apprenticeship approach to group creative music making

With regard to the creative processes that took place during the sessions, some recurring features can be identified as to how the learning pathway was organised. If not as the outline of a 'method', these can be taken as the logic underlying the subsequent steps of work along which children's creative ideas were activated and took shape. In my view, the strategies described below recall those of a cognitive apprenticeship approach (Brown, Collins, & Duguid, 1989; Collins & Kapur, 2014), here applied to collaborative creative learning in music (Sangiorgio & Hennessy, 2013). Abstracting from the specific details of what happened in each of the sessions of the research project (for this see Appendix C and D), the following major phases of creative work can be articulated:

10.3.2.1 Introducing and modelling the idea

- *Briefing*: talking about the theme, explaining to children what we are going to do
- *Modelling and explaining*: teachers show the idea to be explored, giving one or more examples about how to solve an open problem, and at the same time verbalise what they are doing, possibly involving children with open questions. In these first instances the language is kept deliberately simple, near to children's experience. More technical terms or concepts are introduced only later on.
- *Modelling (teacher with child)*: the interactive behaviours are then modelled directly with one or more children. Through a sufficient number of examples the idea is examined in its various aspects and the heuristic strategies and metacognitive strategies in accomplishing the task are made explicit. Modelling with a child is also a precious source of information for the teacher as to what

difficulties or misunderstandings may emerge in children's reasoning. Further, having seen how other members of the group have dealt with the situation may let other children perceive the task as accessible. Involving children in making a chain of choices gives the group the possibility to understand more detailed aspects about how the creative task can be solved and acts as a sort of bridge towards the later phase of autonomous group action.

- *Trying out and developing children's ideas in the whole group (with teacher coaching and scaffolding)*: in this phase children's ideas are explored and the cognitive strategies or the procedures for solving the problem are further articulated and reflected upon, but – importantly – by taking children's suggestions as a starting point. This process of constructing single children's ideas with the whole group, of examining further alternatives, or pointing out specific features of the task, contributes to preparing children for the group work phase.

10.3.2.2 Preparing for small group work

Prior to group work, a series of fundamental decisions have to be taken – the exact order of which depends on the kind of creative idea and on contextual factors:

- *Choosing or preparing materials* (if any, e.g. selecting postcards or drawing a figure-ground relationship)
- *Choosing partners*: the importance of negotiating the groupings cannot be underestimated, as the interpersonal relationship between the group members and their willingness to work together is an essential premise for the effectiveness of the collaboration (Miell and MacDonald, 2000)
- *Choosing instruments*: this is another important issue which requires time, as it conditions the kind of ideas that will emerge in the music making. Further, as far as possible children should have the possibility to decide which instruments they want to play and to develop their own relationship with them (Burnard, 1999; Glover, 2000)
- *Choosing what to do*: in some cases, for example free composition, children had to choose whether they wanted to sing, play, improvise, compose, etc. before passing on to the group work phase

This preparatory phase and the many organisational and logistical choices involved in it may take more than a few minutes and at times require much attention and patience on part of the teacher, but they are of crucial importance for the smooth and ordered prosecution of the activity.

10.3.2.3 Creative group work phase

Finally, after modelling, coaching and scaffolding, at this point children need that the teacher's interventions fade ('standing back') and leave space for their autonomous work. This is the messiest phase of the work, mainly due to the loud, seemingly chaotic atmosphere in the room. In some cases it may be difficult for the teacher to gauge whether children are working effectively or not, or to follow what is contemporarily happening in different groups. It might be important to ask the groups to rehearse their outcomes prior to sharing them within the whole group (what Fautley, 2005, defines a 'work in progress performance').

The greatest issue in this phase is whether or not to intervene in the work of the groups, as this might mean both heavily intruding in their own supposedly independent work as well as letting children drift off towards a perhaps preventable failure (but why not allowing for it? Tahirsylaj, 2012, holds that Intelligent Fast Failures represent important moments of knowledge development). There seems to be no exact rule of thumb in such a situation, but there is often a drive towards control on part of the teacher (I recognise it in myself), which should better be contained, in favour of a readiness to see what emerges from the groups and to let them work autonomously. Of course, the teacher should be available when asked and should at all times monitor the situation from a respectful distance (e.g. Blatchford, Baines, et al., 2006 suggest to "interact minimally but strategically". Chappell, 2005, characterises this as a tension between proximity and intervention, between 'distanced reactivity' and 'close proactivity' – see below 10.6.4).

This issue is at any rate a matter of controversy in much literature on group work.

10.3.2.4 Presentations of the outcomes

- *Preparing for the presentations:* necessary actions are arranging the physical layout of the groups, placing everybody so that performers can see each other and can be seen by the audience (the restant part of the group), creating an atmosphere of concentration, summarising again what is going to be seen, and orientating the vision.
- *Performance of the small groups:* in some cases this is still part of the process, more than a concluding presentation of a product. What children have elaborated may sometimes not even be substantial, they actually improvise in front of the audience, and the idea takes shape through the whole group discussion.

10.3.2.5 Comments and feedback

Depending on the context, there might be no comments at all, or instead there might be a detailed analysis of the outcome. The extent to which comments are made depends on the time constraints, children's attentiveness at the moment, or the relevance of the

observations to be put forward. This phase is particularly important because it is here that children learn how they can evaluate what they have done, metacognitively reflect on the creative thinking strategies they used, and give feedback to other groups.

In some cases it may be important or interesting to invite the group to repeat their piece again, in order to try out possible strategies which have been suggested, or to just let them enjoy a second go, especially if the first one did not go well for some reason, until they get to the 'ultimate provisional Gestaltung'. Through a second try, moreover, it is possible to check the extent to which the material was pre-established – i.e. what is the invariant framework underlying the different renditions of the piece – or rather invented at the moment. In some of the last sessions after a first round of presentations and comments we asked children to go back again in small groups and refine their pieces.

The findings of the study confirm Reese (2003), Webster (2003, 2012), Wiggins (2005) and Younker's (2003) claim that this phase of guided reflection, feedback, and revision is crucial to the increased effectiveness of children's creative work.

10.3.2.6 Not linear and cumulative pathways, but twisty trajectories

This model resembles the ones presented by Webster (2002 – see 3.3.3.1) and Fautley (2005 – see 6.4.3.1). Similar to the situations which they examined, the creative learning processes in this project did not take linear and cumulative pathways, but rather were made of twisty trajectories. Therefore, the outline provided above is just a synthetic representation of the structure of a number of processes which were in reality more intricate, differentiated, irregular and unpredictable than might appear from this simplified scheme.

With regard to cognitive apprenticeship and the cognitive aspects of children's experience, what I am particularly stressing here is the importance of "making thinking visible" (Collins, Brown, and Holum, 1991) and supporting children in developing creative thinking skills in music (Webster, 1990, 2002; Hickey, 2003b) with a particular emphasis on 'interthinking' (Howe & Mercer, 2007; Rogoff, 1990) in group creative music making. In this sense, children's experience in this research project could be seen as a 'cognitive apprenticeship to collaborative creativity in music', where it is not so much the musical outcome to be important – be it aesthetically pleasing or not – as the development of group creative problem-solving and problem-finding strategies, or expressed differently, the development of a mindset and a way of being musically in relationship to others.

10.4 Task design

Based on the activities realised in the project, in the following table (see Table 13) I summarise the key characteristics which define the task design, compare some

examples, and examine how the features of the creative task affected children's involvement in creative collaborative work.

Table 13. Key features of group creative task designs in music

<i>Leading idea</i>	rules, impulses, stimuli, provocations, prompts, ...
<i>Media</i>	movement – voice – instruments
<i>Kind of creative process</i>	exploration – improvisation – composition
<i>Degree of openness</i>	relatively closed, structured tasks (creative problem solving tasks with narrow parameters) open-ended, complex tasks (creative problem finding tasks with open parameters) free tasks
<i>Direction of the form-giving process (Gestaltung)</i>	bottom-up processes (combining elements to form a whole) top-down processes (progressively defining a whole into elements)
<i>Degree of interactivity</i>	cooperative tasks (putting ideas together) collaborative tasks (developing one idea as a group)

For example, N. 2 "Composition of a musical sequence based on graphic notation" is based on a prompt, uses movement, is a group composition process, a highly structured task, a simple bottom-up process building a sequence of four elements and, as children solved it (everybody "doing the same"), a collaborative task. The clear visual structure of the score scaffolds children's decision making process and helps them build a shared understanding about what they are doing, in that they repeatedly refer to the score to show what movements they associate to the single parts. The use of diverse forms of notation – as in N. 27 and N. 28 "Group composition: Rhythm structures", in which a form of notation with objects was used – can significantly facilitate the interaction of the group around an idea.

A different example about how the features of the task impact on the process of creative group interaction is N. 19, N. 20, and N. 21 "Group composition based on imagery: Volcano". Here the stimulus is a painting, children first use voices and movements and then instruments, it is an open-ended task involving much exploration and improvisation, a top-down process through which an embryonic idea is developed and, as children have solved it, a collaborative task.

In contrast, in N. 23 "Pair composition: Flower of light" the fact that the assignment prescribed to put together two different images led to a cooperative solution of taking turns where each child was doing their own thing. However, this was not always the case, as in other instances such as N. 8 "Circus horses" the request of 'putting together' the movements that children had previously invented individually generated a real

transformation of the initial ideas, which were not just sequenced one after the other but combined and fused to form a new one.

In relation to these and other examples, the relevant finding is that, to a certain extent, the task design does affect the nature and quality of the interaction among players. Some task assignments can be defined as more 'interactive' than others, because they tend to activate higher levels of positive interdependence (Johnson & Johnson, 1999). I say 'to a certain extent', however, because as soon as the assignment is given children exert their freedom to interpret it and solve it in one or the other direction. It often happened that two groups solved the same task in very different ways or that children did not work as had been specified but followed an independent route, in a way 'solving a different task'.

Thus, the creative tasks that were offered to children acted as an open-framework (in the sense of Siraj-Blatchford, 2009, see 4.3.1) in which a flexible structure was provided in order to scaffold children's interactions with the material and with their partners, which at the same time was open enough for them to assert control and ownership of the process. This leads back to the crux of creativity, the relationship between freedom and constraint (see below 10.6.1).

A further, foundational point is how creative activities are organised in longer and differentiated learning pathways. In terms of pedagogical strategies, it is not so much the single task as the whole chain of successive creative steps that matters, i.e. how the sequence of activities centred about an idea are built and extemporarily structured in an ongoing improvisational dialogue with the group (Beidinger, 2002; Köneke, 1982; Sawyer, 2004a, 2004b). At each point in time task challenge and children's skills are balanced, thus enabling *flow* processes (Csikszentmihalyi, 1996), and the action fluidly moves forward. An unfolding learning pathway, which is appropriately varied, intriguing, growing out of children's engagement with ideas and with each other, and which above all is co-constructed between them and with them (Wood, 2010) appears to be best suited to support their creative processes.

10.5 Interactions in group creative processes

In this chapter I am considering the component aspects which influence the nature and the quality of children's creative interactions in music. The previous sections have looked at children's characteristics, the features of the context, the pedagogical approach, and the task design. A further aspect is the process itself, that is how creative ideas are generated in the group interaction. With respect to this, a powerful metaphor to interpret

group creative processes is Sawyer's construct of 'collaborative emergence' (Sawyer, 1999, 2003a, 2003b, 2006, 2007; Sawyer & DeZutter, 2009 – see 3.4.1.3 and 6.4.3.1). In the following, I micro-analyse one episode in the study based on this concept and then discuss the extent of its applicability to the findings of this study (other examples may have been used, too, illustrating different ways in which ideas collaboratively emerged in the group creative process, but, for space reasons, I limit the discussion to this one instance).

10.5.1 Collaborative emergence

The following episode is an example of a group process of collaborative emergence of a structured musical organism. I focus here on Chiara and Sandra's scaffolded impro-composition in session 28. In the creative process, ideas were progressively constructed around a central body constituted by a melody and an accompaniment, later on enriched by Flavio's improvisatory intersections.

Here is the micro-analysis of the phases of the process:

Group impro-composition: "Phrygian ostinato and melody"

Phase 1: preliminary choices

In previous sessions children had worked on how to creatively interact by assuming distinct musical roles, according to a figure-ground compositional logic (see above 9.1.2.3). In the last five sessions of the project children had complete freedom about what to do. As had become usual for them, in the preliminary phase, prompted by the teachers, they got ready for a creative phase of work by choosing what they felt like doing (singing, dancing, or playing), with whom they wanted to work, the instruments they wanted to play, and also gathered some first ideas about what to do. Chiara declared she wanted to play a melody and asked for a melodic instrument, and I suggested a soprano metallophone. Sandra had no clear idea, so I proposed an alto xylophone, with the task to find an accompaniment to Chiara's melody.

N. 30 Group impro-composition: "Phrygian ostinato and melody"

Phase 2: group work, free exploration

In the group work phase the two girls begin by exploring each on their own, Chiara playing around with variations of Alessandra's idea of cc' on the soprano metallophone (see N. 15), and Sandra playing a pulse or simple rhythms on random pairs of notes on the alto xylophone. (<https://vimeo.com/124805782>, dvd.45)

My colleague Valentina gives a technical indication to Sandra and shows her how to hold the mallets and to hit in the middle part of the bars. The girls go on improvising for a bit. Then, the proto-idea for Sandra's accompaniment gesture with alternate hands emerges for the first time very briefly (<https://vimeo.com/124805783>, dvd.46) and finally Sandra asks Chiara "what do we do?"

s.28/30 20140514 C,SA

An interesting question would be 'where does Sandra's motor idea emerge from?'. This is something that she must have seen us teachers doing on the barred instruments in some previous sessions, but interestingly we had never taught them explicitly how drones can be constructed. So she picks the idea out of her memory (probably in a subconscious, kinaesthetically driven way) and uses it.

Phase 3: group work, holistic conception of Sandra's accompaniment

Sandra asks me for some help. I suggest to count five bars spreading the fingers over the xylophone, so as to obtain 5ths. She chooses e and b as main notes and finds a rhythm module fluctuating around *ebebeeb* (7/8) and *ebbeeb* (5/8) or similar combinations, later she will also begin on *b* – a sort of irregularly rhythmic drone, with alternating hands and every now and then beating two times in a row with the left hand. (<https://vimeo.com/124805784>, dvd.47)

To facilitate her task, I remove the bars *d* and *c'*, so that she can better visually identify the extreme notes *e* and *b* (a great advantage of Orff instruments).

According to Wiggins (1994, 2003), children's initial musical ideas emerge as melodic or rhythmic wholes having musical integrity. This instance confirms Wiggins' finding about the holistic conception of children's ideas, as Sandra's ostinato appears with a precise shape at this very point in time.

Phase 4 (progressive emergence of Chiara's melody): I then give Chiara a simple indication for improvising a melody on Sandra's accompaniment, i.e. step-wise descending movements starting from a note and stopping every now and then. I also take away the bar of the low *d*, suggesting to her that *e* could be the final note of her melody. My interventions have the function of building upon what they are already doing and confirming the open structure of the piece: a drone and a melody on it. I leave them working again on their own for a while.

Phase 4: progressive emergence of Chiara's melody

Accompanied by Sandra's drone, Chiara explores a way of descending from the high *a'* to the low *e*. From the way she tries out possibilities, I would infer that she is thinking not in terms of melody, but of motor patterns – she is looking for a comfortable handing – *rr //* or something similar but regular.

(<https://vimeo.com/124805785>, dvd.48)

[To help herself have a better visual and motor control in hitting the bars she has in mind to play, she removes the bars *g* and *c'*. She uses the strategy I have just used on Sandra's xylophone to make her own task easier.]

They repeat this module again. Chiara definitely fixes a descending melody *a'g'f'm'baf* just before my eyes, with a precise handing *rr // rl rl* (but I don't notice what she is doing, because I am talking with Flavio). She also finds the ending: playing the low *c*. (<https://vimeo.com/124805787>, dvd.49)

Now the two girls "have found everything" and are ready to try out the whole idea.

Phase 5: first rehearsal of the piece during the group work phase (C, SA)

In this 'work in progress performance' (Fautley, 2005), Chiara performs her melody four times, while Sandra repeats, more or less regularly, her accompaniment. Chiara gives the cue for the ending by playing the low *c*.

(<https://vimeo.com/104224690>, dvd.50)

Phase 6: expansion of the piece (adding one player)

Flavio is involved at this point in the process (he has tried to improvise on his own, but is not happy with what he is doing and has 'no ideas'). Having attentively observed the two girls playing, he decides to use a xylophone. I choose for him a soprano xylophone so that Chiara's melody on the metallophone remains distinct in timbre from the two xylophones; further, by being an octave higher, his soprano xylophone is also easy to be differentiated from Sandra's alto xylophone. This is my third scaffolding intervention.

The three children rehearse the piece. Sandra tells me that it is difficult for her to control the movement (we talk about technique). Flavio does not want (or perhaps perceives he is not able) to fix a melodic line as Chiara has done and asks if he can instead "*improvise a bit*".

Phase 7: first performance to the whole group (C, F, SA)

Flavio improvises on a soprano xylophone some accompaniment more or less in synchrony with Sandra's drone and later plays what I interpret as a descending contra-melody to Chiara's one, actively finding his own place between the two girls. Sandra here begins with a 9/8 *bebebebee*, then changes to a 7/8 *bebebee*, but seemingly without any conscious intention or awareness in doing so.

The ending is provoked by Sandra who just stops playing. This version is much longer than the preceding one and she must have felt it was time to finish.

Chiara, absorbed in her melody, interrupts her seventh time and closes on the low c, while Flavio plays his last notes in a respectful pianissimo.

(<https://vimeo.com/104224643>, dvd.51)

Both Chiara and Sandra seem to be very concentrated on their own playing. To what extent are they really listening to each other? They might actually be perceiving the other just in the background. From a rhythmical point of view, there are continuous, subtle attempts to establish some kind of pulse-related synchrony. However, it is apparent that they do not have enough instrumental technique to precisely coordinate their motor-musical actions with a shared beat and with what the partners are doing. So, while the two girls are playing together, they tend to proceed along parallel paths, each doing their own thing. In this sense, their musical interaction is more cooperative than collaborative – i.e. playing *beside* each other, rather than *with* each other (a 'creative musical jigsaw' – see above 9.3). They are not building on each other's ideas, and their way of working is more cumulative than transactive (Miell MacDonald, 2000). They really connect with each other only for the ending (which had become a shared concept in the group).

Flavio, instead, seems to be more interactive. He takes on a different role, that of the free improviser, and this enables him to be more in contact with what the girls are doing. He attentively observes the girls, takes ideas from them, develops them, and explores his own ideas, as a sort of 'background solo' complementing and integrating the existing texture. In this regard, an observation is that there is qualitative difference between roles in group composition and in group improvisation: in composition, after children have decided what to do, each partner can follow their own routes (here Chiara and Sandra); in improvisation, given the open character of the musical interaction, it is more likely that they keep in contact with each other (here Flavio).

Phase 8: whole-group comments, questions, and suggestions

In the subsequent group comments Lorenzo asked about the respective entries, Sandra acknowledges that she and Flavio are playing the background and Chiara the foreground melody, Sonia suggests to add a drum, and I suggest to Chiara to play the melody also ascending. Flavio decides that he will also add a rubbing movement with the mallets that he 'has just found'.

Phase 9: second and last performance (C, F, S, SA)

Here again are some new elements or variations. Sandra's non-pulse-based ostinato is this time mostly in 7, *bebebee*. Flavio, who is deliberately improvising, further produces rich explorative material – he looks very comfortable in this role. Sonia is very much in the background with her drum, trying to keep the pace with Sandra – which is at any rate impossible, given Sandra's rhythmical instability. Chiara plays the melody first descending and then ascending (a real pity not to have had a second time down and up). For the ending, Chiara plays the bar c as planned, Sandra adds her newly invented ending notes *a'g'*, Flavio closes with an improvised ascending glissando and Sonia with a last stroke on the drum.

(<https://vimeo.com/104224667>, dvd.52)

This 'open and evolving piece' is one of the most mature outcomes that this group of children produced over the year. I find it peaceful, almost hypnotic, with a distinctive aesthetic quality. The various component parts of this 'evolving impro-composition' emerge out of the collaborative interaction in the group (including the teacher). There is a basic structure – a free-metrical (or non-exactly-metrical) ostinato with a melody on it – to which further improvised or aurally composed parts are aggregated. So, the piece has a definite identity, but keeps unfolding. In the whole process the cooperation between the two girls and then with Flavio (and with me) worked in an optimal way. Each of them could find their own distinct, complementary roles within a coherent structure, contributing to build together a beautiful piece.

So, in what terms is this episode an example of 'collaborative emergence'?

- Each performance was the result of a chain of choices made by the children both individually and in the group interaction, verbally or directly by playing
- None of us – including the teacher – could have foreseen the piece of music that resulted at the end of the process, but we all contributed to its co-construction
- There was no centralised guidance of the process, in that the leadership was distributed among the children (and the teacher), and there was no prescribed script to be followed

- The group process was highly contingent and open: each choice, while closing off alternative pathways, opened up the space for further choices.

Looking at the series of creative sparks along this extended learning pathway and comparing the different performances, with each Gestaltung as a provisional sub-step of a virtually ever-evolving dialogic process, the image of children's creativity that appears is that of a 'process creativity' or 'performance creativity' (Sawyer 1998, 2003a) – very much based on improvisation and interaction, not oriented to the product, but to the emergence of ideas – and creativity as collective process of co-construction, in which ideas are generated through the reciprocal interaction around a shared goal.

Admittedly, this group of children is not as collaboratively emergent as a professional jazz group or a theatre improvisation ensemble – one might critically argue that there is not as much group interaction here. It is clear that children of this age cannot have the same level of expertise and do much simpler things. Also, collaboration in terms of achieving intersubjectivity through music is still rather limited as compared to what older children or adults demonstrate. From a cognitive perspective, these children have not yet developed a sufficient number of schemata, i.e. of scripts and structures which expert musicians currently use. A range of issues related to memory, focused attention, and sensorimotor control constrain their ways of interacting with each other.

In sum, it would be unrealistic to expect these children to have proficient collaborative creative skills in instrumental music. However, I clearly see the precursors of them. In my perspective, the kind of emergent processes that these children display are *qualitatively similar* to what expert adults do (though the teacher has to be included as a further component of the process). Therefore, I would argue that the concept of 'collaborative emergence' is a valid interpretive lens which can help recognise and understand children's initial steps in creative collaborative music making. And, as Glăveanu (2011a) advocates, it is convenient to pragmatically 'bet' on children's creativity as an expression of their agency, as the foundation for later and eminent creativity, and also as something which can really flourish if it is acknowledged, valued, and nurtured.

10.5.2 A model of the interactions in the group creative process

Connecting to the models of the group creative process in music presented in 6.4.3.1 (in particular Espeland, 2003; Sawyer, 2003; Wiggins, 2003) I attempt here a model of the web of interactions taking place in children's group creative processes in music (see

Figure 20), which integrates Sawyer's notion of collaborative emergence and Espeland's and Wiggin's consideration of the nearer and wider sociocultural context in which the creative process is embedded.

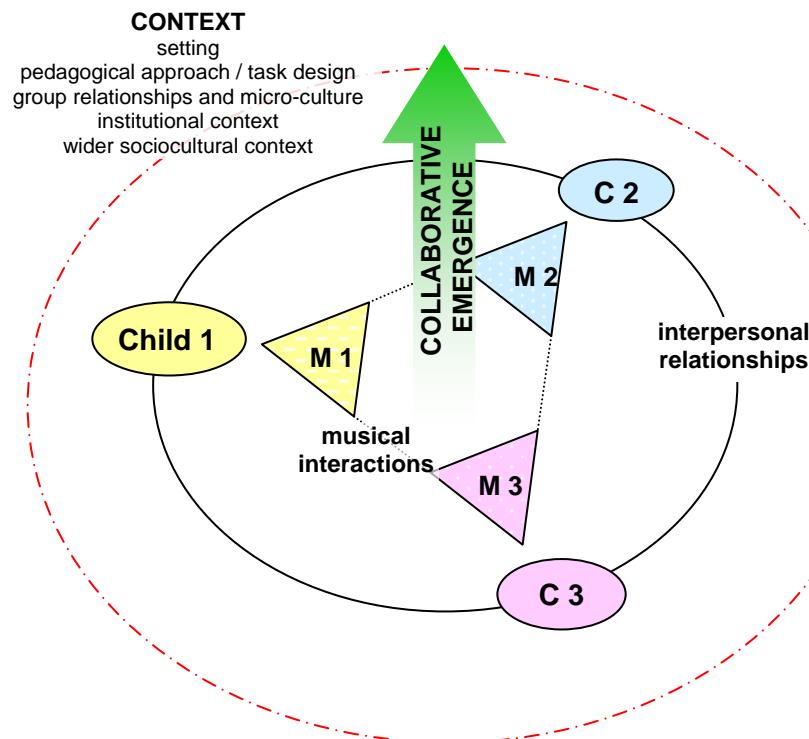


Figure 20. Interactions in the group creative process: a model

The image synthetically represents three players (the circles Child 1, 2, and 3, but it could be just two of them, or more), each with their own individual characteristics, previous experiences, and cultural backgrounds (different colours). Each of them produces musical ideas (the triangles Music 1, 2 and 3). Interactions occur at different levels: there are relationships within the constituent parts of the music played by each child (intra-musical relationships, i.e. within one single triangle in the diagram), and inter-musical interactions between the music played by an individual child and that played by another child (i.e. between two triangles), as well as musical interactions at the group level as a whole (the big triangle). Similarly, each child can be regarded as a system of intra-personal, psychological relationships, which also include their own relationship with the music they are playing, i.e. the interaction with the instrument or their overall thoughts and the expressive and communicative intentions in playing. Each child is also in relationship with the other children in terms of interpersonal, group-dynamic or task-related interactions mediated by verbal and nonverbal communication – regarding further layers of intersubjectivity and attributions of shared meaning (here represented by the circle connecting the three children). Thus, in the creative process an intricate web of

interactions develops in the group, usually activated by some sort of stimulus or task assignment. The collaborative emergence of creative ideas and outcomes in the group interaction is represented by the upward arrow (a graphical alternative might be a spiral growing up from the centre and referring to ideas that bounce amongst members and progressively acquire form). The focus of this study is on this process of emergence, that is, how children build a shared understanding and collaboratively engage in the creative process, both at the micro-level of moment-to-moment interactions (as in the example above) and at the macro-level of a whole school year of creative processes experienced in the group. The outer circle in the diagram represents the 'context' in which interaction processes occur, which includes the physical setting of the classroom, the pedagogical approach and the scaffolding actions and interactions of the teacher with regard to children's activity, the relationships and the micro-culture within the whole group, the institutional context of the music school, and the wider sociocultural context in which the whole creative interactional process is situated. Again, it appears necessary to adopt a systemic perspective in coordinating these different levels of analysis.

10.6 Tensions in creative learning and teaching for creativity

As has been seen in 6.4.4.2, creative work entails some tensions between opposing principles or polarities. There they are presented as controversial issues for the teacher to solve in conducting creative activities. Here, based on the observation and analysis of the data, I try to interpret them both as tensions inherent in children's creative learning seen from the perspective of the children themselves, and as challenges in teaching for creativity seen from the teacher's perspective.

10.6.1 Freedom – Structure/Constraint

The tension between freedom and structure is the crux of creative work in music as well as in any other domain (Sawyer, 2008, 2012). To make clear the dialectic relationship between the two constructs I introduce here a conceptual tool (derived and elaborated from Widmer, 2011, who in turn draws it from Schulz von Thun, 2001) which extends the usual representation of a linear continuum of intermediate possibilities between two opposing polarities (e.g. Chappell, 2005, 2007b; Hickey, 2012). Taking 'freedom' and 'structure/constraint' as neutral values I analyse both their positive and negative implications (see Table 14 below) and relate them to situations which occurred in the study. These may serve as an exemplification of the ways in which the balance of freedom and structure can differently characterise the creative process.

Table 14. Tension between freedom and structure in the creative process

+ Autonomy optimally open, self-organised, self-directed, unfolding, emergent, deliberate, intentional, playful	Restraint too constrained, controlled, tight, fixed, blocked, stifled, hampered, excessively directed	-
Freedom Openness	Structure/Constraint Closure	
- Arbitrariness too open, disordered, disorganised, unaimed, confused, random, desultory, disjointed	Enabling frame optimally structured, ordered, disciplined, scaffolded, focused, cohesive, methodical, safe	+

In the best moments during the project children were moving along a positive tension between freedom as 'autonomy' and structure as 'enabling frame' (respectively the left upper and right lower quadrants in the scheme). In a pedagogical perspective I see this balance as constituted in the first place by the teachers, who provided an open space with sufficiently flexible boundaries within which children could make their free choices. The teachers' scaffolding actions regarded both a single task assignment and the whole chain of preliminary, preparatory, and core phases of children's creative work, combining intentional and responsive teaching in dialogue with the group. But 'structure' was provided for not only by the teachers, as it was constantly created by children themselves, who actively determined the extent and the forms of their own creative activity. Rules were not just formulated in advance by the teachers, but also continuously emerged within children's joint creative process (this resonates with Vygotskian theories about play – Wood & Attfield, 2005). Especially where just a very broad rule was provided – an 'enabling parameter', as Wiggins, 1999, calls it – children established their own internal frames of reference through sequences of shared decisions. In some cases, where the task was more closed, they also transgressed the rules, adapting and interpreting the assignment according to their own understanding and wishes. They positively created structure for themselves, for example, by resorting to imagery or narrative, so that it was the extra-musical meaning of what they were doing that provided the focus for their joint musical invention (see below, section 11.2.1). Further, children differed on the degree of structure they sought for themselves (this recalls Treffinger, et al.'s 2008, 2012, distinction between 'developers' and 'explorers' – see 3.2.2): for example, while Chiara was more clearly orientated to achieving a simple, neat and 'safe' idea which she could feel she was in control of, Flavio was more inclined to improvise and engage in a free flow activity, perhaps because he felt he did not have the mastery to perform a preconceived idea or because the openness of the process was more gratifying for his inquisitive and curious nature. Freedom in this positive meaning is here

'freedom to...' or autonomy in the etymological sense of 'giving oneself rules' – i.e. deliberately and intentionally choosing what to do.

There were other instances (which I would include in the left lower quadrant), however, in which children appeared to be 'lost' because there was too much freedom, i.e. the rule was too open for them, they would have needed further scaffolding preparatory work, could not identify a leading idea for themselves, or could not focus as a group on a common plan. The resulting group action was disjointed and obviously short of shared understanding and a clear direction. In this sense, the 'freedom from...' rules, boundaries, or some kind of either externally imposed or internally constructed order resulted in arbitrariness and lack of meaning. At the other negative extreme (right upper quadrant), an excessive demand in terms of parameters to be respected – as in the case of too close, complex, articulated, or over-determined rules – resulted in what Espeland (2003, 2006) defines a 'blockage', i.e. a halt in the group production of ideas; as an example, see below the episode in the second-last session (N. 31) in which the two teachers made so many requests that Alessandra no longer knew 'what she had to do'. However, just as the requirements imposed by the teachers could hamper the process, also children's fixedness with ideas, limited flexibility in accepting other children's suggestions, or attempts to control and dominate the group process ultimately interfered with the productivity of their joint work. In all these cases 'structure/constraint' was no longer a positive support for the group action, but a hampering restriction which stifled the creativity in the process.

The diagram presented above appears to be a valuable tool to critically analyse and situate different situations in which the issue of the tension between freedom and structure becomes relevant, both in relation to the teacher's pedagogical framing and to children's creative choices.

10.6.2 Process – Product

Looking at children's Gestaltungen throughout the project it is apparent that their products were still to a good extent open and improvisational – in a deficit view, they were 'unstable'. Both for pedagogical and research methodological purposes children were often asked to perform the same piece a second time, in order to give them the chance to improve their presentation and to gain the possibility of a comparison. Even where the intention was just to repeat precisely the same, there were variations and deviations from an underlying invariant structure – see for example the two subsequent renditions of N. 15 "Solo metallophone with drums and bell accompaniment" and N. 11 "Composition for

metallophone with accompanying drum". A thoroughly fixed and reproducible piece like a composition in Western music was rare – the most 'exact' example in the sample is N. 18 "Two-voices layered ostinato with bells and drum", and even there the overall duration is not pre-established. With the exception of children's compositional etudes as in "Rhythm structures" (N. 27) none of children's compositions were notated, so that they can be defined as 'aural compositions' (Burnard, 1999; Glover, 2000; Hickey, 2012) or, as I would say, 'impro-compositions' or 'Gestaltung'. During both the compositional process and the resulting performances children's still uncertain technical skills and limited information-processing abilities – in terms of attention and working memory (as already noted by Kratus, 1989) – often contributed to the fact that they had to cope with an inevitably open process where individual fluctuations were echoed and amplified through the group (see made in N. 9 "Trio free-metrical melody on unstable ostinato"). Further, in many cases the 'shared understanding' was only partial, due to the fact that children only had a rough plan of what they were going to do. This meant that in the performances there were often moments in which they had to improvise adjustments to what was being suddenly and unexpectedly developed in the interaction (a good example of this is N. 29). The absence of a rigorous replicability did not imply, however, the absence of a plan or of a sense for the form of the piece and for the internal relationship between parts and roles. In fact, children often declared to have made 'mistakes', i.e. that the performance had not conformed to their own mental (and shared) representation of the piece. They were working within the constraints of orality, which inevitably entailed 'instability' and required improvisational responsiveness across successive performances of the same idea.

These considerations relate to what would be termed 'compositions'. Beside these there were also more improvisatory pieces or straightforward improvisations in which children continuously transformed the idea through subsequent trials and performances, where the emphasis was plainly not on the product but on the emergent process of 'making up a piece together'. And yet their pieces were never 'random': in agreement with Kanellopoulos' (1999) remarks, these children's improvisatory music making, though including various aspects of chance, was strongly characterised by 'thoughtfulness', i.e. deliberateness and intentionality in the organisation of their musical expressions.

Based on these data, the finding is that these children's ways of 'playing in/through music' were highly open-ended in nature. The concern for the 'product' was probably more mine than theirs, due to the constraints set by the institutional context of the music school which required some form of 'product' to be shown as validation for children's learning. At

any rate, whenever these children set for themselves the goal of achieving a product, it emerged out of their own commitment to an intrinsically motivating process, rather than to satisfy the teachers' needs or projections.

10.6.3 Being creative – Acquiring knowledge

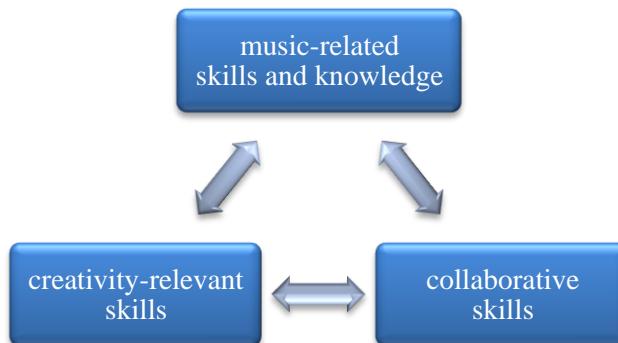
At different points during the project the issue arose about the necessity for children to build musical skills prior to or alongside the kind of creative work they were doing. In some cases, the impression was that a basic vocabulary of musical actions and cognitive schemata were largely lacking or still at too elementary a level to enable children to work more profitably in a creative way. In agreement with much literature on creativity (e.g. Craft, 2001a; Koutsoupidou, 2008; Sawyer, 2012; Sternberg, 1999) this study confirms that creativity grows from the elaboration of preceding experiences and that the more knowledgeable a person is, the more creative she potentially is. The availability of a greater expertise, indeed, increases the quantity and quality of creative ideas. Taking this as an assumption, the question with regard to this study is what knowledge these children needed in order to be (more) creative and how this knowledge was acquired.

In terms of musical knowledge, I make a distinction between technical skills on the one hand and musical concepts and thinking on the other. In relation to technique, we noted that children were most willing to accept technical indications about how to use an instrument when the teacher's intervention was directly related to their present creative process. In this sense, technique was functional to their creative expression, and was not a goal. Thus, the acquisition of technical abilities was fully integrated with children's creative process and tailored to the needs and interests of the children at a particular moment. This may produce a sort of 'patchwork learning' which is distant from the systematic and progressive instructional approaches to instrumental technique as can be found elsewhere, but which proved to be more rooted in children's own learning pathways – as twisty as they might appear (Green, 2002, 2008 makes similar considerations about popular musicians' learning processes over time). The driving force seems to be the actual music making process, which in turn can stimulate the need for higher technical proficiency.

In relation to the development of musical understanding in terms of musical labels, conceptualisations and thinking strategies, the guiding function of the teacher appeared to positively enhance and accelerate children's processes of learning and maturation. For example, with regard to polyphonic thinking the whole learning pathway on 'figure-ground' made it possible for children to acquire new ways of knowing and practising music which

they did not previously show. But again, the development of musical knowledge as an important, though not the only, component element of musical creativity was not a separate, but an integral part of the overall activity. In the sessions observed in this study there was not a clear distinction between phases of 'acquiring skills and concepts through instruction', 'applying them in an exercise', and finally 'freely creating music'. Rather, the transmission/acquisition of knowledge was interwoven and fused in various ways with the creative co-construction (between and with children) of musical knowledge. The point I am trying to make here is firstly that, based on the sample of these children, the development of knowledge is to be seen not as a prerequisite, but rather as a co-evolving constituent part of children's creative processes and, secondly, that even at low levels of expertise (actually, at any level) there can be a meaningful creative engagement with the material and with the others.

To widen the picture I claim that, in the case of group creative learning, the tension is not just between the two poles of being creative vs acquiring domain-relevant knowledge, but that there is a third pole, i.e. learning to collaborate with others (see Figure 21).



**Figure 21. Co-evolving areas of learning
(music learning, creative learning, collaborative learning)**

These children were *at the same time* accumulating experiences on instruments, learning how to invent music, and how to work creatively with others. So there was not first a phase of 'pre-training' and then the 'real' phase of group creative work (as for example in Baines *et al.*, 2009, or Dawes *et al.*, 2004), but each activity had contemporarily different layers of goals, pointing to the musical, the creative, and the social. This recalls the Orff principle by which at every point what children are doing should be musical and at every point there should be something socially valuable and creative about it (Haselbach, 1990, 2011; Haselbach *et al.*, 1985, 1990). Again, a holistic, systemic view of the learning process is required, as the challenge – both for children and teachers – is to keep the three things growing concurrently and in reciprocal interaction.

10.6.4 Children's agency – Teacher's guidance

A central issue about creative learning in educational contexts is to what extent and in what ways children's creative activity can be facilitated by the scaffolding presence of the adult, and when, instead, the teacher's actions become impeding or disruptive intrusions. A scheme similar to Table 14 (Freedom / Structure) is presented below, where children's agency can be positively thought of as 'ownership of the process' as opposed to 'unfocused action' and the teacher's guidance can be characterised as 'supportive intervention' vs 'hampering interference' (see Table 15).

Table 15. Tension between Children's agency and Teacher's guidance

+	Ownership of the creative process autonomous, intentional, meaningful, generative action	Interference too directive, controlling, intruding, dominating action	-
Children's agency		Teacher's guidance	
-	Unfocusedness dispersive, disoriented, uncoordinated, unreflected action	Scaffolding proactive and responsive coaching, facilitating, supportive action	+

A 'negative' example from the study serves well as a stimulus for the discussion on this pivotal theme:

N. 31 Ownership of the creative process and teacher's intrusion

This was the session in which, as teachers, we were confronted with the issue of performing for parents, as the use was in the music school. The following week they would all be there, expecting something from the group. We felt responsible and under pressure, and we inevitably transferred it onto the children. For us, the problem was what we should present. We had never been working towards a 'good musical product', rather we had always been more interested in the process, irrespective of the quality of the outcomes. When this second-last session arrived, we felt unprepared, not having really understood what we wanted to do for or with the parents. But we had to 'produce' something anyway. Thus, this time a different dynamic emerged in the way we were dealing with the group: we needed to be sure of something, and children had to get to some result, fix it and remember it in order to reproduce it with enough certainty in that stressful situation which we know as 'performance' – under the judging eye of the parents and the threatening presence of many cameras. In a way, children had to

do it for us, so we were asking them to 'do it right, beautiful, and repeatable, so remember it'. Thus, instead of the role of facilitators, open to listen to them and help them realise their ideas, we took on the role of the 'teacher in charge', with a clear idea of what needs to be done and how, giving or better imposing instructions on the group, and deciding upon them. As a consequence, the group felt we were dragging and pushing them into our own performative direction. Until they stopped us.

In the first Gestaltung of their piece (<https://vimeo.com/104224688>, dvd.53) Alessandra repeats a non-beat-based tremolo on *cf*, *df*, *ef*, while Sonia plays a | du deka .kade | on the darbukka, and Lorenzo tries to follow one or the other. The result was rather confused, due to difficulties in synchronising. So we suggested to Lorenzo just to play the first beat of Sonia's rhythm, which would make things clearer. In the second Gestaltung (<https://vimeo.com/104224699>, dvd.54) the piece works much better. Nevertheless, not finding it sufficiently long for the final performance, we tried to introduce a B part, and then go back to the A part. The notion of ABA form was something new for the group, so we began to explain, show, play for them, stand beside them, tell them what they should do, and the like (anyway, this exacting and distressing attitude was obvious from the beginning of the session). Our sincere intention would have been to expand the piece and make it more beautiful – according to our vision, though – but, ultimately, we didn't get to a good final Gestaltung because for children it was not clear what they had to do. We gave them too many ideas and concepts, they did not have enough time to absorb, fix, and remember them all, and above all, we were not helping them to do their own thing. We were depriving them of the ownership of their piece. We went well beyond 'supporting', 'scaffolding', 'facilitating', or 'co-constructing' the activity. Neither was this a productive way of challenging children und positively prompting them to go beyond their limits. Rather, we really 'intruded' into their creative process, with the result that they could no longer perform their own piece as a whole. Alessandra eventually reacted by closing herself, saying that she could not remember anything. And we had to stop there. She was the 'emotionally sane' member of the group telling us that this way we were actually blocking them. A lesson I will remember.

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In this case the 'urge to produce learning' – here caused by our perception of the institutional context as pressing and demanding – shifted the balance between children's

agency and teacher's guidance too much in the direction of the intrusion, rather than the facilitation. This was undoubtedly too teacher-directed and essentially disrespectful to children's work – a bad use of our power as more expert musicians and pedagogues. In a wider cultural perspective, the tension here can also be read as performativity agendas (Craft, 2003b) against processual learning: this is indeed a very present danger in the domain of music education where learning is often measured more in terms of performance rather than experience (this leads back to the issue of product vs process).

10.7 Reflection and awareness: talking about and evaluating creative work

In the project reflecting-on-action (Schön, 1983) was not a formalised step in a rigid pedagogical structure, but rather a constant, recursive feature of the learning process. Scaffolded by the teachers' questions and feedback, children were continuously invited to think and talk about their creative actions and outcomes. The size of the group, comprising eight children, allowed this process of reflection to fluidly intertwine with the practical activity, following the current state of attentiveness and readiness of the children (a bigger group, in fact, would probably have required a different and more constrained organisation). In the sessions the group creative activities usually included unstructured phases of group reflection, which could variably focus on:

- *analysing the structure of the piece* (e.g. what happened, who did what, how the piece was arranged)
- *asking questions for explanation and clarification* (e.g. about construction of the piece, arranged signals, interaction strategies, and associated meanings)
- *praising and looking at what is valuable* (comments, appreciations, positive feedback)
- *offering interpretations* (e.g. what the music may represent for the listener in terms of imagery and narrative – see chapter 11 on children's meanings)
- *proposing ideas for extension* (mostly the teachers were modelling this, but towards the end of the project children, too, began to suggest ideas).

Often the dialogue in the group was functional to a new, improved or extended, performance of the piece, so that verbal feedback and reflection were inbuilt in the overall texture of the creative pathway. As Sonia observed, answering Valentina's question about how it was for them to talk so much about their works, they could get (from us teachers and the group) "some good tips [...] this way we improve". A considerable emphasis in these discussions was placed on the interaction and the thinking together that the activities implied. Children explained how they related to each other, how they were

coordinating themselves in the performance of the piece, or how they had come to such an agreement. These conversations were a valuable source of information in understanding children's processes and products (later triangulated with the analysis of the recordings). The goal of talk was here to enhance the awareness of what they were doing – i.e. fostering metacognitive skills in relation to interactive creative behaviour (Bryan, 2004) – promoting a culture of feedback and constructive criticism, and ultimately fostering critical thinking (Shaw, 2014). The importance of this evaluative aspect of creative work, as observed in the study, finds agreement with the conclusions of relevant literature on revision and feedback (Freed-Garrod, 1999; Reese, 2003; Webster, 2003, 2012; Wiggins, 2005; Younker, 2003) and on the significance of the teacher's role in scaffolding children's thinking and learning through dialogue (Major & Cottle, 2010 – see 6.4.5). As important as it may be, however, the experience of this study also suggests that, at least with regard to this age, talk should always remain at the service of the real creative process, respectful of the flow of children's engagement in the activity.

10.8 Time

A constitutive aspect underlying creative collaborative work is time. Interaction occurs in time and at different timescales (see 6.4.3.2). In relation to this study, I identify three temporal levels. Firstly, children's creative interactions took place at the micro-level of the here-and-now interplay within a single moment of a group activity as exemplified in the vignettes presented above – I refer here to body-based interactions, moment-to-moment motor-visual-auditory adjustments during improvisatory activities, instances of synchronisation, 'grounding', synergy, sudden appearance of ideas through children's mutual influences, and all the subtle actions and reactions through which children established and maintained a shared understanding in the ongoing process of playing together. Secondly, at a broader timescale children's creative interactions regarded the longer phases of work on a creative task in one or more sessions and involved verbal interactions, negotiations, conception and organisation of ideas, co-constructive processes of cooperation and collaboration on a piece, as well as adoption, imitation, and variation of compositional ideas previously presented by others. Thirdly, processes of mutual influence within the group occurred over a longer time period in terms of development of new behavioural and thinking patterns and, more broadly, of transformation of participation in the context of specific social and cultural practices (Rogoff, 2003). At the end of the project this group – children and teachers – had become a creative long-term learning community with a 'shared history' (Eteläpelto & Lahti, 2008), made of a long chain of enjoyable creative collaborations, each of which was building on

the experiential richness of the preceding ones. They successfully established a 'culture of collaborative creativity' (I acknowledge that as a teacher I may be biased in asserting it so proudly).

The development of collaborative creativity requires time. Indeed, based on this study, I agree with Eteläpelto and Lahti (2008) that "the essential conditions for productive collaboration might be slow to emerge" and that, in order to become collectively creative, it is crucial that a group build trust, confidence, an emotionally positive atmosphere, a reciprocal understanding of each other's resources, and a shared language, norms, routines, procedures and ways of thinking (this is also corroborated by research on creative collaboration, see John-Steiner, 2000, and Sawyer, 2007, 2012a). As a collateral consideration from a research methodological point of view, the investigation of group creative processes appears to be most meaningful in long-term naturalistic situations (such as in the present study) rather than in more sporadic, one-shot, experimental conditions. In fact, also the studies on musical group creativity which are most relevant to this one (Burnard, 1999; Espeland, 2006; Faulkner, 2003; Kanellopoulos, 1999; Wiggins, 1994) were carried out over a longer period of time and in a naturalistic setting where such conditions could effectively be created.

Thus, the phenomenon of 'creative interactions' embraces different timescales and levels of analysis. Investigating creative interactions means focusing on the generative process and its evolution over time, from the micro- to the macro-aspects of it, as in a dynamic, unfolding fractal image of interrelated events that co-evolve and influence each other. Whatever the timescale under consideration – be it the whole project, some sessions, an activity within a session, or an incident of a few seconds – a unifying category of interpretation of the phenomenon of group creativity is that of 'emergence' and 'collaborative emergence' (Sawyer, 2003a, 2003b, 2007), i.e. how new ideas, behaviours or learning originate and develop over time through the social interaction. Processes of creative interaction are emergent group processes. In this perspective, an implication for music educators is that teaching for creativity consists in facilitating processes of group emergence in a multiplicity of ways and at different organisational levels of the activity.

10.9 A system of interrelated aspects

This chapter has presented the main component aspects influencing the nature and the quality of children's creative interactions in group work in music (see Figure 22).

In synthesis, with regard to the second research question the findings of this study suggest that children's creative collaboration on group tasks can be affected by a number of dimensions and structural conditions, which include: children's characteristics both as individuals and as a group, the organisation of the setting, the kind of pedagogical approach taken and the ways in which the creative task is designed, the unfolding process of interaction and building of intersubjectivity within the group, the balance that both children and the teacher achieve between the basic tensions underlying creative work in education (freedom / structure, process / product, being creative / acquiring knowledge, children's agency / teacher's guidance), reflection on and evaluation of creative processes, and time as the fundamental dimension in which the development of collaborative creativity, from micro- to macro-experiences, is embedded.

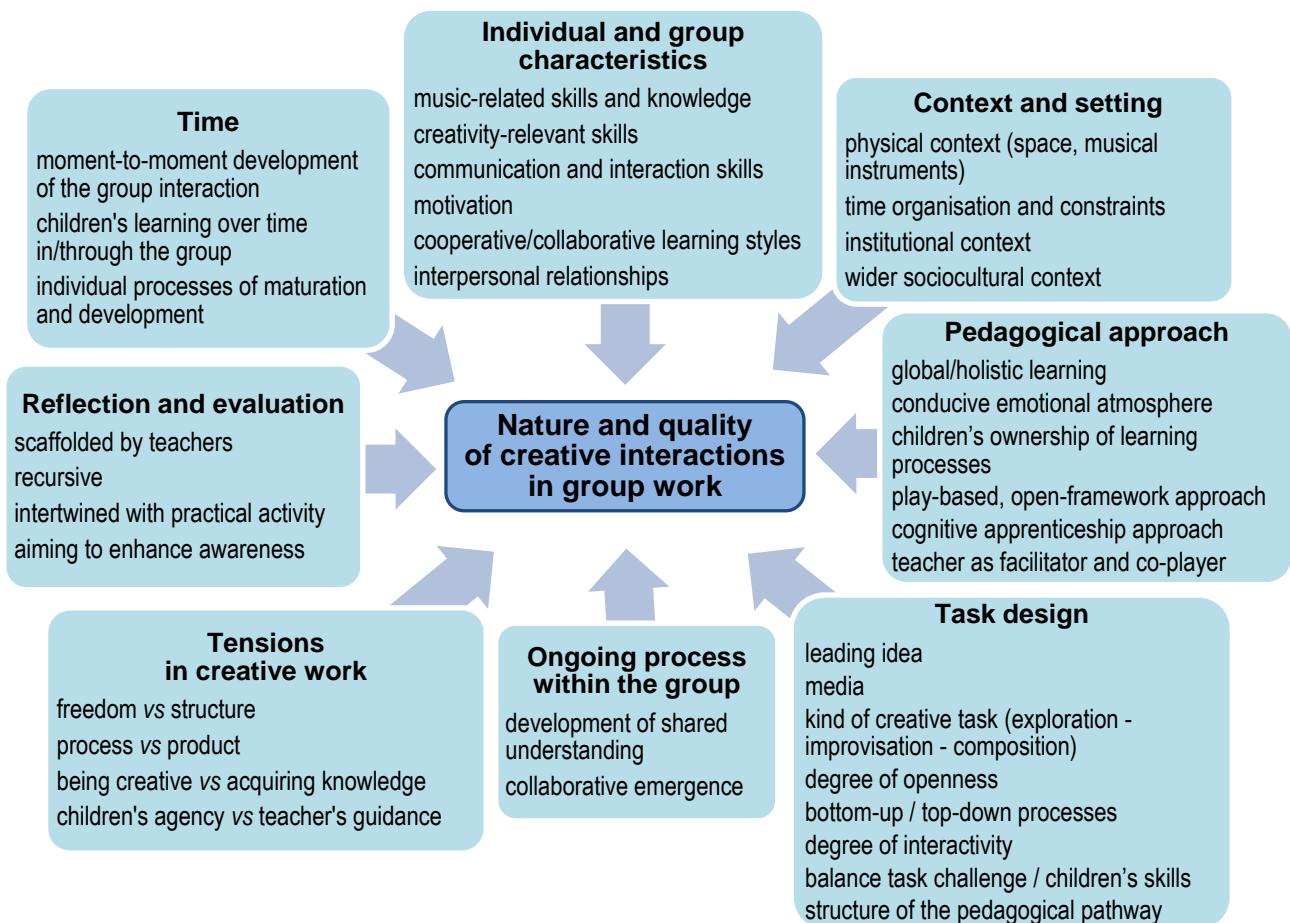


Figure 22. Component aspects influencing creative collaborative learning

In the way the component aspects are visually presented in the diagram, it may seem that they all have equal significance. Actually, it is difficult to identify a hierarchy between them, as each of these aspects and the sub-aspects implied by them can have a beneficial as well as a disruptive effect on children's creative interactions, particularly depending on each unique situation. For collaborative creativity to flourish, they should

concur in an optimal way, which implies looking at them as an evolving complex system of reciprocal influences – a 'fragile ecology' (S. Hennessy, personal communication) where multiple forces must align to attain a delicate balance. As already argued above, a 'systems view' is best suited to understand and act on such a dynamic landscape.

These dimensions have different degrees of manipulability on the part of the teacher, but even those that might appear to be more in their control – the pedagogical approach and the task design – are in creative work inherently open to be co-determined with children themselves. In this diagram – in contrast to the diagram presented in chapter 5 on cooperative learning (see Figure 9, p. 96) – children's agency is not confined merely to the space of group work, with the teacher defining all remaining parameters. Rather, in the kind of collaborative creative work examined in this study children's active contributions extend over many of the areas considered here. In fact, children make choices in relation to groupings and instruments ('context'), co-construct the curriculum in dialogue with the teacher ('pedagogical approach'), largely self-regulate their own collective creative activity based on the frame of an assignment ('task design' and 'ongoing process within the group'), strike their own personal balance between freedom and structure and process and product ('tensions'), and steer the learning process in personal ways to develop their own creative voice and musical identity over time. Children are the protagonists. The function of the teacher is to use their knowledge and skills *at the service* of this process, with 'pedagogical tact' (van Manen, 1991).

After the analysis of the characteristics of children's creative interactions in music (RQ1 – chapter 9) and the component aspects of creative group work in music education (RQ2 – chapter 10), I move on now to analyse the findings relevant to the third research question, about the meanings that children attribute to their creative experience.

11. CHILDREN'S MEANINGS ABOUT THEIR CREATIVE EXPERIENCE

The focus of the third research question was on the meanings that children attributed to their creative activity (see section 6.5). The goal was to capture their intentions and perspectives on the interaction processes among them and the outcomes emerging out of these, and the ways they experienced and conceptualised their joint creative endeavours – what this kind of musical play actually *meant* for them (Wood, 2010). In the following I see 'meaning' on the one hand as the sense they make of their creative activity – in their view, what it is that they are doing – and on the other as perception of the lived experience of collaborative creativity.

11.1 Making sense of the creative activity

In order to act and interact, children need to make sense of what they are doing – this is a basic tenet of constructivist pedagogies (Littledyke, 1998b; Hennessy, 1998; Webster, 2011; Wiggins, 2001), which this research project takes as an assumption and a pedagogical goal. The data offers some interesting evidence about *how* children made sense of their collective compositional activity in music, i.e. to the structured set of actions bringing them to produce an outcome of their own.

11.2.1 Imagery and narrative as meaning of the music-making process

Following Piagetian categories of play (Wood & Attfield, 2005) three main forms of playing in music can be distinguished, i.e. sensori-motor, symbolic, and rule-based play, which in different and combined ways can be applied to music making, as well (see 4.2). For example, many of the exploratory games children played, especially those based on synchronisation or improvisation, had a strong sensori-motor component of discovering the sonor properties of the instrument and matching the partner's movements – Flavio and Lorenzo's improvisation "do it like me" N. 5, or children exploring ideas on the instruments prior to the proper group work phase – here the meaning was the action itself of playing with the material. Examples of rule-based musical play were, among the most interesting, "rhythm structures" (N. 27) or "composition of a movement/music sequence based on graphic notation" (N. 2 and N. 3), where the presence of an organised visual information – a 'score' – provided children with a clear plan about what they were doing at each point in time in the decision-making process.

Yet, the category that emerged as the most present was that of symbolic play: the sense of the music-making process lay in constructing and representing an image or in narrating a story. In some cases the association of the music with some kind of extra-musical event was explicitly prescribed by the task, for example when children used postcards as a stimulus for composition. In translating the visual representation into a musical representation children adopted different strategies, such as

- identifying and representing elements of the picture through a sequence of corresponding musical translations (*literal, one-to-one translation* – e.g. "Volcano" N. 19)
- narrating in music the course of the events represented in the image (*reading the picture as a story* – see below "The drum inventor" N. 34)
- abstracting/detaching from the picture and giving voice to one's own imaginary world, which is then transposed on to the instruments (*going beyond the image, attributing further meanings to the image* – e.g. "Chattering frogs" N. 10).

The interesting finding is what children did when *no* image or extra-musical event was used in the formulation of the task (for example, in free composition tasks): even there children tended to attribute meaning to the music in terms of imagery and narrative. Here is an example based on a listening exercise:

N. 32 Imagery and narrative: attributing different meanings

We teachers were modelling different ways to play as a pair a figure and a background (the idea was to give children some examples about how to play something different but related to what the partner is doing).

Valentina plays a steady 4/4 metre on the djembe and I improvise rhythm phrases on the tambourine, while children are listening and observing
[\(https://vimeo.com/104224481, dvd.55\).](https://vimeo.com/104224481)

s.23/30 20140402 A,V,group

The interesting aspect here was that children gave this improvised music – which for us was only an illustration of a purely musical structure – an array of different meanings, such as: (F) a music of native Americans, or somebody stepping; (L) a 100-kg giant ant walking and preparing itself for a terrorist attack; (SA) Andrea was hanging a cloth and banging it against the window; (C) a walking dog with a flea behind it; (S) Valentina a dolphin, Andrea a shark ready to bite. All of them grasped something out of the emotional character of the music. Chiara and Sonia, in particular, translated into their compound images the structure itself of the music, i.e. the relationship between two different entities.

In many other cases throughout the study children demonstrated a vivid imagination in attributing figurative meanings to the music being played.

In some cases the meanings were retrospectively constructed by the group, rather than by the composers themselves, for example here:

N. 33 Attributed meanings: Alessandras's motif

Alessandra proposed the ending of her previous piece 'moon and stars' (*bd'c* – see N. 26) as the idea for her piece "the xylophone [actually the metallophone] that sounds with the beaters and I have a lot of fun"

(<https://vimeo.com/104224596>, dvd.56). This minimal 'piece' is a non-structured iteration of a melodic fragment, which does not get to a higher hierarchical organisation. In my view, it could have been a good subject for a more extended piece, but of course she was not able to perceive the potential in those three notes. Nevertheless, it was a very concrete idea, with the advantage of being short and exactly repeatable.

Interestingly, the group appreciated it and responded with very positive emotional associations (F: sounds like a good night; FA: I like the sound; SA: it is sweet; S: it is like a lullaby; SA: it is a melody), which reinforced her motivation and served as a social acknowledgement of her creative power. A gratifying experience for her, which further reinforced her bond with the metallophone as her preferred instrument.

s.26/30 20140430 AL

In other cases narrative was the very "organising device" (Langer, 1953, quoted in Cremin, Chappell, & Craft, 2013) which gave the composed music its structure. The succession of events in the music matched the phases of the story. An example of how tight and 'constraining' the relationship could be between the narrative structure and the succession of the musical elements in the piece is the following:

N. 34 Narrative as musical structure: "The drum inventor"

The piece of Lorenzo, Flavio, and Giacomo is built around Lorenzo's story and drawing about the "drum inventor" (<https://vimeo.com/104224598>, dvd.57). According to Lorenzo's later explanation, the man first has the idea (the light bulb on his head – Lorenzo's glissando on the soprano metallophone with sticks of the beaters) then he works on the invention (random strokes on the metallophone). When the inventor has finished (stroke on the wooden side of the metallophone), people start to play the drum (Giacomo and Flavio on bongos and darbukka).

s.27/30 20140507 F,G,L



Figure 23. Lorenzo's "Drum inventor"

The piece is very short, as has often been the case when the children simply represent with a musical sign the corresponding image that they have in mind. In the comments Alessandra expressed the wish to have it longer, though she was not able to articulate how she would do it. Valentina tried to suggest to them that they could abandon the literal presentation of the sequence of events in the story and rather work on different combinations of the musical ideas they had found, following 'their musical taste'. Interestingly, however, Lorenzo expressed with certainty the fact that changing the structure of the music would no longer respect the story that they were playing. In fact, in the second, improved version of the piece (<https://vimeo.com/104224623>, dvd.58), they maintained the same structure as before, and just added a finale – two ascending glissandos with sticks and a supposedly unison stroke with both drums. In such a case, narrative was the primary meaning-making tool for children's musical actions – hence, a purely musical logic could not be applicable, as it would have disrupted the meaning that those sounds carried. The music was the story.

In this sense, the above presented instances of creative musical play based on imagery and narrative (as many others in the study) can be considered as a form or an extension of pretend play and fantasy play, where the meaning of the action of producing music is not the music *per se*, but the story, the plot, or the vision that it stands for. The implication for pedagogy is that an effective strategy to stimulate children to further develop their invented pieces is to work on the image or the story, rather than on the abstract texture of sounds, as this is what is most significant to them. As a comparison, in "Volcano" (N. 19)

the same three children were ready to sustain an in-depth elaboration of the details of their piece because the teachers' suggestions did not alter the basic plot that they had given themselves, but only enriched it. By contrast, here the attempt to deal with the material at the higher level of aesthetic arrangement of parts – as noble as it may pedagogically appear – was perceived as depriving the experience of its fundamental meaning, and therefore was rejected.

11.2.2 Intra-musical meaning: 'just music'

As anticipated in 9.1.2.3, towards the end of the project children 'discovered' the concept of 'just music', i.e. music for its own sake, music as structured sound. Chiara's and Fabiana's experience of not knowing what they were representing was puzzling for them perhaps because on the one hand they were used to justifying music in terms of a sign standing for something else but on the other hand they were perceiving this new way of playing music as meaningful, as well. They could even "*put neither a title, nor any characters*" (Sonia, session 26/30), as they started to conceive of the meaning of music as 'inherent musical meaning' (Green, 1999), i.e. purely musical relationships within an organised structure. This was a breakthrough towards concepts like figure and background musical elements, or 'musical cake' (the superimposition of different rhythmical layers – session 27), or ABA form (session 29 and 30), which further expanded their possibilities to think and interact in music.

11.2 Children's perceptions about their lived experience of collaborative creativity

Given the age of these children (5-7), the evidence of 'meanings' in the form of verbal expressions and conceptualisations was rather scarce (see also 9.1.3). They did not talk much – some of them hardly commented at all throughout the project – and it was rather difficult to elicit well-articulated verbal feedback as reported in similar studies with older children (e.g. Burnard, 1999; Jeffrey, 2008). In addition to this, some further methods might have been employed to this respect (I consider this as a practical limitation of this study). Thus, the findings I present here are based on the one hand on the relatively few utterances they gave about their experience and on the other on what could indirectly be inferred from their behaviour. Though not as rich as I might have hoped for, the data provides at any rate a sufficient basis for a discussion.

11.2.1 Critical awareness of the quality of the group's creative work

A first striking point in the perception of their own experience was the critical awareness that children showed about how effectively they had worked, either individually or as a group. Here is a brief excerpt out of the conversation after a performance in session 14 (see N. 3), which Sonia and Chiara did not perceive as satisfying because of some mistakes they had made:

A: well, you invented two really beautiful pieces
 S: not really beautiful
 A: oh yes, I am curious, how satisfied are you about what you did and how you did it? [...]
 S: what do you mean?
 V: do you like what you did?
 S: no
 A: why not?
 S: because we lost the attention [we got distracted]
 A: that is, you did not perform it well?
 C: no
 A: [...] you would have liked to do it better
 C: yes
 V: and the things you invented on the instruments, do you like them?
 C and S: yes
 A: so, you like the piece, but you don't like how you played it before the audience
 C and S they nod
 A: and what could you do? what does it depend on?
 S: in fact, I am scared by cameras
 V: those that are here or any cameras?
 S: all of them
 A: ah, because you have to 'do it right' and not make any mistakes
 S nods
 A: but here we were just doing a rehearsal, this is not a performance, you could do as many mistakes as you wanted to
 S: then it would not be worth trying at all

In the first place Sonia does not accept the teacher's initial 'encouraging comment' as valid, as they know well – in many cases better than the teacher himself – that their performance did not match the plan they had devised. The issue of 'playing it right', 'not making mistakes', and the effort to adhere to the agreed set of group actions are an indirect expression of the perceived ownership of the creative process. In this episode the psychological value of the camera is that of an observer, and Sonia feels exposed to this physically external, but also internalised 'judge'. The teacher is almost defending her from her own inner pressures and demands but, in spite of his reassuring comments about the complete freedom to make mistakes, Sonia strongly reaffirms her own intention to do it well – or else it would have no meaning at all. This way she asserts that the control over the quality of the creative idea and of the resulting product is hers and not the teacher's.

At other points children demonstrated a keen ability to perceive how well the group was working, for example when they did not manage to build a shared understanding about their work (e.g. Giacomo saying "*but it's Lorenzo who has not understood what I had in mind*" and Lorenzo confirming that that day he was "*out of his mind*") or when they misinterpreted what the other was meaning (e.g. in session 25 Chiara and Sandra, though achieving a good piece, had not understood which were the figure vs the background elements in their composition). In other cases they could not reach an agreement, either because they had few ideas or because one of them tended to dominate the others – as has already been noted above, in some occasions Giacomo, more expert, tended to impose his ideas on Flavio ("*but he does not want to do what I tell him!*"), which leads back to issues of power (see Espeland, 2003, 2006).

11.2.2 Limits of the perceived group experience

The experience of creating music in groups was not enjoyable to the same extent for all children: Fabiana, who had entered the group on session 16, left it on session 27. Sandra, who met her in October 2014, a few months after the end of the project, reported that Fabiana said she "was bored". We teachers had tried to understand the reasons for her retreat, and thought it may depend on the excessively 'intellectual' character of the activity, at least as compared to her age (5, the youngest of the group), or perhaps on her perceived sense of not being competent enough to play beside much more skilled children. An opposite case was that of Giacomo, who the following October did not want to go on with the group, because "*that was for younger children, not for him*" (yet, he went on individually studying percussion with me in the music school and enjoyed much more difficult and personalised rhythm tasks). Perhaps in the project he did not find among the group an adequate partner for himself, or perhaps he felt that the activities were not advanced and challenging enough for his skills. The issue of dealing with a mixed range of abilities, in spite of the openness and adaptability of creative tasks, can be difficult to solve – also the size of the group made it more difficult for Giacomo to find a valid interlocutor at his level, and perhaps a greater number of children might have provided him with more choice. In sum, the presence of different levels of ability in the group, either too low or too high, may make it problematic for the group to positively collaborate together and constitutes a challenge for the teacher, too, in selecting appropriate creative tasks that can accommodate such differences.

11.2.3 Enthusiasm and enjoyment

On the positive side, children's nonverbal expressions at the end of the performance were, much more than words, a strong indicator of how they felt about their achievement. One of the clearest examples is the difference between Flavio, Giacomo and Lorenzo's

facial expressions at the end of the four renditions of "Volcano" (see N. 19, N. 20, N. 21), unconvinced after the first, and decidedly gratified at the end. Flavio, after the session, told me with rapture that he found what they did "*very beautiful*", and also later on they mentioned "Volcano" as particularly meaningful – whereby 'beautiful', as my colleague Valentina argues, is not so much the object in itself as the overall experience through the activity ('I like it because I like doing it').

Prompted by the teachers' questions, children often declared their feelings about the things they invented, for example:

V: what interests me, Alessandra, is how you feel, you who have had this idea [AL's motif N. 33]. How it is like for you, having had this idea, so particular.
 AL: it [the idea] is beautiful!
 V: so you are happy with your idea
 AL nods
 [s.25/30]

Beyond words, their active and engaged participation throughout the process, and the high degree of interest, attention, and intrinsic motivation in the activities – in spite of the toil – were the most tangible sign of their positive experience. Many moments during the project could be characterised as moments of *flow* (Csikszentmihalyi, 1996; Custodero, 2002, 2005) and *group flow* (Sawyer, 2007), where children were intensely absorbed in the joyful effort to build their own identity as creators of music (Jeffrey, 2008). Lorenzo's "drum inventor" (see above N. 34) is, in my view, a powerful symbol of their experience in the project: generating ideas, working on them and constructing artefacts, and then presenting/using them in a social context – a sort of metaphor of their own process of becoming creative musicians.

11.2.4 About the creative group process

Children's observations mostly referred to the outcome, though in some rare cases there were comments also about the creative group process:

Lorenzo: I liked most when we were agreeing how to do our idea
 V: that was a good moment for you
 L: yes
 [s.13/30]

Lorenzo again (the most reflective child of the group), answering Valentina's question whether they found something particular or interesting in the girls' group work:

L: I found interesting how you collaborated
 S: how we worked as a team?
 [s.13/30]

There is a strong sense of "we-ness" (John-Steiner, 2000) in this acknowledgement of the power of the group. In my field notes I write here 'great, they are getting the point!' and actually, though sparsely, children began to use a relevant 'vocabulary of creativity'.

11.2.5 Appropriating word, concepts, and meanings

Perhaps the most notable example of appropriation of a key concept in musical creativity, 'improvisation', occurred in relation to Flavio's free exploration on the triangle (untitled, <https://vimeo.com/104224571>, s.26/30, dvd.59). This was for the group the first piece explicitly meant to be an 'improvisation', which is the concept/word Flavio learned right through this experience. I report here the short dialogue between us during the previous individual work phase as the moment in which he starts using the word to define the kind of activity he is engaged in:

F (who has taken a triangle and is playing it): Andrea, I don't know what I want to do, but I feel like playing
A: then, go. You can also improvise
F: I improvise
A (trying to explain the difference between the concepts): you can compose, that is there is a piece you decide in advance...
F (interrupting): I want to play, that [i.e. but] I don't know what to do
A: this is improvising
F nods
A: that you invent it on the spot
F goes on exploring the triangle...

Just before playing before the group he actively uses the verb to describe what he is going to do, but he distorts the word:

F: I was *improvvinising*
A: F has an idea, that is...
F: to improvise

He says "*io improvvinassavo*" instead of the correct form 'improvvisavo' (most probably he had never conjugated the verb in that tense). Interestingly, he uses the past form 'imperfetto indicativo', which in Italian is the tense of the tales and of fantasy play. It would be the same as saying 'let's pretend that I was...' This sheds some light on his attitude while playing music, that is that of playing a role, the improviser, i.e. a new way of behaving in music that he is learning through his experience in the group. An improviser plays but 'does not know what to do', i.e. has no exact plan in advance. By appropriating the concept he gives himself the possibility to do what he actually feels like doing, i.e. exploring moment by moment. He attributes a socially acknowledged and culturally grounded meaning to his activity. In a Vygotskian perspective, I see this as an exemplary instance of how children acquire conceptual tools and learn to use them in the context of meaningful activities. From this moment on Flavio only engaged in improvisations, probably because he found this practice more suitable to what he wanted to do.

11.2.6 Awareness of the strategies to invent and work together

In the second-last session I 'interviewed' children and asked them what advice they would give to another group of children about how to invent music together:

L: try to collaborate and find an agreement together
 A: and what does this mean? How can you do it?
 L: that they look for ideas, and if it is ok for everybody, they do it
 [...]
 L: we have done so, that... we have taken..., like, I had an idea, we have taken it and we have modified it... all together

Sonia, too, felt confident that she would be able to offer some effective strategies:

S: for example, about a piece that they are doing, I give them some advice to make it better.
 [For example, her strategy to invent rhythms:]
 S: I invent my things on the drum because I know a lot of rhymes and I take a piece of those
 A: aaah, you take a piece of the rhyme and you put it on the drum. This is a good way.

This sense of competence, of being able to solve creative problems, is the sign of a growing 'creative learning identity' (Jeffrey, 2008) which develops in the social context of the group activity.

Both Sonia and Lorenzo seem to fully have got the point:

A: ... the most precious advice about how to do well this kind of things is...?
 L: to collaborate
 A: to collaborate
 S: to learn together
 A: and how do you do it, learning together?
 (S does not know how to answer)

Here, however, as in other cases children lack the words to say more about what they feel and think. But I argue that their silence should not be taken as an absence of awareness.

11.2.7 Expressed and felt meanings

Often children were not able to formulate in words these meanings about creativity and creative collaboration. However, my impression is that they all understood well in practice what this meant, because they had been doing it throughout the sessions. In this sense, understanding creativity in practice was foundational to actively conceptualising it through words, which for many of these children was a stage still to come. However, even if they did not have sufficient vocabulary to verbally express any perceptions about their creative experience, as a teacher I found it pedagogically important to assume that they were surely able to *feel* their own emotional reactions to it, to like it or dislike it, to find it interesting, puzzling, or rewarding, or whatever else. In some half conscious half subconscious, intuitive, preverbal, or only very partially verbalisable way they were fully aware of what was going on in them in their engagement with the activity. Based on such an assumption our role as teachers was to accompany them in recognising, honouring, giving a name, and learning the words and the concepts to describe the experience they were having.

11.3 Children's meanings as pedagogical perspective

"Meaning is how the experiences are felt emotionally, interpreted, acted upon, how they contribute to the play on self and the development of identity" (Jeffrey, 2008, p.255). The findings of this study suggest that these children meaningfully engaged in activities that were relevant to their interests, to which they could develop a personal relationship, over which they could exert a large amount of control, and through which they experienced themselves as competent and effective co-creators. But perhaps the most important finding in relation to children's meanings was posing the question itself. What was initially a typically ethnographic research question – involving participants in expressing their own perceptions about the issue under investigation – became a pedagogical perspective emphasising children's lived experience (as in Kanellopoulos, 1999). Asking the question "how do children experience it?" was a *tool and result* of the study (Holzman, 2009; Wood & Attfield, 2005; Vygotsky, 1978), in that it was indeed functional to triangulating different sources and obtaining richer information, but at the same time it influenced the pedagogical approach, making it more profoundly child-centred. This research project was not an intervention *on* children, rather it was a co-construction *with them* of knowledge about how the phenomenon of collaborative creativity in music looks like. In this new role children were not just learners to whom something is done, but were the producers and owners of their own pieces, their creative processes, and their own musical knowledge. In this sense, 'giving voice to children' went beyond offering to them a possibility to externalise their musical imagination and identity (Stauffer, 2003), but also radically implied listening to the meanings, perspectives, motives, ideas, and feelings that they associated with their own music making. It was no longer or not only the created piece in itself that was the focus, it was the experience that children lived through it.

12. PEDAGOGICAL AND ETHICAL VALUES OF CREATIVE COLLABORATIVE WORK IN MUSIC

Research question four intends to shed light on the one hand on the advantage and significance of creative interactions for children's learning, i.e. their educational value in terms of the benefits that children can gain by engaging in collaborative creative tasks, and on the other hand on the ethical values underpinning the teaching/learning practices as described in this study.

12.1 Value for learning

12.1.1 Group creativity as a high-order goal in music education

In a cognitive perspective, creative learning implies developing higher-order thinking skills. In terms of the revised Bloom's taxonomy of educational objectives (Hanna, 2007; Krathwohl, 2002) working creatively subsumes a variety of cognitive processes, which in a hierarchical order include *remembering* (memorising, recognising and recalling contents related to the invented pieces), *understanding* (observing, identifying, comparing, and explaining basic musical elements, appropriating terminology, becoming aware of strategies for playing and creating), *applying* (using compositional concepts, e.g. figure-ground, practising techniques and skills, implementing procedures, carrying out musical actions), *analysing* (differentiating musical elements and ideas, describing and examining compositional strategies, determining how constituent parts relate to one another and function within a structure), *evaluating* (checking and making judgements about the quality of creative ideas in relation to a purpose or a task, assessing and reflecting on one's own thinking strategies) and, as the top category, *creating* (generating, planning, and producing – i.e. imagining, exploring, improvising, composing, and performing musical ideas and pieces). Different kinds of knowledge are involved in creative music processes – in the first place procedural knowledge (Elliott, 1995) and to a certain extent metacognitive knowledge – at any rate embodied forms of knowledge and of music cognition (Bowman, 2004; Walker, 2000; Westerlund & Juntunen, 2005; see 2.1). But the real point is that the cognitive processes in *group* creative music making take place both in the individual and across the group – this is distributed cognition and intersubjective thinking (Rogoff, 1990, 1998). Thus, when children collaboratively engage in creative music tasks, their thinking is substantially fostered at different levels.

And there is much more than just musical thinking. As has been observed by recent research in creativity (Eteläpelto & Lahti, 2008; John-Steiner, 2000; Moran & John-Steiner, 2004; Vass, 2004, 2007) emotional and relational aspects in the interpersonal interaction play a relevant role in collaborative creativity – and indeed, beyond cognitive skills, an array of prosocial and cooperation skills are nurtured through this kind of activities. Adopting a holistic perspective, then, it might be argued that fostering children's creative interactions represents a high-order (perhaps the highest) goal in music education – a meaningful way to nurture their cognitive, creative, social, and musical development (see also 10.6.3 and in particular Figure 21 on p.237).

12.1.2 Peer collaboration

In a Vygotskian perspective, working as a group facilitates individual learning as processes of reciprocal scaffolding take place among peers, in which through interaction in talk or music children communicate and make their thinking public, mutually stimulate each other's production of ideas, negotiate them, and co-construct musical artefacts that are collectively owned by the group. I mentioned above the issue that we teachers faced when deciding what to show to parents in the final session of the year. The solution we found was to present, among other things, the group creative process itself: before a curious audience of parents, grandparents and siblings children engaged in a group work phase (almost 10 minutes long), built a piece 'on the spot', and finally performed it (see N. 5, N. 9, and N. 29). With hindsight, that was an effective choice, as children once again felt free to self-regulate their own learning process and parents could understand what the real learning was about (this was something we had never done before). I was surprised by the amount of positive feedback that children and we teachers received, above all that children 'had created it before our eyes'. Their motivation, emotional identification with the task, cohesion in the group, ability to devise a complex action in interaction with others, and their concentrated, positive and confident attitude were a demonstration of learning really worth witnessing.

12.1.3 Ownership and identity

Providing space for children's creative agency to emerge allows them to develop a sense of ownership of the learning process. I quote my colleague Valentina in session 13 talking to children during the group comments at the end of the session:

V: I want to tell you that for us it is really important that you invent your own things [...] we can help you come up with something artistic and beautiful and interesting to see

L: it's like that teaching us music means that you help us to better use our imagination

and a bit later

V: ... it's like being explorers, we cannot be content with what is given, what we already see, but we can go and look for an original idea, which cannot be seen yet, the most interesting

Indeed, at the centre of the activity is children's imagination and the discovery of the 'artist within them', of their identity as creator musicians. The very fact that "it's theirs" – as another colleague told me – is what makes them so passionate, interested, attentive, and engaged. The findings of this study about the significance of group creative activities as social construction and expression of identity, both as individuals and as group, support similar claims in creativity research in music and beyond (Burnard, 1999; Moran & John-Steiner, 2004; Stauffer, 2003).

12.1.4 Inclusion

Creative group activities facilitated the active participation of all group members through the inherent open nature of the processes and the climate of acceptance. Children's holistic, multi-sensorial experience through moving, singing, playing instruments and creating music integrated different modes of expression and communication: kinaesthetic, auditory, visual, and verbal. By working creatively and collaboratively children developed over time a sense of autonomy, competence and relatedness (Ryan & Deci, 2000) which fostered their intrinsic motivation, social integration, and social wellbeing (McLellan, Galton, Steward, & Page, 2012). The 'inclusive character' of the tasks consisted in the fact that each child could engage with the material at a level that was appropriate for them, had the possibility to lead their own learning, set and modulate their own challenges, and interact with the others in the group in ways that were meaningful to them. By being to some extent 'free' by definition and at the same time by offering sufficient structure, creative group activities allowed each child to find their own place and self-define their participation. Though this finding is not easily generalisable to other groups, in the case of this group I claim that everybody benefited from such an inclusive approach.

12.2 Ethical values

Why talk about values? Because education is not value-free, rather education is value-driven (Pring, 2000) and a consideration of the values affirmed through such an approach to group creative music making appears therefore as necessary.

In my interpretation, I see children's experience in this research project as an embodiment of the following ethical values:

12.2.1 Acknowledging the person

The fundamental value is honouring the person – her identity as whole person – and fostering a sense of dignity and self-worth. With regard to music, this also means acknowledging the artist in each and every child.

12.2.2 Fostering intersubjectivity

Promoting authentic encounters with and between children, helping them develop a dialogic attitude in life.

12.2.3 Exerting freedom and responsibility

Nurturing children's autonomy, i.e. the capacity of acting in the world in a self-directed way, both as individuals and in collaboration with others.

12.2.4 Promoting a multiplicity of perspectives

Valuing diversity and plurality as resources, respecting everybody's ideas, and allowing ideas and visions to emerge, interact, clash, harmonise, and co-exist.

12.2.5 Cultivating democracy

Endorsing values of fairness, equity, and social justice (Allsup, 2003), in educational contexts as well as in the wider world. As Valentina said to the parents in the final open session:

V: the idea of working with creativity is the idea of teaching people to be free in their minds. This is an important value for us. An education which is not 'I tell you how to do it', but an education in which you discover what you have inside yourself and how you can take it out. For us as educators, we think that this is central.

As Kanellopoulos (2007) observes, free collective improvisation (and, I would add, group creative activity in general) has a political role in "transforming music classrooms from places where knowledge is transmitted to open contexts for acting and thinking" (p.98). In this sense, creative music making has the potential to be a transformative experience aiming to lay the foundation for a democratic orientation in today's and tomorrow's life.

An approach to creativity in music education cannot just reduce itself to a technical-rational acquisition of skills in a domain, it has to have a moral value – we need to develop children's creativity 'with wisdom' (Craft, 2006).

13. CONCLUSIONS AND IMPLICATIONS

13.1 Introduction

In this final chapter I summarise the findings of the study and examine the contributions that it has to offer to research and pedagogical practice in relation to the phenomenon of children's collaborative creativity in music in educational contexts.

The study set out to investigate children's creative interactions in group music making. A group of eight 5-7-year-old children were involved over a school year in weekly sessions centred on group creative music activities. My role in the project was that of teacher researcher and I worked with a co-teacher. In the methodology chapter I defined the study as 'exploratory practitioner research for understanding' based on a qualitative and naturalistic approach to inquiry. As such, the kind of generalisability of the findings presented here is to be intended as 'naturalistic generalisation' (Stake, 1995), implying that the conclusions drawn and the interpretations made can be extended and transferred to other contexts. The aspiration is that relevant perspectives emerging from the study can be useful to other interested researchers and practitioners in understanding and making judgements about their own particular contexts.

In the next section (13.2) I synthetically present the findings related to each of the research questions and relate these back to the literature examined in the review. I then address the limitations of the study (section 13.3), my personal reflections as teacher-researcher on the thesis journey (section 13.4), consider some directions for further research (13.5) and implications for the pedagogical practice (13.6).

13.2 Conclusions and contributions to knowledge

13.2.1 How do 5-7-year-old children interact when they are engaged in collaborative creative music making?

13.2.1.1 A systemic approach is needed

As a first, methodological consideration, a conclusion that the study points to is that an examination of children's creative interactions requires a systemic approach. Collaborative creativity cannot be studied as a property of individuals, but as a 'socio-cultural-psychological' phenomenon (Glăveanu, 2011b) which occurs in the interplay of individual actions within a social and relational context, situated within a wider cultural

context (Csikszentmihalyi, 1999; Hennessey & Amabile, 2010). In a sociocultural perspective, different planes of analysis – individual, interpersonal, and cultural – are intertwined (Rogoff, 1998, 2003, 2008) and a multi-dimensional approach (Feldman, 1999) is necessary to understand the complex web of reciprocal influences between intra-personal, cognitive, emotional, and cultural forces which shape children's collaborative creative endeavours (Burnard, 2006b). This systemic perspective raises some methodological issues when it comes to the practical analysis of research data, as the detailed examination of single aspects always has to be situated within the 'big picture' – looking at parts does not exempt the researcher to constantly be aware of the whole frame of the activity. In this sense, the qualitative, interpretive approach taken here seems to be the most adequate to build a holistic picture of the phenomenon, and this study places itself in the line of recent socioculturally based research on collaborative creativity (e.g. John-Steiner, 2000; Littleton *et al.*, 2008; Sawyer, 2003).

As for the kinds of interactions that take place among children when they create music together (RQ 1 – see chapter 9), the findings of the study identified three main kinds of 'communication media', i.e. bodily interactions, musical interactions, and verbal interactions.

13.2.1.2 Bodily interactions

Body-based interactions appeared to be a significant component of children's creative musical processes, in that many communicative contents were conveyed in the first place through nonverbal language rather than through words or music. Paralinguistic features such as the emotional tone of the voice, pitch contour and loudness, alongside facial expressions and whole-body movements characterised children's exchanges while performing as well as while working on creative tasks. As the pedagogical approach included movement and dance as a central content of the activities, the body assumed a particularly relevant role as mediator of meanings in children's joint creative work and acted as a primal channel to build relationships with others. Movement was also often used in the research project as a preliminary phase to later musical work, where contents related to creativity and interaction were experienced and understood first with the body (and the voice) and then transferred onto the instruments. The role of movement was especially important in the case of 'musical gestures' – i.e. movement cues to signalise the passage from a phase to another during a performance, to communicate a change of roles between partners, or to introduce the ending. In these cases, musical decisions – either improvised or pre-planned – were communicated to the partners in an immediate way through the body. Finally, in relation to activities involving rhythm, the body was the

source and the medium for achieving synchronisation. Though entrainment and synchronisation in music (Clayton, Sager, & Will, 2004) do not necessarily imply a creative interaction – 'keeping in time' with other players is also foundational in reproducing pre-existing or notated music – the issue of coordinating one's own movements to adjust to the rhythms played by the partner arose as a crucial developmental transition for these 5-7-year-old children. Indeed, being able to effectively interact at a rhythm level paved the way for further musical worlds to disclose in their creative activity. The results of the study are in agreement with research on embodied cognition (Johnson, 1987; Claxton, 2012) and on music making as embodied knowledge (Bowman, 2004; Elliott, 1995; Phillips-Silver, 2009; Walker, 2000; Westerlund, & Juntunen, 2005). A conclusion, thus, is that in relation to creative interactions in music the attainment of shared understanding and intersubjectivity (Rogoff, 1990, 2003; Wiggins, 1999/2000) is substantially grounded on bodily relationships and on multi-sensori (kinaesthetic, vestibular, visual, and aural) experiences of connectedness (Burnard, 1999, 2002; Young, 2008).

13.2.1.3 Musical interactions

Musical interactions are in the first place interactions with the instrument as sounding object. In the study, it became evident how the physical layout of the instruments and the possibilities they open up – both actual and perceived – significantly influenced what children could do with them. The importance of a varied set of appropriate musical instruments cannot be underestimated, in that it constitutes a high-affordance tool (Glăveanu, 2012; Wood & Attfield, 2005) which can positively contribute to the generation of creative ideas in children's musical play (Young, 2003).

Children's ways of interacting varied according to the kind of creative process they engaged in, i.e. in terms of exploration-improvisation-composition, either prescribed as a task or autonomously opted for by children themselves. In improvisatory tasks, children's strategies for interaction ranged from no apparent relationship, to complementing what the other is doing, to synchronising with elements of the other's music, in a process which was characterised by immediacy (Burnard, 1999). Children often engaged in more compositional tasks in which they agreed on a common plan of actions to be executed. Being these 'aural compositions' (Burnard, 1999; Hickey, 2012), a recurrent characteristic of children's interaction in the performance was the 'instability' of the product and a radical improvisatory character of the performance, due to both technique and memory issues, as well as the need to adjust to each other's fluctuations around a beat or digressions from the shared plan of action. Though children initially did not distinguish

between the concepts of 'improvisation' and 'composition', through a variety of activities in the course of the project they began to grasp the different kind of musical interactions that are implied in each of them and by the end some of them actively used the words to define the sense of what they were doing ('preparing a performance' vs 'having the possibility to change it before the audience'). In comparison to Burnard's (1999) study, involving 12-13-year-olds, this group of 5-7-year-old children were at the very initial stages of an experiential and conceptual awareness of improvising vs composing. The dynamic of their creative processes, even those which in adult-musicological terms would be associated more with composition, was largely processual. A more relevant way of looking at these children's germinating musical creativity, then, could be in terms of a particular form of 'guided creative musical play' – not as self-initiated, unsupervised play (as in Marsh & Young, 2006, or Marsh, 2008, see 4.5) but as playful engagement in scaffolded musical activity.

Children experimented with different musical roles in the interaction and were able to intentionally organise their musical relationship as imitation or contrast, as leading figure against underlying background, and as linear turn-taking vs superimposition of contemporary events. Interestingly, talking and thinking about music in terms of musical roles (a process which was purposively scaffolded by the teachers) brought about a shift in children's conceptualisation of the music they produced. Alongside a characterisation of the musical elements as corresponding to imagery or narrative (see below) there emerged a new way of thinking about music as "just music", as a child defined it, i.e. a set of purely musical relationships, of 'inherent musical meanings' (Green, 1999), within an organised structure. In Piagetian terms, this might be considered as a crucial developmental transition from the sensori-motor or symbolic play in music to a more formalised, abstract, and rule-based way of making music. This latter was included as an expansion of the already existing ways of being in musical relationship with others.

13.2.1.4 Verbal interactions

Children used talk during group work phases to negotiate joint actions in the production of their pieces. In the pedagogical approach particular attention was given to their awareness of the quality of their dialogue and of the communication in the group, inspired and informed by research on talk (e.g. Mercer, Wegerif, & Dawes, 1999; Dawes, Mercer, & Wegerif, 2000) and group work (e.g. Blatchford *et al.*, 2003; Baines *et al.*, 2009). In spite of some practical difficulties in gathering decipherable data, due to the presence of two to four small groups working at the same time with instruments, some interesting findings emerged from the analysis. Talk played a secondary role in these children's

communication, in the first place because talk is not the real focus of the activity but only a means to an end, that is playing. The use of deictics – talking and doing/showing – was a very frequent strategy to convey meanings about musical ideas (as observed by Green, 2008, with regard to adolescents' group work). A conclusion to be drawn is that, with regard to collaborative work *in music*, the focus should be placed, rather than solely on talk (e.g. Hewitt, 2008), on the degree of *transactional communication* (Miell & MacDonald's, 2000) actually taking place in the group, as an effective combination of verbal, musical, and I would add nonverbal expressions of meaning.

For a synthetic presentation of the media and kinds of interaction in creative group work in music see Table 11 in 9.1.4. (p. 198).

13.2.1.5 Interpersonal relationships and power issues

In this holistic view of children's interactions a consideration of the interpersonal relationships and of power issues should also be included. The observations made are in agreement with Miell and MacDonald's (2000) finding that friendship and a pre-existing emotional bond between children does facilitate their joint creative work and with Espeland's (2003, 2006) finding that the more expert child might tend to use their higher skills as a tool to exert power on and dominate the group. Due to differences in age and skills children can make different uses of the power they have, either as a way to assert control and status or as a resource ('positive leadership') which is collaboratively put at the service of the group's collective endeavour.

13.2.1.6 Cooperative vs collaborative interactions

Based on the findings and on the review of the literature, the study identified a conceptual distinction which helps to characterise the different degrees of interactivity in the group's creative work: cooperative vs collaborative. The two categories – whose opposition, among others, is made explicit by Dillenbourg (1999); Galton & Williamson (1992); Ogden (2000); and implicitly by Glover (2000) – can be considered as extremes of a continuum of possibilities between qualitatively different strategies in organising division of labour and decision making in the group. At one pole children cooperatively produced separate parts that were then assembled or put together as in a 'musical creative jigsaw' (I am recalling a technique of cooperative learning – Slavin, 1991). Cooperative pieces were those in which children were 'taking turns', i.e. playing each their own thing one after the other, or 'playing parallel', i.e. one simultaneously to the other but with reduced interaction. At the opposite pole children were working *with* the other and generating ideas together from the very beginning, sharing the ownership and the responsibility of

the whole. Collaborative pieces were those in which children had co-constructed unison structures, i.e. 'playing the same', or polyphonic textures, i.e. 'weaving different but related ideas'. The distinction between cooperative and collaborative applies to both the creative group process and the organisation of the resulting outcome. Further, cooperative or collaborative ways of interacting creatively in the group can originate in the task assignment itself as well as in children's preferred modalities to work as a group. Though, from a developmental point of view, it may seem sound to presume that collaborative skills build on cooperative skills, in practice it may be more convenient to see the two forms of interaction as both possible and effective in relation to children's skills and to the context and purposes of the activity. Concluding, the distinction cooperative-collaborative that I am making here connects to John-Steiner's (2000) differentiation between complementary and integrative forms of creative collaboration and Broadhead's (2010) categorisations of children's interactions in play along a continuum ranging from Associative, to Social, to Highly Social, and Cooperative Play. Table 12 on p.212 (9.3.2) summarises the main features of children's cooperative vs collaborative interactions in creative group work, as identified in the study. This differentiation appears to be a positive contribution to the practitioner who needs to interpret and assess how children organise their joint work as well as to plan different kinds of cooperative vs collaborative creative tasks.

13.2.2 *What component aspects of group work influence children's collaboration on creative tasks?*

Informed by research literature on group work (chapter 5) and collaborative creativity (chapters 3 and 6) and through the analysis of the collected data, the study identified a range of component aspects which may enhance or undermine the quality and productivity of children's collaborative interactions in group work. These include: children's characteristics, context and setting, pedagogical approach, task design, collaboratively emergent processes in the group, underlying tensions in creative learning, reflection on and evaluation of creative work, and time.

13.2.2.1 Children's characteristics

Beyond looking at children's personal traits and skills, the cooperative vs collaborative distinction made in 9.3 can be applied to children's characteristics in terms of preferred 'learning styles' (Green, 2008, 2010), i.e. their inbuilt attitude in the face of joint work with others, as opposed to 'learning strategies', i.e. the tactics that children developed over time as a consequence of their learning experience in the group. Again, differentiating

between the cooperative and collaborative attitudes in children's behaviour can help the practitioner both in observing, understanding and assessing how single children tend to be in the working relationship with others, and in planning activities that are adaptable to their learning styles and help them expand their set of strategies for interaction.

13.2.2.2 Context and setting

The study confirms the importance of an appropriate physical environment in terms of availability of instruments and space – having more rooms for small group work would be a huge advantage (but this was not the case here).

13.2.2.3 Pedagogical approach

The basic traits of the pedagogical approach to fostering children's collaborative creativity taken in this study can be synthesised as global/holistic learning, conducive relational atmosphere, play-based approach, enhancement of children's control, agency, and ownership of the learning processes, fostering interactions at all levels, and team-teaching. In particular, Wood's (2010) characterisation of 'integrated approaches' to play, and Siraj-Blatchford (2009) 'open-framework' approach (see 4.3) appeared to be relevant conceptualisations of the kind of teaching/learning processes enacted in the study.

Through the teaching experience in the pilot studies and then the main study, an outline of a 'method' for conducting group creative activities emerged, which resonates with the cognitive apprenticeship approach (Brown, Collins, & Duguid, 1989; Collins & Kapur, 2014), here applied to collaborative creative learning in music (Sangiorgio & Hennessy, 2013). Creative ideas and procedures were first modelled and explained in the whole group, gradually involving children in suggesting and trying out possible ideas in relation to a given theme; then the creative group work phase took place, at the end of which children presented their outcomes to the whole group. Discussion and metacognitive reflection on useful heuristic strategies for tackling the creative task accompanied the whole process, so as to "make thinking visible" (Collins, Brown, and Holum, 1991) and support children's creative thinking in music (Webster, 1990, 2002; Hickey, 2003b), in particular their awareness of the 'interthinking' processes (Howe & Mercer, 2007; Rogoff, 1990) in creative group music making. I regard the clarification of this set of pedagogical strategies in teaching for group musical creativity as a very relevant result of the study, both for my roles as a practitioner and teacher educator.

13.2.2.4 Task design

The study identified some key features of the task which orientate children's collective activity. These include: the leading idea for creative work (be it a rule, a stimulus, a prompt, etc.), the kind of media (movement, voice, instruments) required by the activity, the kind of creative process that the rule may imply (exploration, improvisation, or composition), the degree of openness of the task (from relatively closed to open-ended and free tasks), the direction of the form-giving process (bottom-up and top-down processes, i.e. working from the elements towards a whole or progressively defining a whole into constituent parts), and the degree of interactivity required by the task (cooperative vs collaborative tasks). With regard to the latter, a relevant notion is Johnson and Johnson's (1999) 'positive interdependence' implied by the creative task, i.e. the extent to which children *have* to collaborate and share ideas and resources in order to accomplish the assignment – what I would define here as cooperative vs collaborative tasks.

Based on the analysis of the teaching/learning processes in the sessions, a finding of this study is the relevance of the *longer chains* of creative activities through which children's learning unfolded. Though relatively neglected in the literature I have examined – which mostly concentrates on the single creative task – the issue of how the learning pathway is organised both within a session and over the course of more sessions appears to be crucial to the enhancement of children's accomplishments. What makes the difference is not just how *one* activity is segmented and arranged (see the cognitive apprenticeship model above as an example), but how the flow of children's creative engagement (also in Csikszentmihalyi's terms, 1996) is maintained high through differentiated sequences of carefully planned but also extemporarily structured activities (Beidinger, 2002; Köneke, 1982; Sawyer, 2004a, 2004b). This stands out as a theme for further research.

13.2.2.5 Creative interaction processes 'in the making': collaborative emergence

A relevant aspect influencing the nature and quality of children's creative interactions was the process itself, i.e. how ideas were generated and developed in the joint group work. A major interpretative category which asserted itself as an analytical tool for looking at the group creative process was Sawyer's notion of 'collaborative emergence' (Sawyer, 1999, 2003a, 2003b, 2006, 2007; Sawyer & DeZutter, 2009 – see 3.4.1.3 and 6.4.3.1). Though this construct was coined in relation to adults' group improvisation in theatre or jazz, it proved to be helpful in capturing a common thread in the ways children co-constructed their creative products, which were *qualitatively* similar to those of more expert musicians. Indeed, children's group creative processes resulted from subsequent contributions made

by group members, were unpredictable in nature, had no centralised leadership, and were highly contingent and open, in that each choice conditioned the possibility for further choices to be made. Differently from adults' collaborative emergence, however, in these children's creative work the teacher's scaffolding role has to be included as an added factor (but no more than that) in determining the direction of the group invention (see 10.5.2, p.231, for a model of the group creative process which combines and elaborates the models of Espeland, 2003, Sawyer, 2003, and Wiggins, 2003). The concept of 'collaborative emergence' thus seem to provide a powerful construct in the interpretation of a variety of situations – be it instrumental play, voice, or movement – in which children were creatively interacting in groups. I consider it as another *tool and result* of the study (Wood & Attfield, 2005), at the same time a tool for analysing the data ('what is emerging here?') and the result of the search for a unifying metaphor underlying different manifestations of the phenomenon of group creativity.

13.2.2.6 Tensions in creative learning and teaching for creativity

Working on creativity implies no 'right or wrong' way to proceed, but reflective choices in the face of tensions which are irreducible to simple solutions. Informed by literature on creativity (Chappell, 2005, 2007b; Craft, 2003b; Hickey, 2012; Sawyer, 2008, 2012) this study identified four major tensions inherent in creative work, namely freedom vs constraint, process vs product, being creative vs acquiring knowledge, and children's agency vs teacher's guidance. These tensions were analysed both in terms of challenges for the practitioner who is teaching for creativity and tensions for the children themselves to solve in their engagement with creative ideas.

With regard to the tension freedom vs structure/constraint, a relevant result of the process of analysis was the adoption of a conceptual tool (derived and elaborated from Widmer, 2011, see the diagram in 10.6.1, p.233) which does not represent the tension as distributed along a continuum of intermediate possibilities between two extremes (as, for example, Chappell's, 2005 and 2007b, does by identifying possible 'spectra of approach') but as a matrix of four quadrants which include both positive and negative implications of both extremes. Thus, taking 'freedom' as a neutral value, its positive reading would be 'autonomy' (self-directed, intentional, and organised creative processes) versus a negative interpretation as 'arbitrariness' (unfocused, excessively open and disjointed processes). Likewise, 'constraint' can be read either as an 'enabling frame' (optimally structured, disciplined, and scaffolded processes) or as stifling 'restraint' (too controlled, tight, and directed processes). Such a conceptual tool can be helpful to critically analyse the dialectic relationship between the two contrasting principles and to identify the

positive axis (autonomy vs enabling frame) along which productive creative work can be generated. Moreover, this tension in particular regards not just the teacher, but children themselves, as they themselves actively adjusted in various ways their own levels of freedom vs structure in dealing with musical ideas.

The tension process-product appeared to be an issue more for the teacher than for children. As has been observed above, their way of creatively engaging with each other and with the material was largely open-ended and processual, rather than focused on the construction of a clear-cut product that could be termed a 'composition'. The constraints of working aurally (as remarked by Burnard, 1999, Glover, 2000, and Hickey, 2012, too) as well as children's technical and cognitive limitations actually prevented them from working towards a rigorous replicability of their joint musical creations. Though they always had some kind of plan in mind – Kanellopoulos (1999) calls 'thoughtfulness' this immersed involvement in creative activity – and at times reported to 'have made mistakes' in relation to it, their overall engagement was more orientated to 'playing with music' as a pleasurable ongoing process rather than a strenuous effort towards the production of an aesthetically valid object. Based on the observation of the data, it is apparent that this belongs more to the cultural world of a teacher than to these children's natural inclinations.

As for the tension regarding the opposition between being creative and acquiring knowledge, the findings of the study point confirm that, as a general consideration, a greater experience potentially facilitates the production of creative ideas and that creativity needs some kind of basic knowledge in order to flourish (Craft, 2001a; Koutsoupidou, 2008; Sawyer, 2012; Sternberg, 1999). However, at least in the case of this study, the idea of 'pre-training' children to later creative work (as Baines *et al.*, 2009, or Dawes *et al.*, 2004, or other studies on creativity may suggest) did not make much sense here, as both aspects of developing music-related skills and developing creativity skills were integrated in the activities. In addition to these, children had to learn how to collaborate with their peers. Thus, more than a tension, I would talk more about an appropriate balance between three co-evolving areas of competence, i.e. music, creativity, and collaboration (see Figure 21 in 10.6.3, p.237).

The last tension – children's agency vs teacher's guidance – is a pivotal issue in teaching for creativity, in music and beyond. A diagram (see 10.6.4, p.238) shows the negative and positive implication of both polarities – children's agency as 'ownership of the creative process' as opposed to 'unfocusedness', and teacher's guidance as 'scaffolding' vs

'interference'. The pedagogical approach taken in this study confirms the applicability in creative music education activities of the integrated approaches formulated by play-based research (Briggs & Hansen, 2012; Jordan, 2009; Siraj-Blatchford, 2009; Wood, 2010; Wood & Attfield, 2005 – see 4.3), which suggest a sensible balance between play and work, proactive/directive and responsive/receptive approaches, and adult-initiated and child-led activities.

13.2.2.7 Reflection and awareness: talking about and evaluating creative work

The study corroborates the findings of previous research on revision and assessment as an integral and fundamental part of the teaching/learning process (Freed-Garrod, 1999; Glover & Young, 1999; Hennessy, 1998a; Hickey, 2012; Major and Cottle 2010; Reese, 2003; Webster, 2003, 2012; Wiggins, 2005). An ongoing dialogue with children aimed at heightening their critical skills (Shaw, 2014) and metacognitive skills (Bryan, 2004). The unstructured phases of group reflection that ensued from group creative activities included observations about the structure of the pieces and the strategies that children had adopted in constructing them, appraisals and positive feedback, interpretations of the meanings of the piece, and suggestions for extension. In spite of their relatively young age, children demonstrated a considerable level of attention and interest in commenting their own creative outcomes, thus supporting the importance of this aspect in group creative work.

13.2.2.8 Time

The findings of the study point to the fact that creative interactions take place over time at different levels, be it at the micro-level of the communicative exchanges within a performance, or during a phase of group work in a session, or at the macro-level of processes of mutual influence and transformation of participation (Lave & Wenger, 1991; Rogoff, 2003) over a longer period of time. In relation to time, too, the co-presence of different levels of analysis, from the micro- to the macro-temporal aspects of the interaction, appears to be necessary. Sawyer's notion of 'collaborative emergence' (2003a, 2003b, 2007) is applicable to these different layers of activity as a unifying category of interpretation of the phenomenon of group creativity.

Concluding this summary of the findings related to research question 2, these different component aspects concur to form a system of interrelated aspects (see diagram in 10.9), each of which is necessary to facilitate children's collaborative creative efforts. As

already observed above, a systemic approach is necessary to gain a more comprehensive understanding of the phenomenon and, hence, to intervene in it.

13.2.3 What meanings do children attribute to their experience of creating music as a group?

In relation to the third research question, the findings of the study point to 'meaning', on the one hand, as the sense that children made of the creative activity and, on the other, on children's perceptions about their lived experience of collaborative creativity.

In many cases the music-making process was meaningful for children as sensori-motor process of engagement with the sonor properties of the instrument and with the dynamic motor-musical interaction with the partner in improvisatory games based on synchronisation. Beside this, in other cases the creative organisation of musical structures relied on the rule-based use of unconventional forms of notation which made the process of interaction around the material intelligible and shareable. Yet, the most frequent way of making sense of the joint activity was to construct and represent an image or a story – what in Piagetian terms would be called 'symbolic play' (this leads back to the interpretation of young children's creative musical activity as an extension of pretend play and fantasy play). Indeed, both when the task design explicitly included extra-musical elements and, interestingly, also when the task did *not* prescribe any use of imagery or narrative, children gave meaning to their group creative music making as the collective action of depicting a situation or telling a story. The sense of the music was the plot or the image, so much so that, as a counter-example, in some cases children refused to elaborate on a group composition in terms of purely musical-aesthetical re-arrangement of the structure because this would disrupt the meaning of the story they were narrating. Notably, the study documented some of the children's transition to a more abstract conceptualisation of music as "just music", where the pieces they were creating had only 'inherent musical meaning' (Green, 1999) and were constructed as purely musical relationships within an organised structure.

As for children's meanings in relation to their involvement in group creative processes, the study could not gather as much evidence as hoped in terms of verbal expressions. This was due to children's relatively young age and limited vocabulary – as opposed to analogous studies with older children (e.g. Burnard, 1999; Jeffrey, 2008) – and, admittedly, to some practical limitations in the data collection (see the discussion of this issue in section 13.3). However, based on the sparse verbal evidence and, more

substantially, on what could be indirectly inferred from their overall behaviour, some relevant information could be drawn with regard to their creative experience in the group:

- children were critically aware of the perceived quality of the group's creative work (even though they could not exactly express it in words)
- their active commitment to the group creative activity and especially the high motivation that they demonstrated throughout the project was a tangible sign of the perceived relevance of the activity (though, naturally, not always was the group experience fully enjoyable and satisfactory for all of them)
- in some rare cases children verbally expressed their appreciation of the group process (rather than the product) and actively appropriated creativity-related vocabulary to describe and communicate their experience
- towards the end of the process the oldest children (7 years old) showed a clear awareness of the strategies they used in order to productively collaborate in the group and a sense of confidence in their ability to solve creative problems.

The issue of gathering verbal evidence or other kinds of evidence in relation to children 'expressed' and 'felt' perceptions of their own creative experience remains open and a topic for further research. In spite of this research methodological problem, however, the very fact of posing the question has a strong pedagogical value. It is not only how children behave creatively or the pieces they produce that is relevant in educational terms, but also the ways they conceive of it and the musical and human experience they make through it.

13.2.4 What is the value of these creative interactions for children's learning?

The fourth research question was intended to stimulate a wider reflection on the educational and ethical value of this kind of activities. Based on the findings presented above, this study confirms the sociocultural and social constructivist assumption that learning is a collaborative process (Rogoff, 1990, 1998, 2003) and that creativity is an inherently social and emergent phenomenon (John-Steiner, 2000; Sawyer, 2012). With regard to collaborative creativity, the educational value of fostering children's creative interactions in music can be summarised as follows:

- group creativity is a high-order goal in music education. In the hierarchy defined by the revised Bloom's taxonomy of educational objectives (Hanna, 2007; Krathwohl, 2002), the process of collaborating with others in a creative activity subsumes a number of cognitive functions – remembering, understanding, applying, analysing, evaluating, and creating – which are exerted both individually and in interaction with others

- beyond these cognitive aspects implied in creative work (which apply as well to individual creative learning), collaboration in creative music making adds a further layer of relevant social skills, such as the ability to express and communicate ideas, build on each other's contributions, negotiate common solutions, and develop a sense of group identity in the co-construction of a joint outcome
- fostering creativity and collaborative creativity means giving children ownership of their own learning processes and help them nurture the artist within them
- group music creative activities tend to facilitate the active participation and the inclusion of all children, as each child can self-define the extent and the nature of their participation within an open but appropriately structured context. Thus, they promote a sense of autonomy, competence, and relatedness (Ryan & Deci, 2000) which favours their wellbeing.

Finally, the ethical values that can be associated to group creative music making (and which were fostered in this study) are: acknowledging the person and her creative potential, promoting intersubjectivity and a dialogic attitude in life, allowing for freedom alongside responsibility, encouraging a multiplicity of perspectives, and cultivating democracy. Far from a (supposedly) value-free technical-rational approach to creative learning, this study asserted the centrality of ethical principles in education and the importance of nurturing children's creativity 'with wisdom' (Craft, 2006).

13.3 Limitations of the study

Limits and potential weaknesses of qualitative research in general and specifically of the methodological approach taken here have been discussed in the Methodology chapter. Beyond these, there are some further limitations to this study which have to be pointed out.

From a pedagogical point of view, we did not (and could not possibly) 'cover everything', as the range of possibilities for creative group work in music is vast, if not virtually infinite. The findings of the study are based on the activities we did in the classroom – just a limited selection out of many. This, more than a limit, is a condition. The present study would have been at least partially different if we had done different things. So I do not want it to be taken for granted that what we did was 'all that can be done' with children in the area of collaborative creative music making and recognise that further perspectives, themes and contents might have emerged based on different sets of activities. I regard this as a stimulus for further research.

According to its methodological orientation towards understanding rather than action (see 7.5.6), it was not a goal of this study to explore the literature on the teaching practice with regard to creative music making, starting from Paynter and Aston, 1970, just to mention a pillar of creative music education, and proceeding historically towards the present (also including literature from the German-speaking countries and Italy). This is a limit of this study, but also a perspective for future research.

From a research methodological perspective, I have to say that the findings of this study are ultimately based on my own interpretations – other researchers may see different things in the same data. This leads back to the subjectivist nature of qualitative inquiry. Further, due to the scope of this writing, only a part of the collected and analysed data were presented here, just a portion of the bigger picture that I experienced from the inside. And indeed, there was a tension between my comprehensive perspective as teacher seeking to take into account virtually everything versus an extremely focused perspective as researcher who has to build a coherent picture of a very specific aspect of the 'whole'.

Beyond these general considerations, two specific issues related to data collection remain problematic:

- a) *observing and documenting talk during small group work* (see discussion of the technical difficulties and possible solutions in 7.9.1 and 9.1.3)
- b) *eliciting children's meanings* – as remarked in 11.2, gathering verbal comments from children of this age presented numerous obstacles; in short,
 - having excluded 'proper' focus groups or interviewing as not suitable for the age of the group, I did not find an alternative method to bring them to talk (the only 'group interview' I attempted was hardly satisfactory, probably due to my inexperience). I initially thought of using Burnard's 'musical river' (1999, 2000b) – a critical incident charting technique for recalling significant experiences in the musical lives of a person – but later it appeared to be too demanding for these young children's verbal skills. In Burnard's study (involving 12-13-year-olds) this was a 30-60 minutes interview, which for 5-7-year-olds would have been overwhelming. But I might have devised some other method with this age.
 - the image-based, draw-and-talk technique that Burnard used in the same study, or some other image-based technique suitable to this age (Burnard, 2001) might have proved more practicable. However, eventually I did not use it because of practical reasons: we only had a time slot of an hour with the whole group where we were expected to teach and make music, and some of the parents were not

available to bring their children to the music school for the interview at another time during the week. At any rate, I feel I missed an opportunity here.

- video-stimulated recall might have been integrated into the pedagogical process (as a sort of 'special occasion') by showing children some significant excerpts of what they had done and then asking them to comment on those. I have often done this with audio-recordings, though with slightly older children, and it is a very good stimulus for self-assessment and discussion. However, apart from the technicalities that this would have implied (with a smartboard it would have been much easier), our choice was to go on with the flow of the practical activity, rather than to interrupt it and to talk about previous sessions' achievements.

13.4 Personal reflections on the thesis journey

Conducting the study fostered my personal evolution from a reflective practitioner (Schön, 1983,1987) to that of an interpretive teacher researcher. In this sense, I regard the 'value for use and capacity building' (Furlong & Oancea, 2006) of the research process as very high for my own professional development. I acquired a much wider and deeper awareness in my practice, finding new ways of interpreting the context in the light of existing theories. I appropriated a number of conceptual tools to name and understand the events that I am observing and actively intervening in.

Over the last few years, through a recursive process of reformulation of my theoretical and pedagogical knowledge, my own perspective has gradually changed, being strongly influenced by the sociocultural stance. In my trajectory through the PhD experience I see a clear shift from a behaviourist / cognitivist / constructivist approach towards a more social constructivist and sociocultural approach (see Table 2 in 2.6). Thus, this study represents a significant moment for the evolution of my theoretical stance. Moreover, the research process positively affected my practice as a teacher. Thanks to the opportunity offered by carrying out this project I could trustingly explore new ways of teaching, alongside witnessing alternative, possibly more authentically child-centred ways of learning. Both my thinking and my practice have changed.

Of course, all this was not completely new for me, as I had already encountered ideas about group creativity in my previous experiences as student teacher, and then as teacher and teacher educator. Terhart (2003) critically argues that constructivist didactics do not constitute a really new paradigm in education and that, instead of being a thoroughly innovative didactic practice, constructivism represents a new, updated version of "the familiar, old, and romantic conceptions of learning and teaching well-known in

"progressive education" (p.42) – he refers to the German *Reformpädagogik* of the beginning of the 20th century, which is the cultural-historical origin of the Orff-Schulwerk approach (to which the present pedagogical project is affiliated). In my training at the Orff Institute in Salzburg in the 1990s I enjoyed plenty of creative small group work and, indeed, both the social and the creative are central aspects in the approach. So, in a way I have been practising 'social constructivist teaching' for years, being inspired by those ideas and realising that they had a deep value for my identity as a teacher (which is actually the reason why I am here now). Neither do I think that I am making groundbreaking discoveries or coming up with amazing revelations through this study, as this way of conceiving of learning and pedagogy was already established long before the surge of constructivism and social constructivism (I claim that Orff-Schulwerk can be seen as one of the historical precursors of social constructivist pedagogy in music).

However, the process of research as I experienced it in this study is more grounded, rigorous, systematic and, above all, more critical than just reflective practice. The great advantage that I perceive in having done this PhD is to have connected theory and practice as I had never done before, and to have acquired a much greater focus in observing and understanding pedagogical events. In McIntyre's (2005) terms, I can trace now my developmental trajectory from a predominantly practice-based knowledge, through reflective practice, towards a research-based knowledge (see 7.6). This knowledge makes me a better teacher educator, too.

13.5 Directions for further research

This exploratory study opens up various prospects for future research. Bringing forward the analysis on the same data, further issues might be brought into focus, such as

- creative and collaborative creative use of rhythm patterns and more broadly development of synchronisation and rhythm skills
- teacher's talk and teacher's behaviour in the conduction of creative activities
- creative task design and complex structures of learning pathways
- collaborative creativity and inclusion

Given the versatility of a qualitative analysis software like NVivo, it would not be difficult to rework the data in the light of new perspectives, with the advantage of having largely already completed the hard work of transcription and organisation of the data (coding would be mostly new, of course). Moreover, the present study could offer in the future a

rich data bank from which to draw relevant material for comparative analyses – as, for example, Burnard and Younker (2002) and Wiggins (1999/2000) do.

A similar investigation on creative interactions could be carried out in relation to different contexts, ages, and activities:

- I went on with the 'Rhythm-voice-movement' group at CDM in 2014-15: three children of the original group enrolled again, and 11 others joined in – this time I worked with still another colleague interested in creativity. Although I was not collecting and analysing data as in the main study – so that I cannot claim that this is becoming a longitudinal study – I gathered relevant confirmations to the findings of the present study and new questions, too.
- As already observed above, the range of possible creative interactive activities in music is virtually limitless. A relevant direction of expansion of this study is in the search for new group impro-compositional ideas (I am already doing this).
- It would be interesting to work with different samples of participants, children of this age as well as older ones, to see what happens with specific target groups, such as children who have already had some kind of instrumental tuition, talented children, at risk children, or music therapy groups (as well as non-professional adults or music student teachers). The idea would be to build a sort of multiple case study (Yin, 2009) or a broader composite picture of how the phenomenon of collaborative creativity in music might take shape in different situations.
- It would also be important to carry out a similar study in a different setting, first of all in the primary school. This would imply working with much larger groups – not just eight but 25-30 children – and making the necessary adjustments in the organisation of the activities and of the data collection. In particular, it would really be interesting to work in interdisciplinary connection with school teachers from different areas of the curriculum: 'creative interactions' can be a captivating theme for literacy, maths, science, and virtually any other subject. Also collaborating with a dance, theatre, or visual arts educator would bring about fruitful results.
- With older and more experienced children it would also be possible to go through the whole pathway from process to product (which we chose *not* to do in this project). The goal would be to work from the initial exploratory phases and the constitution of the group up to a final performance which emerges out of the creative process and gets to the ultimate refinement of an aesthetically plausible product collaboratively created by children. As a note, this would be needed to 'demonstrate' the power of the approach: a socially and culturally acceptable outcome in form of a concert enriched by children's compositions would be a way

to advocate the practicability and productivity of the approach and to convince the performativity-oriented critics that we are not just 'messing about' – music education is by no means immune from issues of accountability, results, tangible achievements, and the like.

As observed in 7.5.5.1, the emphasis of this exploratory practitioner research was on understanding rather than action and change – this was not an action research study, but it can be preliminary to it. Based on the knowledge developed here, a collaborative action research study might focus on the feasibility of new pedagogical strategies and the functionality of creative teaching-learning processes. The goal would be to examine how group creativity can be best fostered in music education by planning, implementing, and evaluating a 'pedagogy of creative interactions', in order to improve practice. I might take on different research roles here, as teacher researcher going on with a co-teacher as in the present study, or in the role of a mentor/facilitator overseeing the activity of groups of teachers or student teachers. Looking even further, such a collaborative action research project could result in a conceptual and practical handbook for teachers providing a theoretical background (sociocultural theories, creativity, group work) and exemplificative activities that are research-based, described in depth, and therefore particularly valuable for practitioners (something on the model of Dawes *et al.*, 2004, or Baines *et al.*, 2009). The field is open and there is much that can be done.

13.6 Contributions and implications for pedagogical practice

The present study can positively contribute to extending understanding of collaborative creativity in primary music education. In the following, I present some implications with regard to teaching practice, music teacher education, and mainstream pedagogy.

13.6.1 Implications for the music teaching practice

Based on the findings of the study, children effectively create something new together when:

- they are intrinsically motivated and have a sense of ownership and control of the process
- they have developed trust and reciprocity, share the common value of creating, and have acquired a 'method' for working together
- they work in a state of *flow* (Csikszentmihalyi, 1996) and *group flow* (Sawyer, 2007)

- the task is consistent with children's present needs and abilities
- the process is adequately structured and at the same time remains open.

It makes more sense for children, at least at this age, to aim for 'open products' in an ongoing playful process, rather than to force and crystallise the activity into an unlikely attainable clear-cut composition. Creativity is processual and emergent: the product is not the priority, rather it seems important that children can follow their own 'internal drive' towards music making. Teachers can predispose some kind of context and structure in terms of initial ideas, stimuli, procedures, but the real contents should come from children. The role of the teacher is to proactively and responsively scaffold the activity, being at the service of children's processes. In this sense, the teacher is a catalyst for the emergence of creativity. The teacher takes part to the co-construction, striking a balance between constraint and free choice, between their guidance and children's agency, with the aim of facilitating the interaction and the decision-making process of children. A final recommendation for teachers: keep it open, keep it vital, keep it emergent.

13.6.2 Contributions and implications for music teacher education

It may not be easy to work with collaborative creativity, as an array of issues undermine or obstacle effective teaching for creativity: standardisation of curricula and outcomes (against teacher autonomy), limited availability of resources in terms of time and equipment (reflecting a restricted value attributed to these activities), difficulties in implementing collegial collaboration (it costs money), and lacking support on part of external administration and policy (Hämäläinen & Vähäsantanen, 2011; Odam, 2000). Beyond these, the education of teacher themselves is a critical issue. This kind of work with children requires great flexibility and much experience, for it demands that the teacher be open and able to find in real time an appropriate answer for each emergent situation that may come up. It is not surprising that many teachers often feel challenged by the multiplicity of concerns that may arise in practice – and this is perhaps why group work is still underused in education (Galton & Hargreaves, 2009), let alone collaborative creative work. Nonetheless, the potential of group creative activities as a positive and desirable integration to teacher-led, whole-class activities and individualised work is such that trying really seems to be worth the effort. Toward this end, specific opportunities should be provided within teacher education programmes and ongoing professional development.

In this sense, the contribution of this study lies in its potential to reveal in a clear and systematic way what a music teacher might experience when working with children,

group work and creativity. A chief motive for educational research is to articulate professional-pedagogical knowledge about how children learn, what a teacher can do, and how the two things are in a constant dialogue. A desirable goal for this study is recognition, i.e. that another practitioner or a student teacher can find in it some relevant perspectives and orientations that help them to make sense of their own context (this would be an aspect of the "value for use" which Furlong and Oancea, 2006, talk about). Asking the question "what is going on here?" – which this study attempts to answer – is absolutely at the core of the practitioner's world, as understanding is the necessary prerequisite for acting in a meaningful and productive way. We need more collaborative creativity in music teacher education and this study is building relevant knowledge in this regard.

13.6.3 Implications for mainstream pedagogy

'Creative interactions' is a transversal theme that deserves to be explored in relation to diverse curricular and cultural contents. This study situates itself within the wave of socioculturally oriented approaches to creativity as a social phenomenon. The fact that it is based on music, however, gives it a particular value, in that it reinforces the role of embodied knowledge, purposeful play, and holistic participation in collective creative endeavours against more linguistically oriented models of creative interaction – this is a trait that music shares with dance (Chappell, 2005). The contribution that such a study may offer lies in the fact that it illustrates strategies of promoting collaborative creativity, which are alternative or complementary to the language-based ones dominant in mainstream education, and which can be much more relevant at the early childhood and early primary level. Sawyer (2006a) claims that "schools have to provide students with opportunities for collaborative knowledge building, for group creation in improvisational teams" (p.46). Music and movement, indeed, can be powerful educational means to foster intersubjectivity and shared understanding in children's collective creative activity. Along with theatre and visual arts, they can be regarded as leading forces towards creativity in the group.

13.7 Implications for policy makers

The central thesis of this work is that, alongside individual and whole-class activities, creative collaborative activities should be integrated as a crucial component of the music curriculum for young children. Based on the findings of this study, a first relevant implication for policy makers is that in the curriculum guidelines of the Italian Ministry of

Education for the nursery, primary and lower secondary school (Ministero della Pubblica Istruzione, 2012, pp. 71-72) the development of creative collaborative skills in music should *explicitly* be included among the educational objectives of the primary school (this is omitted in the document). Indeed, as the study has shown, the participation in "processes of collective elaboration" (*ibid.*, p.72, refers only to secondary students) is both possible and desirable for younger children, too, as they are well able to work creatively in groups. Thus, beyond the skills of performing, appraising, representing, and analysing music, the learning goal of "using voice, instruments and new technologies in creative and conscious ways, gradually extending their ability to invent and improvise" (p.72) should also include the phrasing '*both individually and in small groups*', in order to acknowledge and foster young children's potential to learn collectively. The attention to this creative and collaborative learning processes cannot just be the fruit of some motivated teachers, but should be promoted in the first place at the level of policy.

Secondly, as already observed above, the implementation of such guidelines would require concrete measures with regard to teacher education. If the assumption is that in order to teach in a certain way, we have to learn in that way, then it is foundational *to educate the educators* - and this needs time and resources. Investing in creativity and collaborative creativity implies in practice that the education programmes of student teachers (both music teachers and primary school teachers, in conservatoires and universities) as well as initiatives for ongoing professional development should deliberately include creative collaborative forms of learning.

Thirdly, we need research on the *status quo* of music education in Italy, with a constructively critical intention to improve it. We need basic educational research aiming to develop practice-relevant ideas for teachers about how to meaningfully design and actualise creative collaborative learning in music. We need government-funded projects which connect various stakeholders from both the public and the private sectors, in order to activate processes of renewal and innovation.

In conclusion, in terms of cultural policy, acknowledging the power of music (Hallam, 2010) means creating the structural conditions for all this to happen. Reforming music education based on conceptions of learning as a social, cultural, creative, participatory, emancipatory, and ethical experience is a challenge which demands systemic action and a strong political will from above, not just ideal formulations.

APPENDICES

Appendix A: Ethical procedures

Certificate of Ethical Approval

Ref (for office use only):

Proposal for consideration by SSIS Ethics Committee

Andrea Sangiorgio
via Ettore Artini, 16 – 00158 Roma
distance-based PhD student
600053455 - as507@exeter.ac.uk

Rome, September 20th 2012
To S.Harding@exeter.ac.uk

Name: Andrea Sangiorgio
Department: Graduate School of Education
Email: as507@exeter.ac.uk
Name of supervisor: Sarah Hennessy

Project title Children's Creative Music Making in Groups:
Actions, Interactions, and Meanings

Start & end date permission requested for:
Start: January 15th 2013 End: June 15th 2013

Date submitted: September 20th 2012

SYNOPSIS OF THE RESEARCH PROJECT

Due to the explicit recommendation in the school curricula of many countries to include improvising and composing activities within the music curriculum, musical creativity has emerged as an essential theme both for practice and for research.

The aim of this research study is to develop a theoretical-methodological framework for understanding creative music making in educational contexts. The focus of this interpretive, practitioner research study is to investigate the nature of children's learning when creating music in groups and the meanings expressed by children in relation to their creative processes and products. The context of the research will be a music school in Rome, Italy, where one group of children aged 5-8 years will be involved over a period of about six months.

Drawing on a wide variety of perspectives on creativity - ranging from cognitive developmental to social psychological and socio-cultural theories - the study will adopt an essentially pragmatist stance and a multi-modal, naturalistic approach to inquiry.

Methods will include participant observation, analysis of musical creative interactions and outcomes, interviews, and other methodological tools to elicit children's perspectives on their own experience (eg. drawings).

Research Question

What kinds of musical, verbal and non-verbal actions and interactions take place between children while they are improvising or composing in groups?

Sub-questions:

- What factors influence their collaborative work on creative tasks?
- How does group learning impact on the creative learning of the individual child, and how does the individual impact on the group?
- What meanings and values do children attribute to the experience of creating music in group?

Ethics Proposal Form - Sangiorgio 600053455**2****RESEARCH METHODS**

An interpretative methodology is used to investigate children's music products and the meanings they attribute to their own creative activities. Data gathered through a multi-modal design will capture the nature of their interactive behaviours while composing and improvising.

Research Context

The research study will be conducted in a private music school in Rome - the CDM Centro Didattico Musicale - that I co-direct with two colleagues. The centre offers individual and group music lessons, and carries out music projects run by its teachers in nursery and primary schools. Thanks to my role in the school, I have the potential to involve as participants some of the children who are taught there. I plan to organise one group of 10-15 children aged 5-8 years. The group will meet once a week for an hour from the beginning of October 2012 to the end of May 2013. Two additional meetings on weekends will be arranged during the year. Recordings of sessions will be collected from the start of the school year (October 2012) for my own teaching records, but the data collection for this study will begin in January 2013. One other teacher at the school will also be engaged in the study as co-teacher, and I have identified a critical friend who will help in video analysis.

Data Collection Methods

- participant observation of practice
- video and audio-recordings of processes and outcomes
- structured and unstructured individual and group interviews with children at different times during the study
- audio and video-stimulated recall techniques
- use of expressive techniques (eg. drawings) aimed at eliciting children's perspectives on their own experiences

THE VOLUNTARY AND INFORMED NATURE OF PARTICIPATION

As stated above, participants will be recruited among the pupils participating in the activities organised by the music school. Being the participants children aged 5-8 years, an information sheet and a consent form will be distributed to all parents (see attachment). The consent form will be printed in two copies, to be signed by both the parent and the researcher, and both will keep a copy of it. The relationship of trust that is usually established with all clients of the music school and the special chance for the children to have an intense experience of music making should ensure a positive response from the parents. As is the custom of our music school, parents will have the possibility at any time to attend the activities, be directly informed about the progression of their children, if necessary discuss any problems, and see the performances.

At any time children (or their parents) have the absolute right to withdraw from the project. In such a case the music school will suggest further possibilities, such as an alternative group to join in.

ASSESSMENT OF POSSIBLE HARM

Given the nature of the research study – a naturalistic inquiry about an educational situation - there seems to be no danger of harm that might be caused to the children involved. In fact, a precondition for the success of a creative learning process is to avoid that children experience any form of distress or discomfort. Rather, it is essential that children enjoy a positive experience of music making. Thus, every measure will be taken to put them at their ease and to reduce a possible sense of intrusion which might arise due to the research process (in particular, videoing and interviewing).

In any case, should unexpected detriment or emotional harm of any kind arise during the inquiry, the researcher would immediately desist from any actions that may have caused it and bring the case to the attention of the children themselves (wherever appropriate) and of their parents.

DATA PROTECTION AND STORAGE

The anonymity of the participants will be protected by using fictitious names in any written accounts regarding the research study.

Parents will be asked permission for the use of video material in dissemination of the research, eg. in the final thesis, and in conference presentations.

The security of all written, audio and video materials collected during the research will be guaranteed by indefinitely storing them on electronic devices (computer, back up storage) that are protected by strong passwords and are not accessible to anybody other than the researcher.

The research study is not concerned with personal information about the participants. Should any issues arise during the study, which are deemed 'confidential' by the research participants (or, in this case, their parents), the publication of the results of the study will avoid any direct reference to the persons involved.

It is important to note that, by law, the music school carries out its activities in compliance with the Italian Data Protection Act (Decreto Legislativo n.196, 30/06/2003 - "*Codice in materia di protezione dei dati personali*"). Permission is obtained from all the pupils' parents to take photos or videos during the learning activities, with the exclusive aim of using them in the context of teacher education initiatives, publications, conferences, and research studies (including this one), in ways that do not compromise the dignity of the persons involved. According to the above mentioned law, any client of the CDM is entitled to ask at any time that such images or videos be cancelled or destroyed. For the full text of the D.L. n.196 see <http://www.garanteprivacy.it/garante/doc.jsp?ID=1311248> and (English translation) <http://www.garanteprivacy.it/garante/document?ID=1894006>

DECLARATION OF INTERESTS

The children's parents will be informed of the exclusively scientific nature of the research study. No commercial interests are involved in the study.

USER ENGAGEMENT AND FEEDBACK

The children involved in the research as well as their parents will be informed both through an information sheet and through a meeting with the parents which will present in detail the characteristics and the goals of the study prior to the beginning of the lessons.

ETHICAL REQUIREMENTS OF COUNTRY IN WHICH RESEARCH IS TO BE CONDUCTED (Italy)

The degree of attention given by the University of Exeter to ethical issues exceeds by far the requirements imposed by Italian Universities (provided that issues regarding the privacy of participants are safeguarded - see above Decreto Legislativo n.196). No further measures are needed in this regard.

yours faithfully
Andrea Sangiorgio

see attached

the Research Supervisor
Sarah Hennessy

- Information sheet and Consent form (+ translation into Italian)

GSE unique approval reference:..... 2 | 11 | 12 | 6.7

Signed:..... *NB Grimes* date: 8/10/12

Chair of the School's Ethics Committee

Information sheet for parents

SCHEDA INFORMATIVA E DICHIARAZIONE DI CONSENSO INFORMATO



Progetto di ricerca:

La creatività musicale dei bambini: azioni, interazioni e significati

Gentile Genitore (*tutore*),

Andrea Sangiorgio, dottorando presso la Graduate School of Education dell'Università di Exeter, Gran Bretagna, sta svolgendo una Ricerca educativa sulla creatività musicale dei bambini e sui modi in cui i bambini interagiscono fra di loro quando inventano musica in gruppo.

Suo figlio/sua figlia è invitato a prendere parte alla ricerca. E' importante che Le sia chiaro il perché la ricerca viene fatta e cosa questo comporta. La preghiamo di leggere con attenzione quanto segue e di chiedere chiarimenti, qualora avesse bisogno di ulteriori precisazioni.

Se Lei acconsente di far partecipare suo figlio/a a questo progetto di ricerca, cortesemente firmi il modulo di Consenso Informato allegato alla presente scheda informativa.

Scopo e contesto della ricerca

La finalità dello studio è quella di comprendere la creatività musicale dei bambini nell'ambito di contesti educativi. La ricerca si concentra su come i bambini lavorano insieme quando creano musica in gruppo.

Per raccogliere informazioni su questo processo è necessario video-filmare i bambini durante le lezioni.

La ricerca coinvolge un gruppo di bambini tra i 5 e i 7 anni anni, tra quelli organizzati dal CDM Centro Didattico Musicale per il presente anno scolastico. Il gruppo si incontra una volta a settimana per un'ora da ottobre 2013 a maggio 2014.

Procedure dello studio

I metodi utilizzati per la raccolta dati e la documentazione delle attività includono:

- osservazione da parte del ricercatore, Andrea Sangiorgio, che è anche insegnante del gruppo assieme a Valentina Iadeluca
- registrazioni audio e video delle lezioni
- conversazioni individuali e/o di gruppo con i bambini
- utilizzo di disegni per raccogliere pensieri o emozioni dei bambini sulla propria esperienza

Confidencialità, Anonimità, e Trattamento dei Dati Personalni

Le registrazioni audio e video, così come le interviste e le trascrizioni, e ogni altra forma di documentazione raccolte nello studio saranno trattate con la massima riservatezza e verranno usate per le finalità scientifiche indicate sopra. Terze parti non avranno accesso ad esse. Tutti i dati raccolti saranno conservati e usati in forma anonima, senza fare menzione del nome di Suo figlio/a.

L'anonimità di tutti i partecipanti sarà protetta utilizzando nomi finti in ogni resoconto scritto relativo alla ricerca. Lo studio non tratta informazioni personali riguardanti i partecipanti. Nel caso in cui dovessero sorgere problemi o aspetti che Lei (o suo figlio/a) considera "confidenziali", la pubblicazione dei risultati dello studio eviterà ogni diretto riferimento alle persone coinvolte. La sicurezza di tutta la documentazione audio e video raccolta nello studio sarà garantita dal fatto che i dati saranno conservati su dispositivi elettronici (computer, back up) che sono protetti da password e

non sono accessibili ad altri che il ricercatore. Alcuni estratti del materiale raccolto potranno essere utilizzati al fine di pubblicare e divulgare i risultati della ricerca, ad es. nella tesi finale del dottorato o in presentazioni nell'ambito di conferenze. Su Sua richiesta, le sarà fornita copia del materiale pubblicato.

E' importante sapere che, per legge, il CDM svolge tutte le proprie attività nel rispetto della legislazione sulla Privacy (Decreto Legislativo n.196, 30/06/2003 - "Codice in materia di protezione dei dati personali"). La scuola chiede a tutti i genitori dei bambini il consenso relativamente all'uso di riprese audio e video durante le lezioni, con l'esclusiva finalità di utilizzare questi dati nel contesto di iniziative di formazione insegnanti, pubblicazioni, conferenze e studi di ricerca (compreso il presente), in modi tali che non compromettano la dignità delle persone coinvolte. Secondo il Decreto succitato, Lei ha comunque la possibilità di chiedere in qualsiasi momento che tali immagini o video siano cancellati e distrutti.

Diritto al ritiro dal progetto

La Sua adesione a questa Ricerca è completamente volontaria e Lei potrà ritirare il Consenso alla Partecipazione di suo figlio in qualsiasi momento, senza dover fornire spiegazioni e senza subire alcun tipo di penalità. In tale caso la scuola Le suggerirà ulteriori opzioni – come ad es. altri possibili gruppi cui suo figlio/a può partecipare – o, a seconda delle intenzioni dei genitori, la scuola può rifondere tutte le lezioni che siano state fino a quel momento pagate e non siano però state frequentate.

Dichiarazione di interesse

La ricerca ha una finalità esclusivamente scientifica e non è mossa da alcun tipo di interesse commerciale.

Benefici per i bambini partecipanti

Data la natura dello studio, non sembra esserci alcun pericolo di dolo che possa essere causato ai bambini sulla base delle procedure di ricerca. Di fatto, perché un processo di apprendimento creativo abbia successo è fondamentale che i bambini non si trovino in una situazione di stress o di disagio. Piuttosto, è essenziale che possano godere di una esperienza positiva nel fare musica.

Ci auguriamo che questa possa essere una occasione particolare di apprendimento per Suo figlio/a e la possibilità di essere coinvolto in una intensa e significativa esperienza di creazione musicale in gruppo.

Speriamo che i risultati dello studio possano contribuire a fornire migliori esperienze creative in musica per molti altri bambini!

Contatti

Per ulteriori informazioni sullo studio di ricerca, si prega di contattare:

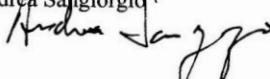
Andrea Sangiorgio, Graduate School of Education, Exeter University, Devon UK.

Tel +44 (0) 1392 263240, as507@ex.ac.uk (c/o CDM Centro Didattico Musicale, via delle Egadi, 42 – 00141 Roma – formazione@centrodidatticomusicale.it +39 338 8487703).

Qualora Lei avesse domande sullo studio delle quali volesse discutere con qualcun altro presso l'Università di Exeter, può contattare il supervisore del progetto, Prof. Sarah Hennessy, S.J.E.Hennessy@exeter.ac.uk +44 (0) 1392 72 4858

Grazie della Sua attenzione e disponibilità!
Andrea Sangiorgio

Roma, 5 novembre 2013



Sample parental consent form

Andrea Sangiorgio e. modimento

**DICHIARAZIONE
DI CONSENTO INFORMATO**

Progetto di ricerca:

**La creatività musicale dei bambini:
azioni, interazioni e significati**

UNIVERSITY OF
E ETER

Graduate School of Education
College of Social Sciences and International Studies
Exeter, Devon, UK

Con la presente dichiaro che:

- ho letto le informazioni presentate nel foglio informativo
- ho ricevuto esaurienti spiegazioni in merito alla partecipazione di Mio figlio/a (del Mio tutelato) allo studio di ricerca sopra descritto
- ho avuto l'opportunità di porre domande riguardanti lo studio, e di avere ricevuto risposte in merito soddisfacenti
- sono consapevole che la partecipazione di Mio figlio/a (del Mio tutelato) alla Ricerca sia volontaria e che ho la facoltà di ritirare Mio figlio/a (il Mio tutelato) in qualsiasi momento senza dover dare spiegazioni di alcun tipo
- sono stato informato del Mio diritto di avere libero accesso alla documentazione relativa alla Ricerca.
- copia firmata della scheda informativa e della dichiarazione di consenso mi è stata data

Accetto quindi liberamente di far partecipare alla Ricerca Mio figlio/a (il Mio tutelato), avendo perfettamente compreso tutte le informazioni sopra riportate.

Roma, 25/11/2013

Nome del bambino/a



Nome del genitore (*tutore*)



Firma del genitore (*tutore*) e data



Nome del ricercatore

Firma del ricercatore e data

Andrea Sangiorgio



Roma, 5 novembre 2013

Appendix B: Summary of the activities in the project "Rhythm, Voice, Movement"

It goes beyond the scope of this thesis to provide an in-depth examination of the teaching/learning pathways in the sessions (which was, at any rate, the initial phase of the data analysis process). However, in order for the reader to have a more precise idea of the kind of programme in which children participated, in the following I provide an outline of the activities realised in the period January-June 2014 (sessions 12 to 30, data collection). The reader may also wish to see Appendix C "Minutes of the sessions" for a detailed account of the structure of the activities over the nineteen observed sessions, and Appendix D for the full list of relevant creative phases and outcomes in the project.

The sessions took place on Wednesday afternoons from 5 to 6 pm. Children used to arrive directly from school, accompanied by their parents or carers. The typical structure of a session comprised some movement activity at the beginning, imitation and invention of rhythm patterns (a la Gordon), some rote singing, and one to three creative music and movement activities, many of them extending over two or more sessions. The themes that were addressed were intended to cover quite a wide range of different approaches to inventing individually or in collaboration with others.

Accompanying movement – synchronising with music

A preparatory, warm-up activity we often did was 'accompanying movement', in which children had to follow and synchronise with the music played by teachers on the drums. The basic structure of the task is that of a 'stop-and-go', that is the teacher plays a pulse, metre or rhythm on the drum, children move freely in space improvising each on their own different kinds of movements, until the music stops. Then the teacher plays a new rhythm, children invent a new movement, and so on. The activity aims to activate children, absorb exuberant energy, and stimulate them to listen and coordinate their whole-body movements with an external rhythm source and/or with a partner. In some cases, individual children would present their idea for the whole group to imitate. Variations and developments of the activity which we explored were: synchronising to different metres (4/4, slow 3/4, 12/8), identifying and synchronising to macrobeats in a complex rhythm texture of semiquavers, freely dancing to recorded music and to specific elements in the music, and cooperatively inventing movements with a partner.

Rhythm patterns (voice and movement)

Rhythm patterns were both an instructional and a creative activity, in that, beyond imitation, we worked a lot on children's strategies in inventing rhythms. Rhythm patterns activities are derived from Gordon's Music Learning Theory (Gordon, 1990, 2012). They are useful as building blocks for rhythm and can be adapted in various ways to different purposes. The structure of the activity is rather straightforward: in a first phase the teacher models a series of patterns in 4/4 and 12/8 using a neutral syllable 'pa' which children repeat in echo. Then children in turns can invent patterns and be imitated by the group. The degree of difficulty of the patterns can gradually be enhanced over time and there are many possibilities of extending the activity in various directions.

In my experience and personal interpretation of the activity, rhythm patterns are a very flexible tool for building rhythm vocabulary by imitation, active appropriation, and invention. Learning patterns is almost like learning basic 'words' of rhythm language. I consider using patterns a 'bottom-up strategy', leading from the internalisation and production of single elements towards their elaboration and combination into wider structures. Also particularly useful is the fact that such patterns are performed in the first place with voice and consequently allow children to imitate or invent even rather complex rhythms, leaving the problem of manual/instrumental technique to a later stage of work. The assumption is that the development of vocal rhythm skills can lead the development of motor-rhythmic skills. Based on my practice, body percussion can be associated to rhythm patterns as an intermediate step from vocal to instrumental performance.

Rhythm structures

"Rhythm structures" is a third activity centred around rhythm. Like "rhythm patterns" and "accompanying movement", it is a bottom-up activity, starting with elements which can be combined in different ways to form an array of higher order metrical structures. The idea is simply: take a pulse, i.e. an undifferentiated sequence of beats at isochronous distances, and group the beats by making them sound differently, for example by combining two or more different body percussion movements (or instrumental actions). What comes out of the alternation of timbrically differentiated strokes are different metres, that is organised structures of macrobeats and microbeats (for example OOXX, OXX, OXOXX, and many others).

The goal of the activity is to lay the foundation for an effective body-based perception and understanding of a variety of metres. I would define this as a 'combinatorial' or 'modular'

approach to rhythm, in which a string of basic objects are permuted in various ways to form higher level structures. In the project an unconventional form of notation with objects was used to manipulatively construct and visually represent different metrical structures (see N. 26 as an example).

Graphic notation into movement/sound

Based on a graphic notation, children had to compose in small groups a short movement sequence, which they later transferred to the instruments (see Example N. 2 for a detailed analysis of this process).

Instrumental interactions in improvisation

Children also engaged in creative processes in which they were interacting directly on the instruments through improvisation. They explored ways to imitate, contrast, and engage in musical dialogues with a partner ("Dominoes", "Frogs' dialogues"), or also they attempted to build rhythmic textures in whole-group free improvisations. The issue was how to build a 'purely musical' relationship with others (there was no narrative or extra-musical stimuli here, just musical roles), and how to extemporarily organise a musical Gestalt, either mensural or free-metrical, in immediate interaction with others.

Vocal work

Beside voice as rhythm – e.g. in rhythm patterns – children used voice as timbre not as an activity in itself, but interspersed throughout the activities, as a way to experiment with vocal sounds and represent various phenomena of the natural and human world.

Children also learned two singing games, namely Samba Lelé, a Latin-American style singing game, and Koromiko, a melody from New Zealand adapted as a singing game for creatively associating movements to melody fragments. Notably, as his final free creative work Lorenzo invented a song – both text and melody – which he successfully performed in the final session with parents.

Postcards (imagery and sound)

Through a rather long process extending over four sessions, children worked on postcards which they chose among a range of 19th and first 20th century art works, using them as a prompt both for individual and small group compositions, with voice and movement as well as with instruments. Individual invention was meant to be preliminary

(or complementary) to working in pairs or small groups later on, and to give children time to get acquainted with the idea and understand different strategies to work with an image in collaboration with partners.

Figure-Ground relationship

Children engaged in a longer series of different activities centred on the idea of interaction as co-presence of two contrasting elements, namely a background and a foreground figure standing against it. The theme was addressed through different kinds of activities: making drawings and performing them with voice, creating multi-layered images with voice and movement, listening and actively dancing to distinct components in the music, up to using the instruments in pairs or small groups. The idea of opposing a figure and a background was meant to be for children a useful visual metaphor to identify different musical functions, and a practical way to think about what they could do when they invented music in pairs. The essential aspect here was the relationship between two distinct but related roles as a conceptual tool to guide action. This way of constructing music promotes a kind of vertical thinking – two different ideas occurring at the same time within a coherent, unitarian Gestalt (actually, a prototype of polyphony) – which constituted for these children a significant step forward towards new ways of organising the musical material and of creatively interacting with each other.

Free creative work

In the last five sessions of the project, including the final open session for parents, children worked on their own creative projects without any indication or prescription on our part. Based on the experiences they had made throughout the school year, children had reached a very mature level and could now enjoy complete freedom as to what they wanted to do – improvising or composing, alone or with others, with voice or instruments, and on ideas that they themselves could autonomously find and develop. Our function as teachers in these last sessions was only meant to support or minimally offer some suggestions to children, so that they could really have complete ownership and control over what they were doing.

Talking about oneself

A further activity, loved by the group and done almost in all sessions, was the "Toccatocca" (whose turn is it?), an activity in which each child in turn, introduced by a refrain-melody, had the possibility to share with the group something 'beautiful' and something

'unpleasant' which happened to them. This was a central moment for the children, as they could talk about themselves as persons and feel listened to, and a good opportunity for us teachers to know about what was important for them in their daily life.

Reflections on the experience

Throughout the activities the group talked a lot, sharing, commenting, explaining, asking, answering, making strategies explicit, talking about thinking, labelling and conceptualising, and co-constructing thinking tools. The research aim of eliciting children's views was built in the learning process as an essential pedagogical strategy, as we assumed that fostering reflection and prompting children to verbalise their experiences in the group would deepen their awareness and ultimately enhance their creative and interactive skills (see 7.7.3).

Appendix C: Minutes of the sessions

Here is a summarized record of the activities over the nineteen observed sessions, which was derived from the transcription of the videos and the early/middle stages of analysis (see 7.9.1).

Headings and subheadings identify the overall organisation of the sessions and the hierarchical structure of the different phases in the learning process.

The background colours help to pinpoint single activities and their development over more sessions.

The text in red indicates significant episodes which have been extracted as video-excerpts for more detailed analysis (see Appendix D).

Session n12 - 2014 01 08	
present: AL, C, F, G, L, S (all 6 children)	
1. Accompanying movement (1) - synchronising with music - Rhythm structures (1) 1.1 G invents a new idea - rhythm structure OOXO showing and explaining the idea finding movements for the rhythm structure OOXO (individually) 1.2 pair work - finding movements for rhythm structure OOXO teachers modelling the pair work 1.3 group work 1.4 presentation of small group works - rhythm structure OOXO F S - AL C - G L	
2. Tocca tocca tocca	
3. Samba Lele 3.1 Samba Lele - recalling the text 3.2 singing the song and adding movements 3.3 Improvising with voice - inventing stories and adapting words to the melody of the song 3.3.1 introducing the task 3.3.2 assigning the task 3.3.3 group work 3.3.4 presentations of the group works 3.4 improvising in turns text (and adapting melody) 3.5 improvising/playing with the song 3.6 last time the melody (singing and dancing)	
4. Comments about the session	
S going out singing Samba Lelé	

Session n13 - 2014 01 15	Session n 14 - 2014 01 22
present: C, F, G, L, S absent: AL	present: AL, C, F, G, L, S (all 6 children)
1. One two three - all away from me (1 2 3 tutti via da me) 2. Tocca tocca tocca 3. Rhythm structures (2) in movement OOO.XXX. (tum tum tum - cha cha cha -) 3.1 modelling the idea 3.2.1 children working individually 3.2.2 Presenting individual solutions (among these G - L - C) 3.3 working in small groups 3.3.1 explaining and modelling the idea 3.3.2 Group work 3.3.3 small group presentation (L G - C F S horses-circus) 3.3.4 comments	1. Rhythm patterns 1.1 imitation 4/4 neutral syllable 'pa' 1.2 imitation 12/8 'pa' 1.3 invention (1+3) 2. Tocca tocca tocca 3. Translating a graphical structure into movement / music (2) 3.1 recalling last session's task (translating a graphic into a group movement action) F G L - AL C S 3.2 Translating the graphic into an instrumental/vocal/movement piece 3.2.1 making the new task clear 3.2.2 group work on instruments 3.3 Presentation of group works - Translating a graphic into an instrumental/vocal/movement piece F G L - AL C S 3.4 Comments
4. Translating a graphical structure into movement (1) 4.1 explaining the task 4.2 analysing the drawing 4.3 small group work (F G L and C S) 4.4 Presentations of small groups' work 4.5 Analysis and discussion of small group works	
5. Commenting the whole session	

Session n15 - 2014 01 29	Session n16 - 2014 02 05
present: AL, C, F, G, L - absent: S	present: AL, C, F, G, S + two new girls, FA and SA, and (today only) a boy, M - absent: L
1. Free group impro (1) improvising freely (as a beginning)	1. Tocca tocca
2. Strategies to interact: imitating / contrasting	2. Frog dialogues (reco-recos)
2.1 strategies to interact: imitating AL C	2.1 modelling a dialogue
2.2 strategies to interact: doing something different F V	2.2 (guided) individual exploration
3. Playing dominoes - instrumental impro on pair interaction	2.3 Modelling the rule (one frog dialoguing with the others) G - S - FA
3.1 explaining the rule	2.4 the activity takes shape (Rondo with frogs' dialogues)
3.2 Playing dominoes (impro on pair interaction) G L - V C - C AL - FA	2.5 Group impro "pond with frogs" (crescendo - diminuendo)
4. Free Group Improvisation (1)	
4.1 explaining the rule	3. Rhythm structures (4) OOOXX in movement
4.2 Free Group Improvisation	3.1 Recalling contents of previous sessions (using a notation with objects) modelling A and V, then SA
5. Rhythm structures (3) in movement	3.2 Introducing the new rhythm structure (OOOXX) (S AL)
5.1 Recalling previous experience, introducing new version of the rule	3.3 Modelling how to solve the task
5.2 rhythm structures OOOXXXX - individual work	3.4 working as a group on children's ideas SAG FA
5.3 presentations of children's ideas L C AL G F(2)	
6. Talking about values and rules in talking together while deciding (introducing exploratory talk)	4. Postcards (2) - creating a soundscape/music for a painting (in pairs, putting together 2 postcards)
A and V modelling situations with communicative mistakes	4.1 recalling and explaining to newcomers what was previously done eg. G ship in danger
7. Postcards (1) Working with images (individual impro-composition)	4.2 Forming groups
7.1 Introducing the images/paintings	4.3 Group work
7.2 Assigning the task (briefing)	4.4 presentation of small group works (G M - FAS - C SA - AL - F 1,2)
7.3 individual work	
7.4 Presentation of the individual impro-compositions	5. Commenting the whole session
G The ship in danger - C The note of the sea	
L Unreadable writing - AL The seven chattering frogs	
F The two coloured dragonflies	

Session n17 - 2014 02 12	Session n18 - 2014 02 19
present: AL, C, F, FA, G, L, S, SA (all 8 children)	present AL, C, F, G, L, S, SA absent: FA
1. Rhythm patterns	1. Rhythm Patterns
1.1 imitation (4/4 and 12/8)	imitation 4/4 and 12/8 neutral syllable 'pa'
1.2 Rhythm patterns - invention (pa) L	2. Rhythm structures (5) (invention), playing it first with voice and gesture/b.p., then with instruments
2. Accompanying movement (2) - walking in time with the drum (exploring meters)	2.1 introducing notation with objects - exploring what kind of rhythm structures can come out
2.1 undifferentiated pulse dude	2.1.1 rhythm structure: OOX - S
2.2 - 12/8 fast tempo	2.1.2 exploring further combinations of O and X: OOO XXXX - L
2.3 - 3/4 with subdivisions (Du kaDu de Du), slow tempo	2.1.3 rhythm structure OXX - F
slow dudadi - slow dudadi G 'punching'	2.2 Assigning the task for small group work
3. Tocca tocca	2.3 Group work - invention of rhythm structures (<u>voice and gesture/body percussion</u>)
4. Postcards (3) (small groups, one postcard - voice)	2.3.1 group work phase
4.1 Modelling and explaining the task (in pairs working on one postcard - voice)	2.3.2 presentations of small group work - invented rhythm structures with voice and gesture/body percussion
4.2 Forming the pairs - organising the group work phase	AL C S SA: OOO. XXX.
4.3 Small group work	F G L: OXOXOXX.
4.4 Presentations of small group works	2.4 Group work - invented rhythm structures with <u>instruments</u>
F, G, L "volcano" (1st and 4th) - AL, FA, S "sea" - C, SA "bear"	2.4.1 group work phase - rhythm structures with instruments
5. A last rhythm (S)	2.4.2 presentation of group works
	F G L: OXOXOXX. with instruments
	AL C S SA: OOO. OOO. XXX. with instruments
	3. Postcards (4) - composing an instrumental soundscape for an image/painting
	3.1 recalling what we did last time
	3.2 Group work - postcards with instruments
	3.3 Group work presentations
	AL S "dancing star, colours, and sea"
	F G L "volcano"

Session n19 - 2014 02 26	Session n20 - 2014 03 12
<p>present: AL, C, FA, G, L, S, SA absent: F</p> <p>1. Tocca tocca 1.1 learning (an accompaniment to) the melody on the xylophone 1.2 Tocca tocca - the game (with sung melody and instrumental accompaniment)</p> <p>2. Koromiko: learning the song and the game (1) 2.1 Introduction 2.2 Text 2.3 Melody 2.4 singing the whole song 2.5 singing the action song with movements 2.6 a child leading the game (V sings) 2.7 Koromiko - the whole action song 2.8 a child (SA) leads Koromiko (V sings)</p> <p>3. Accompanying movement (3) - finding rhythmic movements 3.1 accompanying movement - children dancing and finding rhythmical movements (individual exploration) 3.2 presenting and imitating single ideas (G L sword fight) 3.3 variation: two children in the middle dancing, the others clap to the beat (G L sword fight)</p> <p>4. Improvising with instruments: Dominoes (pair improv) and Free group impro (2) 4.1 explaining and modelling the rule 4.2 Dominoes - pair improvisation (among these G L - S FA - SAA)</p> <p>4.3 Free group impro - 1st ("chaotic") 4.4 Free group impro on beat, phrygian (2nd)</p>	<p>all children present</p> <p>1. Talking about the performance (recita)</p> <p>2. Sociogram of the group (which are the two children you made most friends with?)</p> <p>3. Tocca tocca</p> <p>4. Accompanying movement (4) inventing and putting together different rhythmical movements (in pairs/small groups) 4.1 Finding individual movements on the rhythm (individual work - exploring and then fixing an idea) 4.1.2 moving/dancing to the rhythm of the drum (half part of the group shows the movements - the others observe, then swap roles) 4.3 Teachers modelling pair work - how to put together two rhythmical movement ideas</p> <p>4.4 Group work 4.5 presentation of the Gestaltungen - discussion F G L (1, 2 sharks and robot) - AL C SA (1,2 ladies and dog) - FA S (sheep jumping)</p> <p>5. Koromiko (2)</p> <p>5.1 Koromiko - echo singing with movements - V leads 5.2 children (S FA) singing Koromiko with movements</p>

Session n21 - 2014 03 19	Session n22 - 2014 03 26
<p>present: AL, C, F, FA, L, S, SA absent: G</p> <p>1. Rhythm Patterns 1.1 imitation 4/4 and 12/8 'pa' 1.2 Rhythm Patterns imitation - individual response 1.3 Rhythm Patterns invention (1+3)</p> <p>2. Inventing rhythms with body percussion (as a group and individually) 2.1 improvising rhythmically on a common beat/meter (rhythm texture) 2.2 inventing a rhythm with body percussion (individually - group imitates)</p> <p>3. Talking about singing and inventing songs inventing songs and situations in which they invent or improvise with their voice</p> <p>4. Tocca tocca</p> <p>5. Figure-Ground relationship (1st) - whole-group invention with voice exploring the idea of a background against which a foreground figure stands out (drawing and performing it with voice) 5.1 sea and fish 5.2 grass and bird</p> <p>5.3 the moon and the alien (also F L S interaction)</p> <p>6. Koromiko - song (3) 6.1 playing the game (singing and moving) V leads 6.2 koromiko - children's solo singing (with movements) SA 6.3 Koromiko - Refining the melody</p> <p>7. Samba Lelé</p>	<p>all 8 children present</p> <p>1. Rhythm Patterns 1.1 imitation 12/8 pa (focus on synchronised gestures) 1.2 Rhythm Patterns invention (FAS)</p> <p>2. Tocca tocca</p> <p>3. Figure-Ground Relationship (2) Tableaux Vivants - movement and voice</p> <p>3.1 meadow with grass, flowers (cactus) and birds (S's idea) 3.2 Sunset on sea (C's idea) 3.3 House, tree, tulip, sun (AL's idea)</p> <p>4. Figure-Ground (2) - Listening and analytical dancing to music examples</p> <p>4.1 restless music (Mendoza, chaotic diminuendo) dancing 4.2 calm music (Orff, Dulcissime, Carmina Burana) a) dancing b) listening c) dancing only the background 4.3 Yellow Jackets, greenhouse a) listening b) dancing c) dancing 4.4 Lamma, a Libanese song a) listening b) dancing 4.5 Oeves, a dance from Romania a) directly dancing b) dancing</p>

Session n23 - 2014 04 02	Session n24 - 2014 04 09
<p>FA absent</p> <p>1. Figure background (3) - analytical listening and dancing to musical examples</p> <p>1.1 Listening example 1 - dianne reeves Funny Valentine 1.2 Listening example 2 - Strawinsky Sacre (ritual action of the ancestors) VSA 1.3 Listening example 3 - Kalamatianos 1.4 Listening example 4 - Mendoza chaotic diminuendo ('agitated music')</p> <p>2. Tocca tocca</p> <p>3. Figure-ground (3)- playing with instruments</p> <p>3.1 Teachers modelling how to play figure and background with instruments a) BX Gl; b) sea BX and fish GI; c) djembe tambourine; d) reco-reco triangle children: a) listening, b) dancing, c) and d) interpreting/assigning images 3.2 Group work phase 3.3 Presentation of Gestaltungen AL V - F L - C S - G SA (1,2)</p>	<p>all children present, but L (a bit ill) leaves at half the session (V absent)</p> <p>1. Rhythm Patterns</p> <p>1.1 imitation (4/4 - 12/8) 1.2 Rhythm patterns invention (1+3) F</p> <p>2. Accompanying movement (5)</p> <p>2.1 moving to the rhythm of the music (stop and go with various meters and tempos) 2.2 Identifying and synchronising with macrobeats in a complex rhythm texture (G)</p> <p>3. Figure-Ground (4) - clapping and dancing to listening examples</p> <p>3.1 Listening example 1: clapping hands to a rhythmic African music 3.2 Listening example - Yellow Jackets</p> <p>4. Tocca tocca</p> <p>5. Figure-ground (4) - with instruments</p> <p>5.1 Pair impro: Teacher improvising with individual children (A: SX, children: djembe) ASA - AG - AF - A AL 5.2 Group work - Figure-ground with instruments (fragment C SA) 5.3 Presentation of the small group works (Gestaltungen) F G - CSA - AL FAS</p>

Session n25 - 2014 04 16	Session n26 - 2014 04 30
<p>present: AL, C, L, S, SA absent F, FA, G <i>Sarah and James are here</i></p> <p>1. Rhythm Patterns</p> <p>1.1 imitation 4/4 and 12/8 1.2 Rhythm Patterns invention "pa" (1+3) 1.3 rhythm patterns invention ('more complicated') S1 S2</p> <p>2. Tocca tocca</p> <p>Simprovising with voice</p> <p>3. Koromiko</p> <p>3.1 parametrical motifs - voice warm-up 3.2 V leading the game, singing and modelling movements 3.3 children leading the singing game - AL</p> <p>4. Figure background (5) - instrumental Gestaltung of drawings</p> <p>4.1 Drawing figures and backgrounds</p> <p>4.1.1 Modelling and making perceptual principles clear 4.1.2 Children drawing their own figure-grounds 4.1.3 Looking at / analysing the drawings</p> <p>4.2 Modelling the process of creating music to a drawing</p> <p>4.2.1 discussing how to create a music to A's drawing - (S' musical idea)</p> <p>4.2.2 Gestaltung - L and S - A's drawing, S's musical idea -</p> <p>4.3 Group work phase</p> <p>4.4 Presentation of the small group works AL S (moon and stars) - C SA V (lines dots triangles) L A (crossing pedestrian)</p> <p>5. Flower/microphone game</p> <p>5.1 explaining the game of the flower 5.2 children's meanings (flower game - figure-ground - instrumGest drawings)</p>	<p>present: AL, C, F, FA, G, S, SA absent: L</p> <p>1. Accompanying movement - stop and go</p> <p>dudadi - dudadi dude - dude du . . (filling the hole with a movement)</p> <p>2. Remembering the things we did</p> <p>3. Rhythm Patterns</p> <p>3.1 imitation 3.2 Rhythm patterns - 'difficult ones' (longer) - imitation 3.3 Rhythm patterns - 'difficult ones' (longer) - invention 3.4 strategies to invent long/difficult patterns</p> <p>4. Free individual Composition (1)</p> <p>4.1 planning the composition (introducing the task) 4.2 individual planning of free compositions 4.3 presenting provisional results (towards a Gestaltung) FA "tree and birds", C's plan, SA "tree, birds, and fronds", AL "fun on metallophone (ending moon stars tr'd.)", F free impro on triangle</p>

Session n27 - 2014 05 07	Session n28 - 2014 05 14
<p>Present: AL, F, G, L, S, SA (and her two brothers ED MA) absent: C and FA</p> <p>1. "Inventing a piece" - Free group composition (2) 1.1 choosing partners</p> <p>2. small group work phase: free composition F G L - AL SA and the two brothers - S alone</p> <p>3. Presentations 3.1 AL SA and the two brothers (untitled - only music) free composition 3.2 F G L free composition "the man and the drum" (story and drawing) F G synchronisation exercise 3.3 S free composition (1st and 2nd alone, 3rd and 4th with V and SA - 'musical cake')</p> <p>4. Second group work phase (refining and extending free compositions)</p> <p>5. Presentations of final Gestaltungen 5.1 AL SA and her brothers - Free composition (2nd Gestaltung) 5.2 F G L - Free composition (the drum inventor) 2nd Gestaltung 5.3 S free composition - S with SA (5th Gestaltung) 5.4 comments</p>	<p>present: AL, C, F, L, S, SA absent: FA, G (FA will no longer come, says SA)</p> <p>1. Synchronisation - body percussion on CD listening (not videorecorded)</p> <p>2. Free composition (3) - preparatory phase 2.1 choosing what we feel like doing (here, invent a song, play, dance) 2.2 Forming groups 2.3 gathering ideas about what to do</p> <p>3. Group work phase see C SA rehearsal of phrygian ostinato and melody</p> <p>4. Presentations of the outcomes, comments, and further elaborations - L's song 1st Gestaltung (of 4) - C F SA: phrygian ostinato e melody (1st and 2nd Gestaltung) - AL S (AM, small drum) (1st and 2nd Gestaltung)</p> <p>5. Free group improvisation on pulse (3) see 2nd and 6th of 7 trials to play with a common pulse</p> <p>L's song (1) - 3 rehearsals of the song after the session (see 2nd)</p>

Session n29 - 2014 05 28	Session n30 - 2014 06 04 - last with parents
<p>present: AL, F, G, L, S absent: C, SA</p> <p>1. Rehearsing L's song</p> <p>2. Deciding the programme of the performance (and of today's group work)</p> <p>3. Free group composition (4) Group work phase</p> <p>4. Presentations of small group works</p> <p>4.1 AL L S free composition (1st and 2nd Gestaltung, not finished) (scaffolding too much)</p> <p>4.2 F G improvisation (synchronising on the double pulse)</p> <p>5. Second round of group work</p> <p>6. Presentation</p> <p>6.1 AL L S free composition (only part A, unfinished)</p> <p>6.2 F G improvisation</p> <p>7. L's song 2 (with choral refrain)</p> <p>8. Interview advice for other children about inventing together</p>	<p>present all 7 children: AL, C, F, G, L, S, SA</p> <p>1. Preparing children for the open session 1.1 deciding the activities of the open session / groups and contents of the group work 1.2 briefly rehearsing some of the activities</p> <p>2. Letting parents in -- THE OPEN SESSION with parents --</p> <p>3. Accompanying movement - stop and go</p> <p>4. Tocca tocca</p> <p>5. Rhythm Patterns - imitation - invention</p> <p>6. Free creative Group Work (5) - Gestaltungen 6.1 Group work phase 6.2 Presentation of the group works AL C S - F L (1, 2) - G SA "the musical wood"</p> <p>7. Samba Lelé</p> <p>8. Koromiko</p> <p>9. L's song 3</p>

Appendix D: Chronological list of relevant creative phases and outcomes

Below the full list of significant episodes, creative outcomes and processes as identified in the analysis of the activities (see 7.9.2).

Each line identifies the children involved, the activity, the specific portion of process within it, and the media used (voice, movement, instruments). A selection of these creative instances were extracted as video-clips and are available online (see the link in the extreme right column – password: res).

The video-excerpts referred to in this thesis (see the list at the beginning of the thesis) are a further selection out of these.

N.	Participants	Pedagogical theme/idea	Title / details	Media	Online video pw: res
Session 12 – 08/01					
1	AL CF GLS	Accompanying movement	G invents the rhythm structure OOXX	movement and bp	https://vimeo.com/104030301
2		Rhythm structures in movement OOXX	individual exploration	movement and bp	
3	AV	Rhythm structures in movement OOXX	pair work (teachers modelling)	movement and bp	
4	AL CF GLS	Rhythm structures in movement OOXX	group work phase		
5	F S	Rhythm structures in movement OOXX	pair work	movement and bp	
6	AL C	Rhythm structures in movement OOXX	pair work – then imitated by the whole group	movement and bp	https://vimeo.com/104222832
7	GL	Rhythm structures in movement OOXX	pair work – then imitated by the whole group	movement and bp	
8	S	Tocca tocca	talking and singing – recitativo	voice	o
9	AL CF GLS	Samba Lelé – inventing stories and adapting words to the melody of the song	group work phase	voice	
10	AL C	Samba Lelé – inventing stories and adapting words to the melody of the song	pair work	voice	
11	F S	Samba Lelé – inventing stories and adapting words to the melody of the song	pair work	voice	
12	GL	Samba Lelé – inventing stories and adapting words to the melody of the song	pair work	voice	
13	AL CF GLS AV	Samba Lelé – improvising the story and the melody	whole group, teacher-led impro	voice (singing)	https://vimeo.com/104222833
Session 13 – 15/01					
14	F	Rhythm structures in movement OOO.XXX.	individual invention	movement	
15	G	Rhythm structures in movement OOO.XXX.	individual invention	movement	https://vimeo.com/104222834
16	L	Rhythm structures in movement OOO.XXX.	individual invention	movement	https://vimeo.com/104223210
17	S	Rhythm structures in movement OOO.XXX.	individual invention	movement	
18	C	Rhythm structures in movement OOO.XXX.	individual invention	movement	https://vimeo.com/104222835
19	AL CF GLS	Rhythm structures in movement OOO.XXX. (4 x)	group work phase	movement	
20	CF S	Rhythm structures in movement OOO.XXX. (4 x)	group work "circus horses"	movement	https://vimeo.com/104223079
21	GL	Rhythm structures in movement OOO.XXX. (4 x)	group work	movement	https://vimeo.com/104223080
22	AL CF GLS	Translating a graphical structure into movement	group work phase	movement	
23	F GL	Translating a graphical structure into movement	group work ("the dance of the letters")	movement	
24	C S	Translating a graphical structure into movement	group work ("the ramp")	movement	
Session 14 – 22/01					
25	F	Rhythm patterns (1+3, with b.p. pulse)	individual invention	voice and movement	
26	S	Rhythm patterns (1+3, with b.p. pulse)	individual invention	voice and movement	
27	L	Rhythm patterns (1+3, with b.p. pulse)	individual invention (reworked)	voice and movement	o

28	AL	Rhythm patterns (1+3, with b.p. pulse)	individual invention	voice and movement	
29	C	Rhythm patterns (1+3, with b.p. pulse)	individual invention	voice and movement	
30	F	Rhythm patterns (1+3, with b.p. pulse)	individual invention (with time variations)	voice and movement	o
31	AL CF GLS	Translating a graphical structure into movement	group work phase	movement	
32	F GL	Translating a graphical structure into movement	group work	movement	
33	AL C S	Translating a graphical structure into movement	group work (including AL)	movement	https://vimeo.com/104223081
34	AL CF GLS	Translating the graphic into an instrumental/vocal/movement piece	group work phase	instruments	
35	F GL	Translating the graphic into an instrumental/vocal/movement piece	group work	instruments	https://vimeo.com/104223211
36	AL C S	Translating the graphic into an instrumental/vocal/movement piece	group work	instruments and movement	https://vimeo.com/104223082
Session 15 – 29/01					
37	AL CF GL AV	Free group improvisation	whole group	instruments	
38	F V	strategies to interact: imitating	paired impro	instruments	
39	AL C	strategies to interact: imitating	paired impro	instruments	https://vimeo.com/104223370
40	GL	strategies to interact: imitating	paired impro	instruments	
41	AV	strategies to interact: contrasting	teachers modelling	instruments	
42	F V	strategies to interact: contrasting		instruments	https://vimeo.com/104223260
43	AL V	strategies to interact: contrasting		instruments	
44	GL	dominoes (paired impro)	contrasting	instruments	https://vimeo.com/104223319
45	L V	dominoes (paired impro)	contrasting	instruments	
46	C V	dominoes (paired impro)	contrasting (complementing, O O O X)	instruments	https://vimeo.com/104223369
47	AL C	dominoes (paired impro)	contrasting	instruments	https://vimeo.com/104223318
48	AL F	dominoes (paired impro)	contrasting	instruments	
49	F A	dominoes (paired impro)	contrasting	instruments	https://vimeo.com/104223214
50	AL CF GL AV	Free group improvisation	whole group	instruments	https://vimeo.com/104223216
51	AL CF GL	Rhythm structures in movement OOOXXXXX	individual exploration	movement / b.p.	https://vimeo.com/104223419
52	L	Rhythm structures in movement OOOXXXXX	individual ideas	movement / b.p.	
53	C	Rhythm structures in movement OOOXXXXX	individual ideas	movement / b.p.	https://vimeo.com/104223371
54	AL	Rhythm structures in movement OOOXXXXX	individual ideas	movement / b.p.	https://vimeo.com/104223489
55	G	Rhythm structures in movement OOOXXXXX	individual ideas	movement / b.p.	https://vimeo.com/104223420
56	F	Rhythm structures in movement OOOXXXXX	individual ideas	movement / b.p.	
57	F A	Rhythm structures in movement OOOXXXXX	individual ideas	movement / b.p.	
58	AL CF GL	Postcards (1)	individual work phase	instruments	
59	G	Postcards (1) ind work	The ship in danger	instruments	https://vimeo.com/104223317
60	C	Postcards (1) ind work	The note of the sea	instruments	https://vimeo.com/104223316
61	L	Postcards (1) ind work	Unreadable writing	instruments	https://vimeo.com/104223374
62	AL	Postcards (1) ind work	The seven chattering frogs	instruments	https://vimeo.com/104223261
63	F	Postcards (1) ind work	The two coloured dragonflies	instruments	https://vimeo.com/104223262
Session 16 – 05/02					
64	AV	Frog's dialogues (reco-reco)	teachers modelling	instruments	
65	AL CFFAG SSA	Frog's dialogues	guided individual exploration	instruments	
66	AV	Frog's dialogues	Modelling the rule (one leading frog dialoguing in turns with the others)	instruments	
67	G	Frog's dialogues		instruments	https://vimeo.com/104223418
68	S	Frog's dialogues		instruments	https://vimeo.com/104223417
69	FA	Frog's dialogues		instruments	https://vimeo.com/104223490
70	AL CFFAG SSA	Group impro "pond with frogs" (crescendo intensifying – diminuendo rarefying)	guided group impro	instruments	https://vimeo.com/104223441
71	SA	Rhythm structures	trying out ideas b.p and voice OOXX	b.p and voice	https://vimeo.com/104223469
72	S	Rhythm structures	trying out ideas b.p and voice OOOXX	b.p and voice	
73	AL	Rhythm structures	trying out ideas b.p and voice OOOXX	b.p and voice	
74	SA	Rhythm structures	trying out ideas b.p and voice OOOXX	b.p and voice	https://vimeo.com/104223470
75	G	Rhythm structures	trying out ideas b.p and voice OOOXX	b.p and voice	
76	FA	Rhythm structures	trying out ideas b.p and voice OOOXX	b.p and voice	
77	G	Postcards (2)	individual composition ("ship in danger")	instruments	https://vimeo.com/104223471
78	AL CFFAG SSA	Postcards (2) (in pairs, putting together 2 postcards)	group work phase	instruments	
79	G M	Postcards (2) (in pairs, on only 1 postcard)	group work	instruments	

80	FA	S	Postcards (2) (in pairs, putting together 2 postcards)	group work "the flower of light"	instruments	https://vimeo.com/104223511	
81	C	SA	Postcards (2) (in pairs, putting together 2 postcards)	group work "bear and sea"	instruments	https://vimeo.com/104223444	
82	AL		Postcards (2)	individual work (failed pair work) "seven chattering frogs"	instruments	https://vimeo.com/104223442	
83	F		Postcards (2)	individual work (failed pair work) "coloured dragonflies"	instruments	https://vimeo.com/104223468	
84	F		Postcards (2)	individual work – "coloured dragonflies" 2nd go	instruments	https://vimeo.com/104223445	
Session 17 – 12/02							
85	L		Rhythm patterns individual invention		voice and bp		
86	AL		Rhythm patterns individual invention		voice and bp		
87	C		Rhythm patterns individual invention		voice and bp		
88	FA		Rhythm patterns individual invention		voice and bp		
89	L		Rhythm patterns individual invention		voice and bp	https://vimeo.com/104223513	
90		S	Rhythm patterns individual invention		voice and bp		
91	FA		Rhythm patterns individual invention		voice and bp		
92	AL CFFAGLSSA		Accompanying movement – synchronising with the drum (each child on their own)	dude – slower and faster tempo	movement	https://vimeo.com/104223532	
93	AL CFFAGLSSA		Accompanying movement – synchronising with the drum (each child on their own)	slow tempo with acciaccaturas	movement		
94	AL		Accompanying movement – synchronising with the drum – AL models mov, group imitates	slow tempo with acciaccaturas	movement		
95	AL CFFAGLSSA		Accompanying movement – synchronising with the drum (each child on their own)	dudadi dudadi 12	movement		
96	F		Accompanying movement – synchronising with the drum – F models mov, group imitates	dudadi dudadi 12	movement		
97	AL CFFAGLSSA		Accompanying movement – synchronising with the drum (each child on their own)	dukadakadika slow 3/4 – 1st go	movement	https://vimeo.com/104223584	
98	AL CFFAGLSSA		Accompanying movement – synchronising with the drum (each child on their own, only clapping)	du da di slow 3/4 – 2nd go	movement		
99	AL CFFAGLSSA		Accompanying movement – synchronising with the drum (each child on their own)	du da di slow 3/4 – 3rd go	movement		
100	G		Accompanying movement – synchronising with the drum (imitating G's punching movement)	du da di slow 3/4 – 4th go	movement	https://vimeo.com/104223531	
101	AV		Postcards (3) with voice	teachers modelling	voice		
102	AL CFFAGLSSA		Postcards (3) with voice	group work phase	voice		
103	F	GL	Postcards (3) Gestaltungen (voice)	"volcano" – 1st go	voice narrative	https://vimeo.com/105333814	
104	F	GL	Postcards (3) Gestaltungen (voice)	"volcano" – 2nd go	voice narrative		
105	F	GL	Postcards (3) Gestaltungen (voice)	"volcano" – 3rd go	voice narrative		
106	F	GL	Postcards (3) Gestaltungen (voice)	"volcano" – 4th go	voice narrative movement	https://vimeo.com/104223514	
107	AL	FA	S	Postcards (3) Gestaltungen (voice)	voice words		
108	AL	FA	S	Postcards (3) Gestaltungen (voice)	voice words movement	https://vimeo.com/104223512	
109	C	SA	Postcards (3) Gestaltungen (voice)	"the bear"	voice movement	https://vimeo.com/104223643	
Session 18 – 19/02							
110	S		Rhythm structures (trying out various ideas)	OXXX	voice bp		
111	L		Rhythm structures (trying out various ideas)	OOO.XXXX.	voice bp	https://vimeo.com/104223677	
112	F		Rhythm structures (trying out various ideas)	OXX	voice bp	https://vimeo.com/104223644	
113	S		Rhythm structures (trying out various ideas)	OOOO.XXXX.	voice bp		
114	AL	CF	GLSSA	Rhythm structures – small group invention (voice and gesture/body percussion)	group work phase	voice bp	
115	AL	C	SSA	Rhythm structures – small group Gestaltung (voice and gesture/body percussion)	OOO.XXXX.	voice bp	https://vimeo.com/104223586
116	F	GL		Rhythm structures – small group Gestaltung (voice and gesture/body percussion)	OXOXOXX	voice bp	https://vimeo.com/104223642
117	AL	CF	GLSSA	Rhythm structures – small group invention (instruments)	group work phase	instruments	
118	F	GL		Rhythm structures – small group Gestaltung (instruments)	OXOXOXX – 1st and 2nd go	instruments	
119	F	GL		Rhythm structures – small group Gestaltung (instruments)	OXOXOXX	instruments	https://vimeo.com/104223587
120	AL	C	SSA	Rhythm structures – small group Gestaltung (instruments)	OOO.OOO.XXX	instruments	https://vimeo.com/104223674

121	AL CF	GLSSA	Postcards (4) last time's images with instruments	group work phase	instruments	
122	AL	S	Postcards (4) last time's images with instruments	"Dancing star, colours, and sea"	instruments	https://vimeo.com/104223533
123	F	GL	Postcards (4) last time's images with instruments	"Volcano"	instruments	https://vimeo.com/104223585
124	C	SA	Postcards (4) last time's images with instruments	"the Bear"	instruments	https://vimeo.com/104223535
Session 19 – 26/02						
125	AL C	FA GLSSA	Accompanying movement – dancing and finding rhythmical movements	individual exploration	movement	
126		GL	Accompanying movement – dancing and finding rhythmical movements	sword fight (G and L's idea, whole group)	movement	https://vimeo.com/104223718
127		FA	Accompanying movement – dancing and finding rhythmical movements	jumping	movement	
128	AL		Accompanying movement – dancing and finding rhythmical movements	turning	movement	
129	FA	S	Accompanying movement – dancing and finding rhythmical movements	FA and S dance – all others clap to the beat sitting in the circle	movement / b.p.	
130		GL	Accompanying movement – dancing and finding rhythmical movements	G L sword fight – group sitting and clapping	movement / b.p.	https://vimeo.com/104223720
131		GL	Dominoes (paired impro)		instruments	https://vimeo.com/104223676
132	AL	G	Dominoes (paired impro)		instruments	
133	AL	S	Dominoes (paired impro)		instruments	
134	FA	S	Dominoes (paired impro)	seemingly no relationship	instruments	https://vimeo.com/104223762
135	C	FA	Dominoes (paired impro)		instruments	
136	C	SA	Dominoes (paired impro)		instruments	
137		SAA	Dominoes (paired impro)		instruments	https://vimeo.com/104223719
138	AL C	FA GLSSAAV	Free group improvisation	1st go	instruments	https://vimeo.com/104846991
139	AL C	FA GLSSAAV	Free group improvisation	2nd go (phrygian)	instruments	https://vimeo.com/104223678
Session 20 – 12/03						
140	AL C FFA	GLSSA	Accompanying movement – Finding individual movements on the rhythm	individual exploration (finding and fixing an idea)	movement	https://vimeo.com/104223790
141	FFA	L SA	Accompanying movement	showing invented movements (1st half of the group)	movement	https://vimeo.com/104223792
142	AL C	G S	Accompanying movement	showing invented movements (2nd half of the group)	movement	https://vimeo.com/104223815
143		AV	Accompanying movement	teachers model how to put together two different movements	movement	
144	AL C FFA	GLSSA	Accompanying movement (group composition in movement)	group work phase	movement	
145	F	GL	Accompanying movement (group composition in movement)	Gestaltung – 1st go (robot / planets/ prey and hunters)	movement	https://vimeo.com/104223789
146	F	GL	Accompanying movement (group composition in movement)	Gestaltung – 2nd go (robot / planets/ prey and hunters)	movement	https://vimeo.com/104223760
147	AL C	SA	Accompanying movement (group composition in movement)	Gestaltung – 1st go (lady daughter running after little dog)	movement	https://vimeo.com/104223759
148	AL C	SA	Accompanying movement (group composition in movement)	Gestaltung – 2nd go (lady daughter running after little dog)	movement	https://vimeo.com/104223721
149	FA	S	Accompanying movement (group composition in movement)	Gestaltung – (little sheep jumping over fence)	movement	https://vimeo.com/104223761
150		S	Koromiko (song)	solo inventing movements / body shapes	movement singing	
151		FA	Koromiko (song)	solo inventing movements / body shapes	movement singing	
Session 21 – 19/03						
152	F		Rhythm patterns – individual invention (1+3)		voice and b.p.	
153		S	Rhythm patterns – individual invention (1+3)		voice and b.p.	
154	AL		Rhythm patterns – individual invention (1+3)		voice and b.p.	
155	C		Rhythm patterns – individual invention (1+3)		voice and b.p.	
156		SA	Rhythm patterns – individual invention (1+3)		voice and b.p.	
157	FA		Rhythm patterns – individual invention (1+3)		voice and b.p.	
158	AL C FFA	LSSA	Inventing rhythms with body percussion	group impro on common beat/metre (rhythm texture)	body percussion	https://vimeo.com/104224011
159	AL C FFA	LSSA	Inventing rhythms with body percussion	as a group improvising rhythmically on a common beat/metre (rhythm texture)	body percussion	https://vimeo.com/104223828
160		SA	Inventing rhythms with body percussion	individual invention – group imitates	body percussion	
161	AL		Inventing rhythms with body percussion	individual invention – group imitates	body percussion	
162		S	Inventing rhythms with body percussion	individual invention – group imitates	body percussion	
163	FA		Inventing rhythms with body percussion	individual invention – group imitates	body percussion	

164	S	Inventing songs (on tocca tocca)	individual impro	voice	
165	AL C FFA LSSA	Figure-Ground relationship – group invention	sea and fish	voice	
166	AL C FFA LSSA	Figure-Ground relationship – group invention	grass and birds	voice	
167	AL C FFA LSSA	Figure-Ground relationship – group invention	moon and aliens (F L V)	voice	https://vimeo.com/104223791
168	AL C FFA LSSA	Figure-Ground relationship – group invention	moon and aliens (sequel F L S)	voice	https://vimeo.com/104223831
169	S	Koromiko (song)	solo inventing movements / body shapes	movement singing	
170	SA	Koromiko (song)	solo inventing movements / body shapes	movement singing	https://vimeo.com/104223814
171	C	Koromiko (song)	solo inventing movements / body shapes	movement singing	
172	AL	V Koromiko (song)	pairs inventing movements / body shapes	movement singing	
173	FA SA	Koromiko (song)	pairs inventing movements / body shapes	movement singing	
Session 22 – 26/03					
174	A	Rhythm patterns with body percussion – imitation	12/8	voice and bp	https://vimeo.com/104224031
175	FA	Rhythm patterns – individual invention (1+4)	with raspberry	voice and bp	https://vimeo.com/104224059
176	S	Rhythm patterns – individual invention (1+4)	10/8	voice and bp	https://vimeo.com/104224412
177	SA	Rhythm patterns – individual invention (1+4)	the only one with microbeats	voice and bp	
178	FA	Rhythm patterns – individual invention (1+4)		voice and bp	
179	SA	Rhythm patterns – individual invention (1+4)		voice and bp	
180	F	Rhythm patterns – individual invention (1+4)	5/8 – process of idea taking shape (with teachers' scaffolding)	voice and bp	https://vimeo.com/104224034
181	S	Figure-Ground – sounding images – group construction on child's idea	"meadow-grass with flowers (cactus) and birds"	voice and movement	https://vimeo.com/104224058
182	C	Figure-Ground – sounding images – group construction on child's idea	"sun sets into the sea"	voice and movement	https://vimeo.com/104224032
183	AL	Figure-Ground – sounding images – group construction on child's idea	house, tree, tulip, sun	voice and movement	https://vimeo.com/104224010
184	AL C FFA GLSSA	Figure-Ground – listening to and dancing different layers of music	agitated music (Mendoza, chaotic diminuendo)	movement	
185	AL C FFA GLSSA	Figure-Ground – listening to and dancing different layers of music	(Orff, Dulcissime) – dancing only the background (3/3)	movement	https://vimeo.com/104224009
186	AL C FFA GLSSA	Figure-Ground – listening to and dancing different layers of music	Yellow Jackets, Greenhouse (2/3)	movement	https://vimeo.com/104224033
187	AL C FFA GLSSA	Figure-Ground – listening to and dancing different layers of music	Lamma (Lebanon)	movement	
188	AL C FFA GLSSA	V Figure-Ground – listening to and dancing different layers of music	Oeves (Romania)	movement	https://vimeo.com/104224012
Session 23 – 02/04					
189	AL CF GLSSA	Figure-Ground – listening to and dancing different layers of music	Funny Valentine	movement	
190	SA V	Figure-Ground – listening to and dancing different layers of music	Strawinsky Sacre	movement	https://vimeo.com/104224061
191	AL CF GLSSAAV	Figure-Ground – listening to and dancing different layers of music	"Sea and fish" – teachers play V BX A GI	movement	https://vimeo.com/104224433
192	AV	Figure-Ground – children listening and commenting, giving interpretations	teachers play V djembe, A tambourine	listening and interpreting	https://vimeo.com/104224481
193	AV	Figure-Ground – children listening and commenting, giving interpretations	teachers play V reco-reco, A triangle	listening and interpreting	
194	AL CF GLSSA	Figure-Ground – pair Gestaltungen	group work phase	instruments	
195	AL V	Figure-Ground – pair Gestaltungen	scaffolded composition 'toccata tocca'	instruments	https://vimeo.com/104224415
196	F L	Figure-Ground – pair Gestaltungen	"robot and sharks"	instruments	https://vimeo.com/104224060
197	C S	Figure-Ground – pair Gestaltungen	"teacher with children and school bell" (2nd of 2)	instruments	https://vimeo.com/104224414
198	G SA	Figure-Ground – pair Gestaltungen	rhythm ostinato 1st	instruments	https://vimeo.com/104224413
199	G SA	Figure-Ground – pair Gestaltungen	rhythm ostinato 2nd	instruments	https://vimeo.com/104224435
Session 24 – 09/04					
200	F	Rhythm Patterns – individual invention – 1+4	self-initiated, group repeats	voice and bp	https://vimeo.com/104224516
201	SA	Rhythm Patterns – individual invention – 1+3		voice and bp	
202	FA	Rhythm Patterns – individual invention – 1+3		voice and bp	
203	L	Rhythm Patterns – individual invention – 1+3		voice and bp	
204	F	Rhythm Patterns – individual invention – 1+3		voice and bp	
205	C	Rhythm Patterns – individual invention – 1+3		voice and bp	
206	AL	Rhythm Patterns – individual invention – 1+4		voice and bp	
207	AL C FFA GLSSA	Accompanying movement – moving to various metres and tempos	fast 4/4, slow 3/8, very slow 2/4, fast 12/8, 3/8	movement	
208	AL C FFA GLSSA	Accompanying movement – moving to various metres and tempos	synchronising with macrobeats in fast 4/4 with semiquavers G!	movement	https://vimeo.com/104224432
209	SA A	Figure-ground – paired impro (child teacher)	A (SX background) and indiv child (djembe figure)	instruments	https://vimeo.com/104224486

210	C	A	Figure-ground – paired impro (child teacher)	A (SX background) and indiv child (djembe figure)	instruments	
211	FA	A	Figure-ground – paired impro (child teacher)	A (SX background) and indiv child (djembe figure)	instruments	
212	S	A	Figure-ground – paired impro (child teacher)	A (SX background) and indiv child (djembe figure)	instruments	
213	G	A	Figure-ground – paired impro (child teacher)	A (SX background) and indiv child (djembe figure)	instruments	https://vimeo.com/104224485
214	F	A	Figure-ground – paired impro (child teacher)	A (SX background) and indiv child (djembe figure)	instruments	https://vimeo.com/104224484
215	AL	A	Figure-ground – paired impro (child teacher)	A (SX background) and indiv child (djembe figure)	instruments	https://vimeo.com/104224434
216	AL C F F A G SSA		Figure-ground with instruments	group work phase	instruments	
217	C	SA	Figure-ground with instruments	group work phase (fragment)	instruments	https://vimeo.com/104224549
218	C	SA	Figure-ground with instruments – Gestaltung	"sun hitting hard and setting down, and just music"	instruments	https://vimeo.com/104224513
219	AL FA S		Figure-ground with instruments – Gestaltung	no title	instruments	
220	F G		Figure-ground with instruments – Gestaltung	no title	instruments	
Session 25 – 16/04						
221	S		Rhythm Patterns – individual invention – 1+3		voice and bp	
222	C		Rhythm Patterns – individual invention – 1+3		voice and bp	
223		SA	Rhythm Patterns – individual invention – 1+3		voice and bp	
224	AL		Rhythm Patterns – individual invention – 1+3		voice and bp	
225	S		Rhythm Patterns – individual invention – 1+3	more complicated'	voice and bp	https://vimeo.com/104224569
226	L		Rhythm Patterns – individual invention – 1+3	more complicated'	voice and bp	
227	S		Rhythm Patterns – individual invention – 1+3	more complicated'	voice and bp	https://vimeo.com/104224550
228	S		Rhythm Patterns – individual invention	more complicated' (no group imitation)	voice and bp	
229	S		Tocca tocca	S improvising melodies and talking	voice	https://vimeo.com/104224570
230	S		Koromiko (song)	solo inventing movements / body shapes	movement, singing	
231	AL		Koromiko (song)	solo inventing movements / body shapes	movement, singing	https://vimeo.com/104224551
232	LS		Figure ground – instrumental Gestaltung to drawings – modelling how to invent	L and S – A's abstract drawing, S's musical idea	instruments	
233	AL C	LSSA	Figure ground – instrumental Gestaltung to drawings	group work phase	instruments	
234	AL	S	Figure ground – instrumental Gestaltung to drawings	"moon and stars"	instruments	https://vimeo.com/104224552
235	C	SA V	Figure ground – instrumental Gestaltung to drawings	abstract drawing "lines dots and triangles"	instruments	https://vimeo.com/104224511
236	L	A	Figure ground – instrumental Gestaltung to drawings	"pedestrian crossing the street"	instruments	https://vimeo.com/104224514
Session 26 – 30/04						
237	AL C F F A G SSA		Accompanying movement – moving to the rhythm of the drum	dude du . . (filling the hole with a movement)	movement	https://vimeo.com/104431255
238	FA		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
239		SA	Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
240	S		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
241	FA		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
242	SA		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
243	G		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
244	C		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
245	S		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
246	FA		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
247	G		Rhythm patterns – ind invention group imit	difficult ones (longer)	voice and bp	
248			Free individual composition	planning the composition	writing / drawing / talking	
249	FA		Free individual composition	"tree and birds" (4th of 4 versions)	instruments	https://vimeo.com/104224595
250		SA	Free individual composition	"tree, birds, and tree-fronds" (2nd of 2)	instruments and voice	https://vimeo.com/104224572
251	AL		Free individual composition	"ending of moon and stars"	instruments	https://vimeo.com/104224596
252	F		Free individual improvisation	"free improvisation" – triangle	instruments	https://vimeo.com/104224571
Session 27 – 07/05						
253	AL F GLSSA		Free group composition	group work phase 1	instruments	
254	AL	SA	Free group composition	untitled (only music) with SA's brothers	instruments	https://vimeo.com/104224600
255	F GL		Free group composition	"the man and the drum"	instruments	https://vimeo.com/104224598
256	F G		synchronisation exercise (failed)	G starts, F follows – F starts, G follows	instruments	
257		S	Free group composition	untitled (1st)	instruments	https://vimeo.com/104224640
258	S		Free group composition	untitled (2nd)	instruments	https://vimeo.com/104224624
259	SSA V		Free group composition	untitled (V's "musical cake") 3rd	instruments	https://vimeo.com/104224625
260	SSA V		Free group composition	untitled (V's "musical cake") 4th	instruments	
261	AL F GLSSA		Free group composition	group work phase 2	instruments	

262	AL	SA	Free group composition	untitled (only music) with SA's brothers	instruments	https://vimeo.com/104224622
263	F	GL	Free group composition	"the man and the drum"	instruments	https://vimeo.com/104224623
264		SSA	Free group composition	untitled (synchronised pulse)	instruments	https://vimeo.com/104224641
Session 28 – 14/05						
265	AL CF	LSSA	Free group composition	group work phase	instruments	
266	C	SA	Free group composition	C SA initial exploration (phrygian ostinato and melody)	instruments	https://vimeo.com/124805782
267	C	SA	Free group composition	SA emergence of the ostinato gesture	instruments	https://vimeo.com/124805783
268	C	SA	Free group composition	SA holistic conception of the ostinato	instruments	https://vimeo.com/124805784
269	C	SA	Free group composition	C emergence/exploration of melody	instruments	https://vimeo.com/124805785
270	C	SA	Free group composition	C fixes her melody for the first time	instruments	https://vimeo.com/124805787
271	C	SA	Free group composition	C SA rehearsal in group work phase – phrygian ostinato and melody	instruments	https://vimeo.com/104224690
272		L	Free individual composition	L's song – 1st rehearsal only voice	voice	https://vimeo.com/104224693
273		L	Free individual composition	L's song – 2, 3, 4th (attempt with bp)	voice	
274	CF	SA	Free group composition	C SA F phrygian ostinato and melody – 1st Gestaltung	instruments	https://vimeo.com/104224643
275	CF	SSA	Free group composition	C SA F phrygian ostinato and melody + S on drum – 2nd Gestaltung	instruments	https://vimeo.com/104224667
276	AL	S	Free group composition	AL S – 1st Gestaltung	instruments	https://vimeo.com/104224666
277	AL	S	Free group composition	AL S – 2nd Gestaltung	instruments	https://vimeo.com/104224642
278	AL CF	LSSA	Free group improvisation – 2nd of 7 trials	none with a stable synchronisation (basis rhythm: S's du deka kade)	instruments	https://vimeo.com/104224668
279	AL CF	LSSA	Free group improvisation – 6th of 7 trials	(basis rhythm: S's dude du)	instruments	https://vimeo.com/104224669
280		L	Free individual composition – L's song (1)	2nd of 3 rehearsals after the session	voice	https://vimeo.com/104224742
Session 29 – 28/05						
281	AL	F GLS	Free group composition	group work phase (1st round)	instruments	
282	AL	LS	Free group composition	AL L S – 1st Gestaltung	instruments	https://vimeo.com/104224688
283	AL	LS	Free group composition	AL L S – 2nd Gestaltung	instruments	https://vimeo.com/104224699
284	F	G	Free paired improvisation	F G – 1st impro (structure ABA)	instruments	https://vimeo.com/104224725
285	F	G	synchronisation exercise (successful) – synchronising on the double pulse	playing fourths and eights – F follows G, G follows F (ok)	instruments	o
286	AL	F GLS	Free group composition	group work phase – 2nd round, refining and rehearsing the pieces	instruments	
287	AL	LS	Free group composition	AL L S – 3rd Gestaltung (interrupted – AL is blocked)	instruments	
288	F	G	Free paired improvisation	F G – 2nd impro (structure ABA)	instruments	https://vimeo.com/104224726
289		L	L's song – rehearsal	other children act as choir	voice	
Session 30 – 04/06						
290	AL CF	GLSSA	Accompanying movement	being in time with the drum rhythm	movement	
291	AL	SA	Accompanying movement	SA jumping (up) on the 1st beat	movement	o
292	AL	SA	Accompanying movement	SA anticipating and landing on the 1st beat	movement	o
293	AL CF	GLSSA	Rhythm patterns – imitation	4/4 and 12/8 teacher/group	voice	https://vimeo.com/104224746
294		S	Rhythm patterns – individual invention	S 6/4	voice	
295	AL CF	GLSSA	Free composition/improvisation	group work phase	instruments	
296	AL C	S	Free group composition	untitled	instruments	https://vimeo.com/104224743
297	F	L	Free paired improvisation	untitled – 1st version	instruments	https://vimeo.com/104224800
298	F	L	Free paired improvisation	untitled – 2nd version	instruments	https://vimeo.com/104224745
299	G	SA	Free group composition	"the musical wood"	instruments	https://vimeo.com/104224727
300		S	Samba Lelé	S's solo	voice	o
301		S	Koromiko (song)	S's solo	voice	
302	AL		Koromiko (song)	AL's solo	voice	o
303		L	L's song – last performance		voice	https://vimeo.com/104224728

Appendix E: Codebook

Below is the initial Codebook created in NVivo, which had a mainly organisational function. Contents were categorised in order to facilitate retrieval of relevant information. Focused coding (Bazeley, 2013) and the creation of higher-order nodes were carried out in the middle and late stages of analysis by using headings and subheadings in Word (see 7.9.1 and 7.9.2).

Activities	accompanying movement – stop and go comments about the sessions creative group work phases creative individual work phases dominoes – impro on pair interaction Figure-Ground relationship free composition free group impro frog's dialogues (reco-recos) – frogs' song improvisation individual exploration interview inventing songs-melodies Koromiko – song L's song melodic-vocal impro notation parametrical motifs performance for parents remembering the things we did rhythm patterns imitation – rhythm patterns invention – rhythm patterns rhythm structures Samba Lele – song self-initiated activity or proposal toccata visual – images – graphic notation graphic notation into movement/sound postcards
Children's meanings	
Creativity issues	aesthetic perceptions – beautiful confusion and disorder in creative work cooperative – collaborative creative process – phases difficult to invent together endings evaluating creative work – feedback form – making it longer ideas taking shape in the group process imagery narrative leadership in the group mistakes in creative work misunderstanding among partners

	music only – non iconic not daring to invent not engaged or motivated unstable outcomes – memory
Gestaltungen	
Interactions	interaction – instrumental music interaction – movement interaction – verbal interaction – voice (as music) interpersonal relationships monitoring the group work process strategies to interact
	representing in movement int mov synchronis with music int mov synchronis with partner choosing partners interact strategy Doing different interact strategy Imitating
Participants	AL – Alessandra C – Chiara F – Flavio FA – Fabiana G – Giacomo L – Lorenzo S – Sonia SA – Sandra z_A – Andrea z_V – Valentina
Pedagogical issues	balance children's agency / teacher's guidance behaviour management power relationships not working – difficulties pedagogical approach process vs product sociogram time
Pedagogical strategies	building on children's ideas building relationship with children forming groups instruction kinds of creative tasks modelling and explaining an activity narrative – imagery reviewing – recalling talk – introducing concepts through the activity talking about creative process-product
Methodological issues	analysing videos my personal research journey process of analysis using NVivo
Values	

Appendix F: Sample transcript of a session

I include here a sample transcript of part of session 13 (2014 01 15). The episode refers to the activity analysed in 9.1.1.2 (example N.2). Due to space problems, it is not possible to attach here all commented transcripts of the 19 sessions (more than 100.000 words).

43	38:27,5 — 39:09,4	4. Translating a graphical structure into movement V ok congratulations for this work for the next activity we change groups, we make F G L and S C L great! males and females 4.1 explaining the task (translating a graphical structure into movement) now, you see I made a so called <u>abstract drawing on the whiteboard</u> so we look at it What I want to do now is that <u>you dance this drawing now</u> L how can we dance it? V I really don't know – just the way you like it
44	39:09,3 — 40:22,0	4.2 analysing the drawing naming the single parts (three points, small medium large, a spiral 'tornado' 'twine/turning', some 'sun rays', and a small point at the end) V so, try to represent that drawing with movement, using your body you can do whatever you like
45	40:22,0 — 43:04,3	4.3 small group work (F G L and C S) Translating a graphical structure into movement children talk, refer to the drawing, try out different ideas (analyse what each of them is exactly doing – F is not contributing)
46	43:04,3 — 44:23,4	children: we've done it V ok, now do it once without stopping, doing it from the start to the end F I have not understood well L and G explain to him referring to the single parts in the drawing (L and G are really synchronous here)
47	44:24,9 — 45:36,7	
48	45:36,7 — 46:25,4	
49	46:25,4 — 46:41,9	4.4 Presentations of small groups' work L F G performance small group work - 1st go ("the dance of the letters")
50	46:43,3 — 47:00,5	- 2nd go L F G presentation small group work – Translating a graphical structure into movement
51	47:02,0 — 47:27,0	the other group S C ("the ramp")
52	47:28,5 — 47:58,3	S C small group work performance (they use some voice, as well) - 1st go
53	47:59,7 — 48:06,2	

54	48:06,2 — 48:35,0	S C small group work presentation – Translating a graphical structure into movement - 2nd go
55	48:36,2 — 49:12,6	A I like it very much let's comment it V next time we could do it with the instruments (sitting down in circle)
56	49:14,1 — 49:24,1	
57	49:24,1 — 49:44,6	4.5 Analysis and discussion of small group works – Translating a graphical structure into movement - Analysing L F G' work V: now, C and S, what did you like about L F G's work, what you would suggest as improvement A: or, first, if you remember what they did
58	49:44,5 — 51:57,6	S I liked when they did A E I O U (the rays) V did you remember where they did it? S points to the drawing (satisfaction from L G F) A: C do you remember what they did at the beginning? C no S: no V may I tell you what I think you were doing? are you interested in seeing if I understood S: yes I understood you were doing this (a step) S shows the turning further comments S's suggestion is that at the end (final small point) L goes down and rolls backwards, while G and F at the sides just go down V I have the impression that this idea is similar to the one you used before, when the one who was in the middle was doing something different from the others at the side a principle: the one in the middle does something different, the ones at the sides do something similar
59	51:57,5 — 53:45,9	- Analysing S C's work L analyses (very well) the parts of their composition further comments V I liked the fact that you used the voice to accompany the movements A (to S) I ask to be sure: with the first point you were turning very near around C, then a bit larger, and still larger (S: yes) my suggestion is that you may do it even bigger, so that the audience can really see it

60	53:45,9 — 54:48,8	<p>A we'll do it with the instruments next time now, three breaths to remember it well</p> <p>V and we'll have to include AL, as well</p> <p>A and for next time you might also start to think how you would use the instruments to play it</p> <p>V or if you want that everybody plays or perhaps that somebody plays and somebody else dances</p> <p>G you know, I already have an idea</p>
61	54:50,2 — 56:19,8	<p>5. Commenting the whole session</p> <p>L I liked most when we were agreeing how to do our idea</p> <p>V that was a good moment for you (mirroring)</p> <p>L yes</p> <p>G everything</p> <p>S I liked the thing we did with C and F, and I also liked this one</p> <p>V perhaps you like to invent?</p> <p>S nods</p> <p>V I want to tell you that for us (teachers) it is really important that you invent your things</p> <p>and we are interested that you invent well</p> <p>we are interested in the fact that you invent something artistic and we can help you to come up with something artistic and beautiful and interesting to see</p> <p>L it's like that teaching us music means that you help us to use better our imagination (insegnare musica deve aiutarci a usare meglio l'immaginazione)</p> <p>A very good, L!</p> <p>V and learn that through the body we can express beautiful things, the same with the instruments</p> <p>not like when somebody tells you how to do something and you have to make it in the same way</p> <p>that is a way, that is an aspect</p> <p>but there is also that we can invent our own music</p>
62	56:19,7 — 57:45,5	<p>C I liked to turn with S</p> <p>L we learn to use the body</p> <p>V and the instruments, and the body. But beyond that, we see that within each of us there is an artist, something that we can take out (tirare fuori) and look for what is interesting and beautiful</p> <p>it's like being explorers, we cannot be content with what is given, what we already see, but we can go and look for an original idea, which cannot be seen yet, the most interesting</p> <p>Ok bye bye</p> <p><u>end of the session</u></p>

Appendix G: Curriculum Vitae Andrea Sangiorgio

(November 2015)

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Teaching, organisational and administrative responsibilities at CDM Centro Didattico Musicale

Since 1997 up to the present day he has been co-director and music teacher (piano, percussion, adults and children choir, ensemble music, music literacy, and music projects in nursery and primary schools) of CDM Centro Didattico Musicale, a private music school in Rome, Italy. www.centrodidatticomusicale.it

Since 2002 he has been responsible for the teacher education courses of the CDM. Since 2007 he organises a one-year course on *Orff-Schulwerk – Elemental Music and Movement Education* in collaboration with "Tor Vergata" University, Rome On behalf of CDM he has implemented numerous artistic-educational projects with and for children, also presenting some performing groups of CDM pupils in the context of international events (ISME Norway 2002, ISME Spain 2004, International Symposium Orff-Schulwerk Salzburg 2006).

Experiences in the field of teacher education

Since 1997, he has given numerous courses and workshops throughout Italy as well as internationally (Austria, Germany, Spain, Finland, France, Russia, Lebanon, United Kingdom, Ireland, South Corea, Czech Republic, China, Taiwan, Switzerland, Iran, Turkey, Australia), mainly on the subjects:

- Elemental music and movement education
- Voice training for children
- Ensemble music for percussion instruments
- Group improvisation and musical creativity
- Cognitive aspects of music learning

From December 2015 he will work with a 3-year contract as Professor für Elementare Musikpädagogik at the Hochschule für Musik und Theatre in Munich, Germany.

Conference / research contributions related to the present study

- 2015 Research paper: "*Collaborative emergence in children's group creative music making*", 9th RIME Conference, Exeter University, UK
- 2014 Focus group discussion: "*Orff-Schulwerk: Relationships between practice and theory*", International Convention of the Orff-Schulwerk Forum Salzburg, Austria
- 2014 Research paper: "*Tackling the challenges of inclusion through a focus on creative interactions*", 22th EAS-Conference, Nicosia, Cyprus
- 2013 Research paper: "*Exploring the nature and value of children's interactions in group creative music making: Methodological issues from the pilot study*", 8th RIME Conference, Exeter University, UK

- 2013 Research paper: "*Two Dilemmas of teaching for musical creativity: Teacher's guidance or Children's agency? Freedom or Constraint?*", 21th EAS-Conference and ISME European Regional Conference, Leuven, Belgium
- 2012 Research paper: "*Children's interactions in creative music-making: Structuring the teaching/learning process from a social constructivist perspective*", 20th EAS-Conference, The Hague, The Nederlands

Other relevant writing and articles

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Personal education

- From October 2011 PhD student at the University of Exeter, UK
- Master of Science in Educational Research at the University of Exeter (2010-11)
- Master's degree in Ethnomusicology at the University "Tor Vergata", Rome (2006)
- Piano diploma in Pesaro, Italy (1999)
- Graduated in Music and Movement Education at the Orff Institute, University "Mozarteum", Salzburg, Austria (1997)

Appendix H: Information about the CDM Centro Didattico Musicale

The following is a general presentation of the music school in which the study was carried out, drawn from its website <http://centrodidatticomusicale.it/english-version/> (November 2015).

CDM: a presentation

The CDM Centro Didattico Musicale (Centre for Music Didactics) is a music education agency in Rome, Italy, founded in 1993 and presently directed by Andrea Sangiorgio and Valentina Iadeluca.

The CDM provides music education services in a variety of ways: It serves as a private music school for individual and group instrumental lessons. It implements music and dance projects in nursery and primary schools. The CDM organises different kinds of projects in collaboration with other public and private institutions, in particular interventions in which music and movement are used as tools to promote social inclusion and well-being for disadvantaged children.

The CDM is also active in the field of teacher education. It realises an annual Orff-Schulwerk teacher education course in collaboration with Rome University Tor Vergata (120 hrs), and provides teacher education initiatives all over Italy. The CDM is increasingly building a network of international relationships and has recently become an 'associated institution' of the Orff-Schulwerk Forum Salzburg.

The mission of the CDM

- To create a milieu where music and movement/dance are means of expression, communication, social aggregation, creativity, self-actualization, and holistic well-being.
- To develop as a research centre, producing and disseminating new educational ideas, strategies and materials, in Italy as well as internationally.
- To create a working environment which nurtures professional as well as human growth.
- To be a cultural enterprise inspired by the highest standards.

Basic educational ideas

Our concept of music education

We are a group of music teachers who have been working for many years studying, researching and experimenting in the field of music education.

Strongly influenced by the pedagogical concept of the Orff-Schulwerk, we see children as competent, able and naturally inclined to build their own identity. We believe that educating – and especially educating through music – means communicating with children and teenagers, to enhance their natural attitude towards learning, seeking, understanding and expanding their horizons.

We think that teaching means finding a way to get into contact and developing an active collaboration with students. We aim to create such conditions so as to provide a meaningful experience for the students: exploring, practising, reflecting and comprehending music. We believe that motivation can be developed if students feel they are the protagonists of their own learning process, considered as persons who can think autonomously and unfold their personality.

Music and dance belong to the human being. They are means of self-expression and communication, a way to encounter others. Music and dance are body, thought, emotion, group, and culture. It is this multi-dimensionality that makes them such a powerful educational tool. Educating to and through music and movement means developing motor, perceptive, listening skills, attention and memory. It means strengthening analytic and synthetic skills, nurturing creativity and enhancing learning through the group. It means educating to the arts.

Our approach to music and movement education is holistic, addressing the whole person and their specific needs, aptitudes, interests, wishes. We are professionals in the area of music education for children and adolescents. We also transmit to adults the same clarity, spontaneity and joy for music, letting everybody feel at ease, irrespective of age and initial skills.

The ultimate goal of our teaching is to offer an experience through which children, adolescents or adults can positively enrich their lives.

Our pedagogical references

Our main reference for music education is the Orff-Schulwerk approach. Central tenets of our pedagogy which are derived from the Orff-Schulwerk are

- the integration of music, movement/dance and speech (holistic learning),
- the centrality of the body in music learning,
- the value of voice as a fundamental expressive and communicative tool,
- the use of Orff instruments,
- the attention to group processes and to relational learning in the group,
- the relevance of creative processes in contributing to a sense of ownership of and identification with the learning process.

Within the frame of the OS elemental music and dance education we have been integrating and further developing many theoretical and practical suggestions derived from a cognitive approach to the development of the musical mind: Edwin Gordon's Music Learning Theory. We value its coherent and systematic methodic-didactic vision and the planning of hierarchically ordered curricula for the development of music literacy. We are also interested in more general cognitive aspects of music making, in particular the role of metacognition in music learning.

Over the last years the CDM's pedagogical concept has gradually been shifting towards a wider music anthropological and sociocultural approach to music education. We conceive of music learning in terms of a culturally situated phenomenon, in which processes of social construction of knowledge are adapted to meet the unique requirements of each context, in order to foster the active, motivated, and meaningful participation of all learners.

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