

International Perspectives on
Early Childhood Education and Development 29

Mariane Hedegaard
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Children's Exploration and Cultural Formation

International Perspectives on Early Childhood Education and Development

Volume 29

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Children's Exploration and Cultural Formation

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ISSN 2468-8746

ISSN 2468-8754 (electronic)

International Perspectives on Early Childhood Education and Development

ISBN 978-3-030-36270-6

ISBN 978-3-030-36271-3 (eBook)

<https://doi.org/10.1007/978-3-030-36271-3>

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The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Acknowledgement

This book has been published with funding from Research Council Norway, via project 275575, KINDknow – Kindergarten Knowledge Center for Systemic Research on Diversity and Sustainable Futures.

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Chapter 1

Introduction to Children's Exploration and Cultural Formation



Elin Eriksen Ødegaard and Mariane Hedegaard

The notions and ideas of the United Nations (UN) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), which are outlined in *Transforming our World: The 2030 Agenda for Sustainable Development* (UN, 2015), can be seen as an introduction to how exploration can be brought more directly into early childhood education, thus leading to children's cultural formation both locally and globally. In this document, the UN and UNESCO ask for a loci-based, ecological, integral education. This educational process combines historical knowledge recognizing cycles and planetary boundaries with children's equity and well-being in efforts to build better education programs for the future also along with critique that challenge the UN and research for not going far enough (Boldermo & Ødegaard, 2019; Holden, Linnerud, Banister, Schwanitz, & Wierling, 2018). With this book, we hope to take a step in this direction by bringing exploration and cultural formation into the debate while outlining our visions for future early childhood education (EEC). In line with Wals (2017), we find that children's exploration and cultural formation are important for their creation of meaningful and compassionate lives, where both the nonhuman and human worlds on the Earth is the key questions of our time.

Contributors' shared attempt throughout this book is to not only examine and conceptualise exploration and cultural formation through locally situated cases but also direct their contributions toward global educational concepts. The contributors provide different windows into how children may explore in everyday practice settings in kindergarten. In Chap. 2, Hedegaard outlines how exploration has been

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M. Hedegaard, E. Eriksen Ødegaard (eds.), *Children's Exploration and Cultural Formation*, International Perspectives on Early Childhood Education and Development 29, https://doi.org/10.1007/978-3-030-36271-3_1

approached earlier in EEC and gives her own version of how children's exploration as a radical local activity is important for supporting their cultural formation. How teachers may create conditions for children's exploration that are oriented to both the local community and the global world is debated by Ødegaard (Chap. 6). Chapters 9, 10 and 11, the authors also point out the necessity of teachers' global orientation to transcend everyday experiences related to teachers' introduction of different subject areas in kindergarten (e.g. science, music and drama). The authors contributions combine local events with a global outlook.

The different authors explain how explorative activities in local activity settings are dependent on the institutional dynamics of personal relations and how practitioners and children interact with artefacts and material conditions. An example illustrating this is Hammer's approach (Chap. 9) to create a budding scientific community in kindergarten. Hammer points to the importance of taking note of children's wondering about natural phenomena and then using their wonder as a jumping-off point for introducing science concepts. For example, children may wonder about what happens to a dead animal, and the adult notices the children's wonder. In this case, teacher and children then, together, explore the specific animal's life and what happens when animals die; that exploration may lead to an opportunity to introduce concepts like ecological niches and ecosystems. When teachers connect local events with general knowledge, the local events become connected to theoretical concepts as a radical-local learning activity (Hedegaard, this chapter).

1.1 A Cultural Historical Approach to Children's Exploration and Cultural Formation

The educational analyses and illustrations in the different chapters build on a cultural-historical approach that brings together the substantial philosophies of Lev Vygotsky (1997) and Michael Bakhtin (1991) and adds contemporary global awareness of education for sustainable futures to create productive new conceptualisations for exploration and cultural formation. We argue the dialectically and dialogically approaches from, respectively, Vygotsky and Bakhtin, both belong to a socioepistemological tradition, well-established within early childhood education and childhood studies; we will build on productive integration of these two positions. For elaboration, see e.g. Matusov (2011), White, (2014) and Stetsenko (2007).

Culture refers to traditions for practice in institutions and local communities as manifested in interactions and the production of living conditions (Hedegaard, 1999). It is the interactions between teacher and children in different activities that are the focus of the cases of ECE practice that are presented. A historical perspective is introduced by focusing on traditional practices.

The practice of children's participation in activities is an ongoing process; traditions influence the actual activities and, thereby, contribute to children's cultural formation. Children are born into pre-existing communities, and those children become participants in institutional practice (i.e. family, kindergarten) where tradi-

tions encompass the nuclear family and kindergarten. The activities within these practice traditions frame children's potential development and cultural formation. Conversely, children also influence the activities they participate in, thereby contributing to changes in the practices at home and kindergarten. History can be related both to how the institutions in a society change and to how society, itself, changes (see Hedegaard, Chap. 2, Fig. 1). History is also related to children's development as a process that, for each person, takes place through their movement along the trajectories that the institutions in a society create for their upbringing and education.

Fleer, Hedegaard and Tudge (2009) have criticized some contemporary constructions of childhood. They criticize the way some globalized discourses reify, measure and name children as universal and general (i.e. ready for learning, schooling and the economic market) without considering that children live and develop within concrete local practices that encompass unique conditions, cases and events. Children's cultural formation signifies more than the process of gaining knowledge and skills. While knowledgeable citizens know how things work and know the essence of great books and ideas, this intellectual understanding of knowledge is not enough to support changing practices to foster sustainable living. Educational researchers and pedagogues must attend to values that are the most important for personal lives—both those lived in the present and future civilizations and lives on the planet Earth. The adult generations globally have a duty to protect and act upon the best interests of every child: the child's right to live and to develop to his or her full potential with a sensitivity to local culture and nature. To create optimal conditions for children both today and in the future, we believe that a wholeness approach, understood as an ecological foundation of education, is of the utmost importance in early childhood—the most formative years—as well as later for lifelong cultural formation.

The authors of this book, in agreement with Fleer et al. (2009), argue that new visions for the future must build upon the human capacity to explore, to discover and create, and to form and to be formed in ecological interplay with the local culture, nature and societies where children live. Children live complex, situational local lives, which are more or less impacted by the dynamics of global discourses on education at a time when sustainability is high on the global agenda. To find a way out of 'unsustainability', the driving argument in Ødegaard's chapter of this book is that the cultural and creative dimensions of sustainability need to be given more attention. 'Unsustainability' is a concept meaning that something is not valued to be continued or maintained because it can destroy relationships, be harmful for someone, will eventually be empty or could jeopardize humankind and the planet in the long run. The cultural dimension of sustainability contains a wide range of important areas relevant for ECE (e.g. local heritage, arts, diversity of nature, Internet, and indigenous culture).

In this book, we draw to a large extent upon examples from Norway, but we also include examples from China (Chaps. 4 and 8) and from Greenland (Chap. 2). Play is conceptualised as central to childhood development and is viewed as the main activity of early childhood. Education has to draw on local cultures, which implies variation between local communities; however, it must also be oriented to both national guidelines and UNICEF *Early Learning and Development Guidelines*. In

Chap. 8, Hu demonstrates this variation between the practices described by kindergarten professionals in three different provinces in China. Hu points out how material and cultural traditions influenced the practices in different ways yet also related to the national guidelines. The practices in kindergarten must both support children's exploration and culture formation and take different conditions and traditions into consideration. In Chap. 4, which discusses outdoor kindergarten practices in a Chinese kindergarten and a Norwegian kindergarten, Værum and Birkeland demonstrate that it is possible to focus on play and exploration under very different conditions. Their chapter illustrates how the material conditions and weather conditions may influence kindergarten children's outdoor activities differently, even if both kindergartens and their respective countries follow the same UNICEF guidelines.

In Chap. 5, Grindheim points out the importance of nature as a factor together with culture, in line with Værum and Birkeland's argument that weather conditions are important. In both chapters, the authors argue for extending the model presented in Hedegaard's chapter to apply to the conditions in nature. Grindheim outlines a methodology for how to do research into the complexity of a wholeness approach to education focusing on children's cultural formation. The methodology Grindheim advocates is constructed around microanalyses of different types of conflicts between the societal concept of education, the actual educational setting and conditions in kindergarten, and children's interaction.

A focus on conflict as a way to understand children's social interaction is also the theme in Chap. 3, where Skoglund argues that conflicts in children's interaction can be a way for children to explore their social situations. Skoglund opines that conflicts need not indicate bullying.

1.2 Examining Cultures of Exploration

This book examines the educational conditions that support cultures of exploration in kindergartens. The chapters conceptualise cultures of exploration, whether those cultures are created through children's own passionate engagement or are demanded of them through undertaking specific tasks within different institutional settings. The conditions for children's exploration are a web of activities in different settings with social relationships and artefacts. *Artefacts* carry history and meaning from other places and times. It is in the activities with artefacts and social relations that children's explorative actions take place, and these activities are where they acquire cultural competencies and motive orientations (see Hedegaard, Table 1, this book). From the perspective of the present book, children are viewed as agents in their daily activities, and the analytical focus is placed on how both teachers and children contribute to and participate in exploratory activities. Both children and adults learn through participating in everyday activities, and collaborative exploration has the potential to provide experience that can benefit and support intergenerational activities that create cultures of exploration in educational set-

tings. Ødemotland, in Chap. 11, outlines process drama as a model that can be used in kindergarten practice so both teachers and children can be inspired to approach complex themes in the local environment.

Exploration by young children is central to their development as persons. To explore is a play-related action—a social situation that affects what and how objects or relations are explored. In Chap. 7, Eikset and Ødegaard show how the early educational approach of Fröebel's play pedagogy favoured children's exploration and can be seen as the foundation for later evolution of such an approach. Supporting children's play activity gives children the opportunity to become explorative, curious and self-controlling, as well as emotionally expressive in their relationships to the environment and the persons around them. Children's experiences are widened by their new discoveries and understandings. In ECE, different aspects of discoveries may be opened through activities (e.g. music, dance, nature, language, mathematics). It is a child's engagement and joy in exploration and curiosity, as well as understandings, knowledge and skills in relation to different topics and areas, that create meaningful competencies and life experiences. In addition, emotions like anger, lust, confusion and compassion are relevant to understanding motives that could drive explorative practices. In Chap. 10, Schei and Ødegaard analyse children's exploration of music and of becoming musical; their analysis demonstrates how explorative play with music and children's musicality can lead to musicking (which means that listening, rehearsing, performing, practicing and composing are not separate events, rather we do music, when musicking). Exploration has the potential to break the dichotomy of play versus learning. This book brings an argument of exploration as a pedagogical approach for ECE and, at the same time, also brings to the forefront problematic attempts to universalize exploration. New understandings of layered and imbedded cultural values and activities have been crucial to the team of researchers and contributors to this book.

The concept of learning is sometimes articulated as contrary to the concept of play, but both play and learning are main aspects of young children's lives and will, therefore, easily be connected. The authors of the book share the conviction that the concept of exploration can bridge understandings of play and learning as processes. We share the belief with many early childhood researchers that play, creativity, imagination and experiences are the basic activities of early childhood, and that these activities must be trusted to be of high value for future ECE (e.g., Anning, Cullen & Flear, 2004; Bodrova, 2008; Chaiklin & Hedegaard, 2009; Dahlberg & Moss, 2005; Gradovski et al., 2019; Li, Pan, & Wang, 2018; Nsmnang, 2009; Ødegaard, 2015).

We believe that early childhood tradition and history have the potential to outline pedagogical models built on historical grounded knowledge and explorative attempts (see Hedegaard, Chap. 2 and Ødegaard, Chap. 6). The present book will contribute theoretical insights necessary for understanding and creating children's cultures of exploration. The book will explore how both teachers and children are intertwined in collaborative practice that controls, hinders, develops or transforms both children and teachers alike. Institutional practices can support or hinder different forms of curiosity, creativity and exploration; therefore, the awareness of the cultural aspects of institutional practices is of high importance.

1.3 ‘Glocalisation’ – Revisiting the Global and the Local in Early Childhood Education

An ecological wholeness approach in education calls upon new theories and understandings of teachers and children in institutional contexts. As pedagogues, we believe that such a wholeness approach, considering wider ecological relations as well as the minor relations, will give the best educational conditions for children today and in the future. It is crucial that education break the main discourse of education (i.e. as a market) and restore the strength found historically in ECE. The dynamics of modern childhood penetrate children’s lives through climate change, media, migration, travel, economics and technology, all of which cry for contextual sensitivity in educational policy and pedagogical practices. Globalisation may imply better life conditions for some and worse for other, marginalized groups (Bauman, 1989). It is, therefore, a crucial issue for the experienced generation: how to create a life together with children to approach this question of social equity as well as changes in climate and environment that are a present reality across the globe. It is important that educators and researchers both understand young children in the context of their local cultural-historical heritage and needs, and understand that their childhood is going on now, as we speak. It is a continuous challenge to create conditions for children to have a sense of local heritage at the same time as they learn to understand and manoeuvre in a globally changing world. Indeed, one can learn from history and the present, but our task is to create new pedagogies that are relevant for children in their everyday lives, now and in the future.

The authors of this book share the understanding of cultural traditions as deeply implicated in the developmental processes, holding that local considerations have to be reflected in education. Ødegaard introduces the concept of ‘glocalisation’ in Chap. 6 to point to the present situation for children and to emphasize the interconnectedness between an ecologically layered wholeness approach and the teacher practices that plays out in-between the global and the local. It was Roland Robertson (1995) who introduced the concept of ‘glocalisation’ in his classic, *Glocalization: Time–Space and Homogeneity–Heterogeneity*, where he commented on the assumption that globalisation refers to large-scale phenomena and that what one thinks of as local is, in fact, constructed in a trans-local setting and will often occur in a large-scale locality. He also argued against the presumption that globality is a consequence of modernity; what we call ‘modernity’ has developed historically in different places without any direct connection between them. With his critique of the polarised concept of the global and the local, Robertson invites the reader to a more dynamic understanding of the global and the local. ‘Glocalisation’ conceptualizes the idea that globalisation does not necessarily penetrate every aspect of the local culture, local traditions and views. In spite of globalisation, local conditions can be adopted, maintained and transformed into something beyond what existed beforehand. Glocalisation can be seen as a blend of local and global, which gives it additional meaning.

Awareness of the co-presence of both universalizing and particularizing tendencies and the inspiration to see the local in the global and the global in the local was later taken up in dialogues between Chinese and Norwegian researchers,¹ who proposed the concept of the 'glocal' teacher (Birkeland, 2015; Ødegaard, 2018a, 2018b, 2018c; Trippestad & Huang, 2015). Cases from Norway and China provided detailed insights into how culturally based values and practices are simultaneously global and local (see Chap. 4 by Værum and Birkeland). Ødegaard (in Chap. 6) proposes a model of the teacher calling for dialogical engagement as the teacher always will be locally present in the moment and at the same time living in and with global conditions. *Glocalised learning and teaching* refers to the curricular considerations and pedagogical framing of local and global community connectedness in relation to social responsibility, justice and sustainability. Illustrative cases and arguments for the importance of local communities' influence on implementation of globalised approaches to ECE have also been highlighted by researchers globally for some time (e.g., Chaiklin & Hedegaard, 2005; Hedegaard, 2014; Freitas, Terri, Shelton & Sperb, 2009; Nsmnang, 2009; Ødegaard, 2015; Pearson, 2011; Rogoff, 2003; Simpson, Lumsden & Clark, 2014; Tudge & Wang, 2009).

1.4 The Structure of the Book

This book is structured in three sections: (1) Children's agency and cultural formation, (2) teacher's support to children explorative activity, and (3) Content-specific explorative activities.

Section 1 is oriented to the children's perspective in EEC. In this section, Chap. 2 presents Hedegaard's wholeness approach to development. The chapter then outlines different approaches to supporting children's motivation for being explorative in kindergarten activities. In Chap. 3, Skogslund argues that when children create conflicts during exploration in play activities, they may be motivated to explore their relations to other children. Next, in Chap. 4, Værum and Birkeland present cases from Norway and China to demonstrate that weather and material conditions influence children's motives for exploration. Finally, in Chap. 5, Grindheim presents a methodological approach to studying children's explorative activities through focusing on conflict from different perspectives in children's and teacher's interaction.

¹Matters of globalisation—in educational reform and practice in teacher and preschool teacher education—have been addressed in many formats, including series of seminars and conferences, years of cooperation, cultural exchanges and many visits between scholars of East China Normal University (ECNU) and Bergen University College (BUC), and later a more extended collaboration with Beijing Normal University, Beijing Institute of Education and conference at North East Normal University.

Section 2 takes the teacher's perspective when analysing conditions for children's explorative activity. In Chap. 6, Ødegaard outlines a model for understanding children and teachers as collaborators, dialogically engaged in explorative activity in the context of pedagogical practices. The model are supported in Chap. 7, where Eikset, and Ødegaard argues with the ideas formulated by one of the originators of ECE, Fröebel, whose ideas also are very relevant to present-day ECE. Hu illustrates, in Chap. 8, how concepts and cultures of practice may vary although they relate to the same national ECE policy.

Part 3 takes the content perspective in ECE. Chapter 9 demonstrates how adults connect to children's wondering about natural phenomena and, thus, create possibilities for children's budding scientific activity. In Chap. 10, Schei and Ødegaard argue that children's exploration of music and musicality are important for children engaged in musicking. In Chap. 11, Ødemotland demonstrates how teachers can enrich children's play activity by using process drama activities. Together, these three chapters demonstrate how teachers' support of children's exploration within different areas can contribute to a wholeness approach in ECE that impacts multiple subject areas. These chapters demonstrate—through the diversity of relating to children's wonderings—the importance of teachers' relating to several subject areas in their ECE practice.

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Chapter 2

Children's Exploration as a Key in Children's Play and Learning Activity in Social and Cultural Formation



Mariane Hedegaard

2.1 Introduction

It has been a dilemma in preschool education for some time about how to prepare children for school without drawing school subjects into the preschool curriculum. Participants at the 'Reconceptualising Early Childhood & Education' (RECE) conferences reflected at their 20-year anniversary about how little they have succeeded to concretize new conceptions into curriculum (Bloch, 2014; Grieshaber & McArdle, 2014; Kessler, 2014; O'Loughlin, 2014). Since the early 1990s childhood researchers have formulated new conceptions (e.g., Burman, 1994; Corsaro, 1997; Grieshaber, 2004; James, Jenks, & Prout, 1998; Walkerdine, 2004) promoting the child's perspective and seeing children as active participants in society. These new theoretical approaches, the RECE researchers argue, have not changed early childhood curriculum. Neither has new conceptions in developmental research (as can be found in Bronfenbrenner 1979, Bruner, 1968, Rogoff, 2003)¹ where children are seen as active and explorative. Early childhood curriculum in most countries is still oriented toward preparing school competences. New tendencies can be found in the Nordic countries (Grindheim, 2011, Hedegaard & Munk, 2019, Johansson et al. (2018). In Denmark and Norway, the governments have recently formulated frameworks for early childhood activities that conceptualize person formation from a wholeness perspective, and promote children's explorative activities. The Norwegian government formulated a framework in 2017 (Utdanningsdirektoratet, 2017) for how to realize their daycare law from 2005 oriented toward children's play,

¹I have participated in this chorus (Hedegaard, 1990, 2009) and continued this together with Marilyn Flear (Hedegaard & Flear, 2009, 2013).

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exploration and culture formation. In Denmark the government in 2018 (Socialministeriet, 2018) also formulated a framework oriented to play and exploration, realizing the six learning goals that were formulated in 2004 as focus points in the Danish daycare law.² The aim in both these Nordic countries seems to be oriented to a wholeness approach where children's exploration and play are the foundation for their social and cultural formation. These frameworks may succeed in formulating a new form of childhood curriculum that the RECE researchers might find satisfying. In this article, I will argue, in line with these two frameworks, that a preschool curriculum should be oriented to children's play and exploration in everyday settings in their community. Such a curriculum will lay the foundation for children's exploration and reflection in kindergarten as well as in school. However, there have to be qualitative differences between the pedagogy and curriculum in kindergarten and the early school curriculum even though they both should be oriented to children's exploration. Therefore, the Danish and Norwegian frameworks for daycare have to be realized in a curriculum for early childhood (kindergarten) that is qualitatively different from the early school curriculum.

The aim in this chapter is to discuss how to formulate a curriculum that supports children's exploration and social and cultural formation in early childhood education. This curriculum shall also open up for a practice that may prepare children for school learning without drawing school activities into kindergarten practice. Here play activity is seen as central.

2.2 Children's Exploration in Different Life Periods

From a cultural-historical wholeness perspective (Hedegaard, 2009, 2012, 2014) the question of supporting children's explorative activity may be seen from the following four perspectives: (a) a societal perspective about how to give children the best developmental conditions, (b) an institutional perspective focusing on practice that promote children's development in early childhood, (c) a situated perspective focusing on the children's social situation, and (d) a personal perspective reflecting children's motive orientations and intentions (see Fig. 2.1). Together these perspectives characterize a child's developmental period, where each life period involves specific ways of exploration in his or her different life settings.

A wholeness perspective implies that one takes the societal demands, the institutional practice and its different activity settings, and children's motive orientation into consideration when planning or evaluating their learning activity and possibility for development (see Fig. 2.1; Table 2.1).

²The six learning goals are: (1) person formation, (2) social development, (3) communication and language, (4) sensation and movement, (5) nature and science and (6) culture, aesthetic and community. In 2012, the Danish government sent out another framework oriented to prepare children for school. This framework was met with some opposition. The 2018 framework is still oriented to the six learning goals, which indicates the dilemma between forces that want the kindergarten to prepare children to school start and forces that see early childhood as important for children's social and cultural formation (Hedegaard, 2017; Hedegaard & Munk, 2019; Kampmann, 2014).

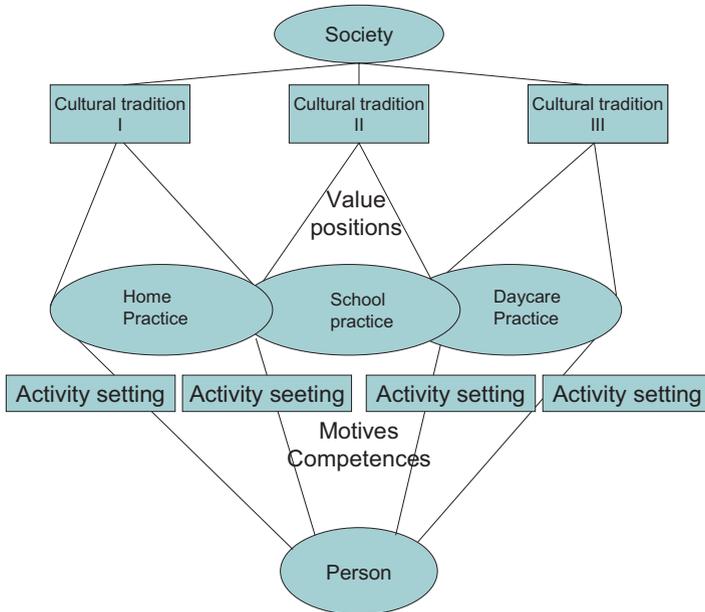


Fig. 2.1 Illustrations of the relations between society- practice and persons with cultural traditions and activity settings as mediating links

Table 2.1 A wholeness perspective on children’s learning and development

Structure	Process	Dynamic
Society	Tradition	Societal conditions and demands
Institution (home, kindergarten, school)	Practice	Value motive/objectives demands
Activity setting	Social Situation	Motivation/engagement/demands
Person	Activity	Motives/intentions and demands
Human biology	Neurophysiologic	Primary need/drives

The societal conditions for kindergarten and school are formulated in laws and regulations for children’s learning and development (as in the framework for respectively the Danish and Norwegian kindergarten, and school laws). In Denmark and Norway, laws and regulation for kindergarten practice are rather new in relation to the government’s formulating demands for school practice that started in the Nordic countries nearly 200 years ago (Ramirez & Boli, 1987).

Children’s exploration has to relate to the different institutional practices in which they participate, and their exploration takes different forms depending on how routines and demands influence their activity in respectively home, nursery, kindergarten and school. Societal values vary between different societies for how children’s cultural formation and learning should take place in kindergarten and

school, and also between different historical periods in the same society (Fleer, Hedegaard, & Tudge, 2009; Hedegaard, 2009; Rogoff, 2003).

Institutional practice in kindergarten as well as in school, takes departure in the goals and standards for evaluating children's learning and development that teachers orient towards. In kindergarten, the goals and standards may be that children have to be able to take care of practical chores, but it can also relate to getting knowledge about their community through stories, reading and visits.

Vygotsky (1987) distinguishes between standards for everyday knowledge and for scientific knowledge. Everyday knowledge is connected to learning in everyday settings; scientific knowledge is connected to subject matter learning in school. Children need experiences from everyday activities to be able to relate to the academic knowledge that school seeks for children to acquire. From this distinction, the goals and standards for children's activity and competence acquisition in day-care should relate to the traditions for different activity settings and different practices in a society or local community. The standards and goals for school activity and knowledge should relate to the systematicity in the different subject matters inspired by science knowledge. Both the Danish and Norwegian frameworks for early childhood education fit well with Vygotsky's theoretical approach and is orientated to children's learning of values and care and their everyday experience and play.

Following the cultural-historical approach from Vygotsky (Elkonin, 1999; Hedegaard, 2009, 2014; Vygotsky, 1987, 1998) a child's developmental age periods reflect the different institutional practices in a modern Western society: home, nursery, kindergarten, primary school and secondary school. Therefore, ideal learning forms are different in different development periods.

2.2.1 Children's Activities in the Different Institutional Settings

Explorative activities are central in children's activity for acquiring competences in infancy and early childhood (Bruner, 1968, Stern, 1985, Vygotsky, 1998). The infant will explore their surroundings (including persons) through intentional orientation and imitation, if home and nursery give the possibility to support this orientation. Children's imitation has, according to Vygotsky (1998) and Bronfenbrenner (1979), to be understood from the child's perspective as meaningful imitation. For the toddler, meaningful imitation (i.e., modelling of persons' activities) can be seen as a foundation in the young child's exploration. This exploration is the leading activity for promoting acquisition of competences and values. In kindergarten, children's exploration may start to take place through fantasy and role-play (if the institutional practices support this). Therefore, the daily settings for preschool children should give children the possibility to explore different family and community settings and the demands of different social roles in these settings. Through this

exploration, both directly and through play, children will acquire competences and motive for learning (Elkonin, 1999). Exploration through imitation, modelling and play continue as learning forms into early school age, where explorative investigations may be seen as the ideal in connection with teachers' guidance and support in formulating conceptual relations between core concepts (Aidarova, 1982; Davydov, 1982; Hedegaard, 1990, 2002).

2.3 Early Childhood Education

There are many ways that children acquire experiences and concepts in kindergarten, such as visits to other places, shared round table discussions where children are asked to tell or describe events, looking in picture books and pedagogues reading. Children may rework these experiences in fantasy play (Hedegaard, 2016; Vygotsky, 1966) and creative activities of drawing and constructing. Fantasy is central in play, which means that exploration may take place not only through material exploration but also through exploration in the child's imagination. In fantasy, it becomes possible to create images of what does not exist in reality. Through play children may create collective imagination (Fleer, 2013) that they can explore together, and thereby develop both their agentic relation to each other as well as their courage to be explorative. These developments may be seen as a life competence. In their play, children can orient to activities in which they do not yet participate and realize wishes that are otherwise impossible for them to realize.

Children's motivation for transition to school is, according to Elkonin (1999), grounded in play oriented toward acquiring competences related to the adult world. Having imagined their participation in activities, children at some point no longer want to pretend, but want to get competence and be able to act. Care takers and teachers are central in supporting children's exploration and building images of what to orient to in the different practices (i.e., kindergarten and school). The way these professionals do this has to be different in the two settings, because the ideals for learning should, as Vygotsky pointed out, be different in kindergarten and school.

2.4 Three Approaches to Explorative Learning in Kindergarten

In the following, I will present three approaches to early childhood education that have promoted children's explorative activities and play as a central pedagogical aim for children's learning and development in early childhood age as well as preparation for learning in school. The earliest is Maria Montessori's *auto-education* (formulated in 1912) the other two build on the cultural-historical tradition from Vygotsky: Bert van Oers' *developmental education* approach and the approach

of *effective pedagogy* initiated by Ronald Tharp through the Center for Research in Education, Diversity and Excellence (CREDE). Tharp's CREDE pedagogy was developed further in Greenland into an early childhood educational approach.

Montessori's approach builds on the ideal of children being explorative in their activity. She writes that a child's attention is caught by material objects during his or her exploration. This process creates the way for a child to understand the world and to become conscious. Montessori (1918) expresses it this way:

It made me think of *life of man* which may remain diffused among a multiplicity of things, in an inferior state of chaos, until some special thing attracts it intensely and fixes it; and then man is revealed unto himself, he feels that he has begun to live. (p. 69)

Montessori's conception is that a child develops as an active person and not as a receptive person. In her 'auto-education' approach, children should be allowed to be spontaneous and free to explore, but at the same time guided by educational objects.

However, to ensure psychical phenomena of growth, we must prepare the "environment" in a definite manner, and from the environment offer, the child the external means directly necessary for him. (p. 71)

Her principles of 'auto-education' build on presentation of material where exploration is connected with possibilities for errors, where:

the control of errors is not mechanical, but psychological, the child himself, whose eye has been educated to recognize differences of dimensions, will see the error, provided the objects be of a certain size and attractive colored. It is for this reason that the next object, so to say, is the control of error in their own size and in their bright colors. (p. 76).

It is the educator's task to create material that will catch young children's attention and guide their exploration. The construction of material has been done experimentally by Montessori by using different materials with qualitatively different sensory aspects (i.e., various geometric forms, material with different weights, sound materials, different colors), where she through experimentation found the differences that will attract a young child's attention. Montessori's material is constructed to enable children to explore sensory dimensions that prepare them to act in a functional and technical world. When creating her educational material, Montessori builds on the conception that the material possesses the power to educate and engage children in both the technical and the moral sense. These properties of the material serve as an introduction to subject matter learning in math and mother tongue in school.

Educators today can still learn from Montessori that possibilities for children's exploration can be created by constructing materials that catch children's attention from early age. Educators thereby guide children's conscious relation to the world. Montessori's approach has influenced the industry of material production for preparing children for math, reading and writing in school. Her ideas of children's exploration are important, but I have earlier criticized the functional approach her material inspires (Hedegaard, 1984) as too technical, and does not orient children to general concepts in their everyday settings. In line with Vygotsky, I find it more important to support children's concept formation of everyday concepts of events

and relations to other persons than of concepts related primarily to the sensory aspect of the world (Hedegaard, 2007).

Bert van Oers also conceptualizes children's exploration as central in their transition to learning in school (van Oers, 1999, 2012). Bert van Oers named his approach *developmental education*. This approach relies on finding cultural products that have high educational power and get children engaged in playful activities that may include the teacher. 'Developmental education' finds its power through engaging and educating children's co-operative participation in play, where the teacher brings material that can be used to engage children in acquiring competence for reading, writing and math. In van Oers' approach the teachers' role is seen as a more experienced participant, where the teacher provides material for play, such as shoeboxes for playing 'shoe shop'. Bert van Oers uses the ideas of Elkonin (2005) that children become motivated to play by attending to the adult's practices in the local community. Therefore, the teacher's task is to orient children to the surrounding community practices in order to motivate explorations that involve school competences of reading, writing and math. The shop theme is central in van Oers' projects.

Roland Tharp and colleagues initiated the third program I will discuss, 'effective pedagogy' (Tharp, Estrada, Dalton, & Yamauchi, 2000). Tharp builds on the Vygotskian position that social interactions within activity settings form the basis for all higher psychological phenomena, including beliefs, ideas and thinking. Tharp pointed out the importance of creating engagement through instructional conversation and relating children's learning toward community traditions. The teacher's task is to establish inter-subjectivity and assisted performance (Tharp et al., 2000; Tharp & Gallimore, 1988). Tharp formulated five standards for how content from everyday activities in the local community should be implemented in pedagogical activities in school.

The CREDE theory was adapted to the Greenlandic context for school in the form of the five standards (Olsen & Tharp, 2013). These standards were extended for kindergarten and daycare pedagogy (Wyat & Lyberth, 2011) with two categories promoting the child's perspective (S6 and S7) into seven standards.

The Seven Standards of Effective Pedagogies

- S1) joint productive activity.
- S2) language development and beginning writing and reading skills.
- S3) using the funds of knowledge and values in home and community to create knowledge in kindergarten.
- S4) promoting complex thinking through questions.
- S5) instructional conversation (the leading standard, to which the other standards relate).
- S6) modelling, visualizing, playing.
- S7) children's interest as initiating shared activity.

2.5 Instructional Conversation (S5) About the Polar Bear's Life

To instruct kindergarten personnel, Lyberth developed a coaching approach using video and an instructional sequence that encouraged preschool teachers to construct their own goal-directed activities. An example from one of her instruction sessions was about the polar bear, its life and it is dangerous to humans. The instructional sequence had six small scenarios that followed the standards presented above, with instructional conversation (S5) as the center for the other six standards. In the education video, five children participated. In the first scenario Lyberth showed a picture of a polar bear and made children tell what they know about the polar bear. The children and teacher talked about how dangerous it is to meet a polar bear (S1). This made the children suggest that they change the song Lybert introduced 'The bear is sleeping, it is not dangerous' ('Bjørnen sover, den er ikke farlig') to 'The bear is sleeping it *is* dangerous' (S2). Lyberth showed children some pictures of where the polar bear lives (S3). Then she asked about where the children were sleeping. They answered in their beds. She asked how their bed looks. Then she asked where the bear sleeps, how its bed looks, and what the difference is (S4). Then Lyberth suggested that children build the bear's cave and played the dangerous polar bear. The children suggested one could use chairs and a table and blankets to make a cave for the bear and they made the cave together with Lyberth (S6). The children entered into the cave and played they were bears, and a child suggested that a bear hunts for food. Lyberth suggested they could play how the bear hunts (S7), which they did.

2.6 Evaluation of the Different Educational Approaches

The three approaches to early childhood education discussed here have contributed to shifting the focus away from receptive learning toward exploration as the central activity for education in early childhood.

Montessori's contribution was to set the child free, by letting the child become an agent in his own learning, where the teachers' task was to provide opportunities and material for the child's exploration. In Montessori's approach the learning objects guide the children's competence development toward sensory discrimination of form, size, color, weight, etc. The knowledge children hereby attain becomes the foundation for knowledge connected to science learning in school. The more general concepts connected to everyday objects and events in the community are ignored when making children focus on discrimination of functional aspects in their environment.

Bert van Oers' 'developmental education' approach orients educators towards seeking opportunities for children's cooperation through playful activities. This approach makes community activities important for children's play activity, where the teacher provides materials and support for playful learning that models

community activities. In this approach, as in Montessori's approach, the educator's aim is to orient children to use math and language skills with the material available for their play. In van Oers' approach, competence of math, reading and writing are the objectives of the play from the teacher's perspective, even though he draws on community activities. The van Oers approach surpasses Montessori's approach with its focus on cooperative play activity, where goals for the activities are formulated through children's cooperation.

Tharp's approach also draws on children's relation to their community, and their cooperation in activities to promote knowledge. Here the main aims are children's learning of critical thinking, communication and reading. In the version developed for the Greenlandic school (Olsen & Tharp, 2013) the five standards for promoting knowledge still focus mostly on the form of knowledge and not the children's experience from the local community. However, in the early childhood education that Tharp developed together with Lyberth, modelling, play and child-initiated activities were added and got a central role. This is in line with Vygotsky's idea that the foundation for children's acquisition of everyday knowledge (i.e., concept learning in early childhood) is their interest.

I have worked with teaching projects in school that were oriented to children's exploration (the *double move* in teaching, (Hedegaard, 1990, 2002) and together with Seth Chaiklin to *radical local* teaching and learning. Radical local education subsumes and surpasses the double move by relating collective local knowledge about nature and culture to general concepts modelled in core models of conceptual relationships. Radical comes from the Latin word root, referring to central concepts. Local refers both to the actual and the historical community. In the concrete project with Puerto Rican children, local referred specifically to the actual community in New York City and to the Puerto Rican community their families had left (Hedegaard & Chaiklin, 2005).

The ideas that I will put forward for early childhood education from the 'double move' and the 'radical local teaching and learning' are:

- take departure in what the child is oriented to
- orient to children's feeling of belonging to a place and community,
- choose topics and concepts from everyday life that relate to children's community and what they think is important,
- guide children in their activity to model conceptual relations that reflect their experience (in play, or children's drawings or storytelling), and reflect together with the children about these relations.

Learning in preschool should never copy school learning, because children need experiences that they are not likely to receive through learning activities that characterize school learning, even though both may favor children's exploration. In school the adults should guide children's exploration in taking the curriculum for the specific subject and grade into consideration.

By guiding children in specific sessions to reflect about the relations they model in play, the staff in kindergarten may support young children's acquisition of concepts that may function as the foundation for the systematic structures that

characterize school subjects. In school, children meet a system of knowledge that may structure their everyday concepts and qualify them theoretically. Children who have rich experiences, which they have reflected about under adult guidance will have a foundation for meeting the system of language (in reading and writing) and science (in math) that is formulated into subject matter areas in school. However, one also needs to be aware that the subject matter areas in school such as grammar or mathematics are not goals in themselves, but are a way to prepare the child's possibility to act outside of school and think in relation to what is important in everyday life and work. In the end these systems should enrich children's everyday concepts (Hedegaard, 2002; Vygotsky, 1998).

2.7 Conditions for Early Childhood Education that Orient Children Towards Play and Exploration

The first step in an approach to learning in early childhood education is to orient children to the content of their everyday life, which implies a move away from a functional approach of training children's discrimination and motoric development. Care-persons and pedagogues should see children's sensing and movement as activities related to a content that the child pays attention to and communicates about. Through this awareness, care-persons and pedagogues should try to introduce new themes. New themes can be about daily activities in the community that they do not meet in kindergarten, and about imaginative events with inspiration from children's books, TV or play material.

Problems created by children not learning about their everyday context and culture can be found in the extreme cases where children of indigenous/original peoples were forced away from their living traditions, parents and native language to become part of the dominant culture tradition. An example from school teaching is the experiment that the Danish government initiated in the 1950s by removing children in Greenland from both parents, nature and culture, and bringing them to Denmark to educate them. On returning home, the children did not know how to relate to their family and community. This resulted in many cases that these children growing up into adulthood with problems of belonging. Similar types of problems were created when Canadian Indian children were moved from their homes to Canadian boarding schools, or the Aboriginal children to Australian boarding schools. In Norway Sami children until recently in school have been taught in Norwegian and had to learn the Norwegian tradition.

The Norwegian and Danish governments formulated clearly in their new framework for early childhood education a need for children to learn about their cultural belonging. Learning content in everyday settings, and learning ways to express emotions and act in their communities are important for children's development and later learning in school.

The principles for how curriculum and tasks should be formulated in early childhood education are quite different from school, because kindergarten tasks and demands should follow the children's spontaneous activities, as illustrated in the approaches developed by Montessori, van Oers and Tharp. In school, tasks and demands should follow scientific principles from the specific subject matter areas, but in both kindergarten and school, it is important that children want to explore either through play or through research activity.

In kindergarten play, the tradition is that children direct how the play themes unfold, while adults may follow and support children in their exploration (Johansson, Emilson, & Puroila, 2018). Conditions for children's play is created by the pedagogues structuring of the practice of the kindergarten, but pedagogues may only indirectly influence what children play, as in the example with Lyberth. The children's initiatives create the content of the play activities.

In early childhood, play should have a central role. Through play, children become oriented to planning activities and to imagining what they cannot see, which are foundational capacities for working with the written language in school.

The way that children's school readiness is evaluated in kindergarten has consequences for their activities in early childhood, because pedagogues introduce demands that correspond to the evaluation criteria. I will present the ideas behind evaluation material formulated together with Naussunguaq Lyberth (Hedegaard & Lybert, 2019) for the Government in Greenland to evaluate 3 and 5 years' social situations of development and their readiness for school that build on the wholeness theory for children's development formulated earlier in this chapter (Hedegaard, 2012). In this evaluation, the pedagogues are evaluated as much as the children, in relation to how they promote play and exploration. This evaluative focus reflects the conception that play, exploration and life competences must be reflected in the pedagogy.

2.8 Evaluation and Pedagogy Have to Be Seen as a Unit: A Greenlandic Early Childhood –Kindergarten Project with Focus on Exploration

Evaluation systems will influence how the professionals create conditions for play and care in early childhood because the system is also an evaluation of the professionals' capability to teach children and prepare them for school.

To give an idea of how evaluation can take a form that promotes play and exploration, I will describe a project (with Lyberth) to secure that young children get supportive conditions for their social situations of development in kindergarten, which should also promote transition to school. In the project, we formulated six areas of evaluation of children's social situation of development, which was assessed with a screening material named *Undersøgelse af Børns Udviklings Situation* UBUS

3 and UBUS5 (Investigation of children's developmental situation)³ (Lyberth, Lund, Hedegaard, & Pedersen, 2017a, 2017b). The first area: (1) was connected to a child's *health and wellbeing*. The following five areas were connected to how a child relates to other people participating in shared activities. These were: (2) *social interaction and competences* (focus area: how a child relates to other people and creates contacts), (3) *communication and language competences* (focus area: how a child relates to other people through language and for what a child uses language), (4) *sensation and movement* (focus area: the content that a child is oriented to when moving around and paying attention), (5) *cooperation and initiation of activities* (focus area: how and what a child contributes to shared frameworks and child-led activities), (6) *knowledge of nature and culture* (focus area: the content of nature and cultural activities with which a child engages).

The focus is on (a) the child as an active agent who takes initiative to participate in shared activities and explore his environment of daily settings and nature through sensation and movement, cooperation and communication with other people, and (b) the child's orientation and participation in cultural activities and explorations through play activities and fantasies.

The main concern in the evaluation of the child's social situation of development is how the child may participate in shared activities. It is not directed at evaluating a child or a child's functional abilities in isolation.

In the evaluation material, the categories for 5-year olds look similar to those for the 3 year olds (see Tables 2.2 and 2.3). The main differences are in the interpretation of the results in that 5-year-olds are expected to take initiative in a shared activity of exploration (i.e., older children should be more conscious about their social relation of being explorative).⁴

- Three year-olds: The focus is on exploration of actions through imitation and modelling
- Five years olds: The focus is on exploration of social relations through play and communication

The question in early education is how the educators may create tasks so children get possibilities to use their capabilities to cooperate in exploration. For both 3- and 5-year-olds, tasks should lead them to explore the activity settings of daily life, while 5-year olds should also reflect about these shared activities in fantasy and play.

The differences in nature and cultural traditions and events in different societies should be reflected in the play material and the themes that characterize a curriculum. Values that should dominate in preschool has not been an explicit topic in

³Investigation of children's developmental situation (UBUS 3 and UBUS 5) in Greenland are inspired by the themes in the Danish Government's framework for early childhood education.

⁴The task of evaluation is the responsibility of the daycare personal, or the family if the child is not in daycare. The next step is to formulate guidelines (Hedegaard, presented at CHACDOC 2019) for how to support children if there are areas of concern, and how this can be done. The task is to find ways to support children so they get possibility to become explores of daily life in their community and environment of both nature and culture.

Table 2.2 Standards for evaluating 3 year's social interaction and development (area 2 in UBUS 3)

Focus areas	Competences	Yes	Partial	No
The child enter into shared activities as a way of contacting other children or/and making friendships	The child plays with other children			
	The child contacts other children to play			
	The child accepts to be close to adults			
Ideas for pedagogical activities:				

Table 2.3 Standards for evaluating 5 year's social interaction and development (area 2 in UBUS 5)

Focus areas	Competences	Yes	Partial	No
The child enter into shared activities as a way of contacting other children or /and making friendships	The child initiates play with other children			
	The child accepts decisions in play and to control its activities by the play group			
	The child accepts bodily contact and distance, may express wishes for being close to an adult, but also made borders for itself			
Ideas for pedagogical activities:				

Western preschool curricular traditions. Recently a project by Johansson et al. (2018, pp. 33–35) argued that Nordic countries have some kind of hidden agenda for value education in early childhood. These values are: (a) self-enhancement: to enfold and be listened to, (b) democracy: rights and responsibilities, (c) discipline: rules and order, (d) efficiency: institutional resources, and (e) ethical values: care and safety. The five value areas Johansson argues have to be seen as a field of competences both for the pedagogues and for the children. All these areas can be found in early childhood education in the Nordic countries, but they are dependent on the specific pedagogues. Researchers and politicians need to dare to make guidelines for curricula that give foundations for children's play and explorative activities in early childhood education that explicate values. The new frameworks formulated by the government in Norway (Utdanningsdirektoratet, 2017) and in Denmark (Socialministeriet, 2018) can be seen as a first step to such guidelines. Curricula based on these frameworks could incorporate some of the value fields that Johansson et al. (2018) describes as characteristic for the Nordic countries by including themes from the specific community of ways of being a family and community member.

2.9 Conclusion

The chapter shows a way to transcend the pessimism that several authors have raised about how to include the child's perspective as an agent in early childhood education. Montessori promoted the child's agency already in the early 1900's. Her

approach to early childhood education can be criticised for focusing too much on the functional aspects of children's agency that are oriented to math and science education. Within the cultural-historical tradition van Oers, Tharp, Hedegaard & Chaiklin have formulated educational approaches that promote exploration of local culture. This chapter takes departure in these approaches, arguing that exploration of local culture is central for children's cultural formation. Furthermore, a curriculum that promotes children's play and exploration should have explicit standards, which are also reflected in the system for evaluating children's competences. These standards should not be school standards used to evaluate children's school readiness. Instead, these standards should be connected to the values one wants to promote in kindergarten, and relevant for cultural formation of children's life competences, promoting their transition to the next age period, school age. These life competences are children's cooperation, communication, imagination, planning and being able to express and control feelings. These competences are also all relevant for school. An early childhood curriculum should encompass both emotional experience and knowledge of the community, which is elaborated and related to general concepts (root concepts).

The task for preschool educators is to take departure in children's interests and the local community, but to enhance these interests so that the education does not remain with what is close to children, such as children's play material at home, or their own body or the obvious in the community (i.e., the grocery where the parents bring them when they shop). In a Danish context, one might start where the children live (e.g., city or countryside), but then explore new areas (i.e., the countryside, when they live in a city or vice versa). The initial area for children's exploration in a society will therefore not be the same for all children, but the task of the educator is always to orient children to new areas so that they may become curious and want to explore and know about them. Toys and objects that can catch children's interest, story-telling and reading and picture books are important as starting points for motivating exploration.

The Nordic frameworks for early childhood education fit with a Vygotskian approach. The task is to orient children to their local community, nature and culture, so that they get concepts about these areas. This means that it will be relevant to plan activities related to children's knowledge of their community, local nature and cultural traditions. In the Danish framework for early education (2018), it is suggested that one should make a year plan for activities oriented to content. Units in such an approach could relate to the way that a specific community is organized in families, educational institutions, work places, the local nature (with its specific geography and animal life), and the local culture (with its history, child literature, music and song traditions, traditions for celebration, and ethics).

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Chapter 3

Beyond Bullying: Understanding Children's Exploration of Inclusion and Exclusion Processes in Kindergarten



Ruth Ingrid Skoglund

3.1 Bullying in Kindergarten

While bullying has been a well-known phenomenon in schools for several decades, the relevance of the concept of bullying in kindergarten is still disputed among researchers, professionals and parents. Reservations regarding the use of the concept of bullying in kindergarten has much to do with labelling young children as bullies – characterised by certain traits caused of individual aggression, intention to hurt and imbalance of power – and victims – characterised by low self-esteem and lack of different competencies. These explanations continue to represent dominant models of research about bullying and school intervention programmes (Camodeca, Caravita, & Coppola, 2015; Goryl, Neilsen-Hewett, & Sweller, 2013; Perren & Alsaker, 2006; Salmivalli, 2010).

Despite disagreement about the individual causes of bullying, there is an increasing recognition that actions associated with bullying behaviour occur among kindergarten children (Cameron & Kovac, 2016, 2017; Camodeca et al., 2015; Goryl et al., 2013; Helgesen, 2017; Idsøe & Roland, 2017; Kirves & Sajaniemi, 2012; Lund et al., 2015; Perren & Alsaker, 2006; Vlachou, Andreou, Botsoglou, & Didaskalou, 2011). Children, parents and practitioners in kindergarten seem to interpret bullying as actions that cause children to feel violated. Children perceive bullying primarily as being excluded from play, which is what they are most fearful about in kindergarten (Helgeland & Lund, 2016; Kirves & Sajaniemi, 2012).

In Norway, the Framework Plan for Kindergarten notes that 'if a child experiences harassment or bullying, the kindergarten must deal with, stop and follow up on it' (Norwegian Directorate for Education and Training, 2017, p. 11). Recent research about bullying in kindergarten has sought to identify not only the bully and victim

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M. Hedegaard, E. Eriksen Ødegaard (eds.), *Children's Exploration and Cultural Formation*, International Perspectives on Early Childhood Education and Development 29, https://doi.org/10.1007/978-3-030-36271-3_3

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but also the group and institutional levels involved, especially in terms of strategies aimed at combatting bullying. Even if group and institutional factors are considered, much of the existing research is anchored in a definition of bullying as characterised by aggressiveness and intention to harm (Idsøe & Roland, 2017; Perren & Alsaker, 2006; Repo & Sajaniemi, 2015; Salmivalli, 2010). Therefore, an increasing number of Nordic researchers are looking for alternative definitions and explanations of bullying that are not based on individual characteristics but on bullying as primarily rooted in group relations (Cameron & Kovac, 2017; Helgeland & Lund, 2016; Helgesen, 2017; Lund et al., 2015; Søndergaard, 2009, 2014). Some definitions also look explicitly at physical and material factors linked to bullying (Helgeland & Lund, 2016; Helgesen, 2017; Myong & Søndergaard, 2013; Vlachou et al., 2011).

3.2 Research Focus and Aims

There is a need to investigate theoretical approaches that consider the complexity of the social processes related to bullying. The questions in focus are: (1) How can bullying in free play be seen as children's exploration in inclusion and exclusion processes? (2) In what ways are children's exploration of inclusion and exclusion processes in free play supported or restricted by institutional practice?

The purpose for this chapter is to look beyond traditional expectations about bullying, explaining the phenomenon mainly by individual factors. The aim is to explore how a theoretical framework about inclusion and exclusion, as constitutive of democratic processes, can contribute towards a view of bullying as a complex relational and contextual phenomenon. What can be perceived as bullying will be investigated in light of children as explorers of inclusion and exclusion processes, which constitute their cultural formation. From these theoretical perspectives, bullying will be analysed in the context of relational, institutional and societal dynamics.

As the main purpose of the chapter is to explore a theoretical framework, the chapter will be primarily theoretical in scope. Thus, only one empirical case is used as an example. This case will be analysed and discussed, obtained from a larger qualitative study of four Norwegian kindergartens. The analysis and discussion will illustrate how bullying can be seen as children's exploration of inclusion and exclusion processes in a situation called free play.

3.3 Children's Exploration

The concept children's exploration of inclusion and exclusion processes is inspired by the perception of children as active agents (Hedegaard, (Chap. 2 in this book)). Through play and exploration, children act and experience the world and their relationships from the very beginning of their lives (Murray, 2012, p. 1211; Nilsson, Ferholt, & Lecusay, 2018). Exploring means to be familiar with, investigating, test-

ing, experimenting, discovering or a combination of these approaches. What seems to be typical of children's exploration is that it is not just a methodical or epistemological approach; it is also an ontological one. Children's explorations can be seen as inductive processes, requiring openness and flexibility, creativity and imagination, where they are in search of new ideas or perspectives (Nilsson et al., 2018; Stebbins, 2001). According to Stebbins (2001), it is necessary to constantly explore social life because life is forever changing. Children as active explorers is also in accordance with an understanding of the concept of cultural formation, which seeks to describe how the human being is in a culturally and socially conditioned world. The formation process is seen as a social, all-presenting and never-ending process, with the child acting with spatial, material and linguistic factors (Ødegaard & Krüger, 2012, pp. 25–26). At the same time, an active formation process leads to continuously different results, depending on how people perceive themselves and the world. The outcome of the formation process is always more than, and not rarely different from, what is expected and therefore something no one can take total control of (Hopmann, 2007). To understand children's explorations as constitutive of their ongoing cultural formation seems to be a relevant perspective, from which to investigate bullying resulting from inclusion and exclusion processes in kindergarten.

3.4 Earlier Research About Bullying of Relevance to Kindergarten

There is a close connection between theoretical perspectives about bullying and what researchers are looking for in their empirical investigations (Rigby, 2004; Schott, 2014). For several decades, most of the research about bullying has been anchored in an individualistic approach centered on the Swedish researcher Dan Olweus' definition of bullying, where "A person is bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself." (Olweus, 1993, p. 9). Bullying consist of aggressive behavior, involving negative actions repeated over time and imbalance of power or strength. Olweus' definition is regarded as universal and does not consider cultural or contextual conditions. In recent years more researchers acknowledge contextual, material and physical factors as important in understanding bullying (Camodeca et al., 2015; Helgesen, 2017; Myong & Søndergaard, 2013; Vlachou et al., 2011).

There has been little research about bullying in kindergarten context, but there is evidence to suggest that small children can behave in ways that are consistent with bullying (Cameron & Kovac, 2016; Goryl et al., 2013; Kirves & Sajaniemi, 2012; Monks & Smith, 2006; Myong & Søndergaard, 2013; Perren & Alsaker, 2006; Vlachou et al., 2011). Increasingly, research has shown that bullying can have much to do with the social processes of groups of children (Helgeland & Lund, 2016; Helgesen, 2017; Kofoed & Søndergaard, 2009, 2013; Lund et al., 2015; Salmivalli, 2010; Schott & Søndergaard, 2014).

Although individual and social aspects are combined, much research is still focused on individual aggression as the starting point and the victim's lack of social skills (Camodeca et al., 2015; Idsøe & Roland, 2017; Kirves & Sajaniemi, 2012; Perren & Alsaker, 2006; Repo & Sajaniemi, 2015; Salmivalli, 2010). Kirves and Sajaniemi (2012, p. 386) used Olweus' perspective to investigate bullying among kindergarten children. Exclusion is perceived as an indirect sort of bullying, 'known as relational or social aggression', where someone is sabotaged from friendships, isolated and excluded from community. They also point out that special children with low social status, such as children with special needs and immigrant children, are mostly at risk of being victims and excluded from groups. In a Norwegian report by Lund et al. (2015) about bullying, the researchers found that especially vulnerable groups of children are the same as those highlighted by Kirves and Sajaniemi (2012).

Cameron and Kovac (2016) conducted quantitative research on six Norwegian kindergartens, asking parents and practitioners about bullying in kindergarten. They also asked about their interpretation of bullying, the role of bullies and victims and perceptions of gender differences regarding bullying. The findings corroborate those of Helgesen (2010, 2017) and Helgeland and Lund (2016), who found that bullying does exist in Norwegian kindergartens, especially taking the forms of excluding others from play and conditional threats. Both parents and practitioners viewed the victims' experience of being bullied as an important factor in bullying (Cameron & Kovac, 2016, p. 1967). Departing from other studies, they found that physical aggression was considerably lower than other behavioural factors. The researchers maintained that the inconsistency likely reflects a distinction in how bullying is interpreted in the context of preschool and school vis-à-vis differences in cultural norms. They noted the increased level of attention on the concept of inclusion in the Norwegian Framework Plan for Kindergarten and wondered whether this influenced the interpretation of bullying. This chapter therefore engages in an in-depth analysis of a theoretical framework of democracy as inclusion and exclusion processes. Hopefully, this investigation will contribute to an understanding of bullying focusing on children as a community and the societal and institutional conditions for relations between children.

3.5 Bullying Caused in a Need for Belonging, Can Lead to Exclusion

Various theoretical perspectives can be applied to explain bullying and in recommending intervention strategies. Rigby's (2004) analysis of different approaches concluded that none of these approaches have grasped all aspects of bullying. Research and intervention strategies ought to be informed by knowledge from different sources. Nevertheless, the understanding of what bullying is has important consequences for what kind of knowledge we seek about bullying (Schott, 2014, p. 22; Schott & Søndergaard, 2014, p. 2). Therefore, the theoretical perspective can be decisive in how we perceive and then prevent and intervene in bullying. The

Danish interdisciplinary research project Exploring Bullying in Schools (eXbus) consists of several researchers who are investigating bullying from an alternative standpoint to the dominant Olweus-inspired perspective of bullying. Unlike in the concept from Olweus, they do not focus on individual characteristics or a universal definition. Instead, they examine relationships and group dynamics, taking contextual factors into account. Researchers from eXbus explain that bullying is a consequence of social processes, whereby members of a group constantly worry about their own position and where their need to belong is threatened, with exclusion being a possibility. These researchers understand exclusion as a general phenomenon in normal groups, noting that it can move to social processes in awry directions and can develop into bullying (Myong & Søndergaard, 2013; Schott, 2014; Schott & Søndergaard, 2014; Søndergaard, 2009, 2014).

Although all these researchers see bullying as a need to belong, which can result in exclusionary processes, none of them refer explicitly to inclusion and exclusion as constitutive of democratic processes. Therefore, it might be useful to investigate whether the theory of democracy can expand our understanding of the processes that result in bullying. The starting point of my theoretical investigation is the research by eXbus. Different eXbus researchers have written about inclusion and exclusion in line with the political theorist Iris Marion Young. I will follow up on her perspective about democracy to address the question of inclusion and exclusion. Then I add some thoughts from another political theorists, Chantal Mouffe, and a theorist of education, Gert Biesta.

According to Young inclusion is a process of discussion and decision-making in terms of freedom from domination. She points out that the 'Calls for inclusion arise from experiences of exclusion – from basic rights, from opportunities to participate, from the hegemonic terms of debate' (Young, 2000, p. 6). Understanding bullying as exclusion does not require the existence of an absolute outsider to the group; rather, a borderline position might suffice. For internal exclusion, though people are formally included, they may find that their claims are not taken seriously and they are not treated with equal respect (Young, 2000, p. 55). Myong and Søndergaard (2013, p. 325) point out that the position of a victim can continue as exclusion when the excluded person is at a sufficient distance. Exclusion can then serve as a tool for strengthening inclusion within the group.

The need for inclusion in a group can promote goals for contempt, expressed as symbols of similarities and differences (artefacts such as clothes styles, interests, toys as well as behaviours, attitudes, norms and values). However, the selection of what is important as differences and similarities can be random and alternate from time to time (Søndergaard, 2014, pp. 51–52). This perspective centres not on the personal characteristics of the bully or victim but on what is 'here and now', the goal of contempt, and a tool for the group to achieve inclusion through the process of exclusion. Therefore, children's positions can shift from that of being bullies to being victims. It can be difficult for group members to uncover this, which can produce more fear. For adults it can be challenging to understand what is happening, making them question whether it can be called bullying (Myong & Søndergaard, 2013, p. 326).

The complexity of inclusion and exclusion processes – where they always require and are interwoven in each other in a unpredictable way – challenges how we have generally thought about bullying and intervention, perceived as a chronologic process – bullying – exclusion – intervention – inclusion (Myong & Søndergaard, 2013, p. 340). Myong and Søndergaard have also warned about our expectation that social processes can be free from exclusion. This understanding can reproduce a rigid separation between ‘positive’ similarities and inclusion on one hand and ‘negative’ differences and exclusion on the other. In every group, resistance and conflict will always be necessary to prevent hegemony. Demands for inclusion can conceal real differences because of, or can lead to, asymmetries of power. They warn of being blind to inclusion’s own exclusion.

From a deliberative democratic perspective, inclusion as democracy is a question about equality and freedom. Realising these values is not something that needs to be understood or decided on once and for all; it is a question that has to be asked in every new situation where questions about inclusion and exclusion arise (Biesta, 2011; Mouffe, 2000). This perspective goes beyond bullying caused by individual, aggressive factors or individual experiences of being bullied. Biesta (2010, p. 561) has maintained that freedom is not ‘a phenomenon of the will’ or a private feeling. He refers to Arendt (1961) who understood freedom as the possibility to exist together in plurality, where all participants can act as equal, but unique human beings.

According to a democracy perspective, which is based on the values of freedom and equality, it is significant to relate to others, not in an antagonistic way (relating to others as enemies) but in an agonistic way (relating to others as opponents). How to transfer antagonism into agonism has to be a central question in thinking about preventing and intervening in exclusion processes. This perspective makes it necessary not to look at opponents as good or bad, in moral terms, but in political terms, in light of questions about freedom and equality (Biesta, 2010, 2011).

Schott and Søndergaard (2014, p. 12) have employed the cultural–historical framework from psychology to empirically analyse the complexity of inclusion and exclusion processes in children’s groups. This approach understands human practice in terms of an ‘inner’ and dialectic relationship between the social and the individual. It corresponds with Hedegaard’s (2008, 2012) model for children’s learning and development. She highlights a dialectical perspective of conflict or tension between children’s motives and perspectives and the different demands from friends and caregivers in institutional settings.

Hedegaard’s model, more in explained in detail (2012) is suitable to grasp the complexity, both of the child’s intention and project, and what is going on in concrete situations. The model consists of three levels, the first of which is divided into two sub-levels: 1a) The personal (relational) level is about the child’s own intentions and perspectives. 1b) The shared activity in the group is where persons might have a common project, but there can occur conflict because the persons in the activity setting have different personal motives, intentions and projects. 2) The institutional level is about pedagogical practice and how practitioners create conditions for the social processes in groups of children. Material artefacts and physical conditions for the children’s agency and exploration of inclusion and exclusion processes are high-

lighted. 3) The societal level is about the formal and informal values and norms in a society, embedded in expectations regarding children's learning and cultural formation, influencing what is going on in the kindergarten (Hedegaard, 2008, 2012).

Hedegaard's model is relevant for analysing the complexity of bullying in kindergarten. The model can help us understand that the prevention of bullying is dependent of possibilities of cultural formation based on the values of freedom and equality in a democratic community. This approach does not focus primarily on changing individual factors. The overarching aim is to consider how individual motives and perspectives can be transformed into what is good for all in the community. An important question is to examine institutional conditions and societal values and expectations in terms of what is considered a good life for the children living together in the kindergarten (Hedegaard, 2008, p. 17).

3.6 The Empirical Excerpt and Methodological Aspects

An example of children's exploration of inclusion and exclusion processes in kindergarten is presented in the excerpt from a qualitative empirical research in four Norwegian kindergartens in 2013 and 2014. The main goal of the research was to employ a democratic perspective to investigate conflict situations between children and between children and practitioners. The project was reported to the Norwegian Centre for Research Data. Written consent from the practitioners and parents was obtained on the bases of assurances of anonymity, confidentiality and the right to withdraw at any time (Backe-Hansen, 2016). For the youngest children, consent was given by their parents, but for children over 3 years, I asked for permission to look at their play, how they make friends and how they re-establish friendships after a quarrel (Backe-Hansen, 2016; Bell, 2008; Hedegaard, 2008). The informants and kindergartens presented in the excerpt have all been given pseudonyms.

I spent 1 week in each of the four kindergartens to observe the interaction between the children and between the children and practitioners. During these weeks, I also had unplanned dialogues with the practitioners during lunch breaks, as well as more random encounters, all recorded in field notes and observation protocols. To obtain some knowledge about the context and institutional practice, institutional routines and physical framing factors were also observed (Hammersley & Atkinson, 2007). I attended staff meetings where the practitioners were asked to write about conflicts between children or about events where they personally had been involved in a conflict with one or more children. Furthermore, they were to state the time and location of the event and who was present – children and/or adults. They were also requested to reflect, in writing, on their perception of the event. Based on my own observations and a thematic analysis of 30 narratives (Gibbs, 2007), I developed a semi-structured interview guide and carried out 12 focus-group interviews with the practitioners from the four kindergartens. In the focus group interviews, the participants did not only answer the interview questions; they also discussed with each other and exchanged their views and experiences (Kamberelis & Dimitriadis, 2011).

Field notes, observation protocols and group interviews with the practitioners about conflicts involving the children during play were collected and underwent a thematic analysis (Gibbs, 2007). During the analysis of the empirical data, I discovered a few episodes that differed from other conflict situations. In particular, the power balance between the children involved was outstanding. I started wondering whether the observed situations could be about bullying. The selected excerpt is used as an example because a written narrative from Sara, one of the practitioners, chronicles a situation in which a boy (Sjur) was the target of a trap planned by two other boys in the preschool group. During the observation recorded in the excerpt, I positioned myself close enough to hear the conversation, not participating or disturbing the boys. Based on the ethical responsibilities of the researcher (Backe-Hansen, 2016; Bell, 2008), I chose to comment to one of the assistants that Sjur was excluded from the drawing activity for nearly an hour. I also enquired about Sjur's situation in the focus group interview. The observation protocol was analysed according to spatial and material factors. The utterances between those involved were analysed utterance by utterance, according to the dialogical model (Linell, 2009; Linell & Gustavsson, 1987). Because of space constraints for this chapter, the excerpt has been condensed.

3.7 A Case About Internal Exclusion in a Free Play Setting

The case is from a Norwegian kindergarten named Viben, with approximately 80 children. The oldest children belong to the preschool group, and especially the boys in this group seem to distance themselves from the rest of the children in the kindergarten (referenced from an informal dialogue with one of the kindergarten teachers). Analysis of the case reveals how Sjur is internally excluded (Young, 2000) from the activity in the outdoor free-play setting for nearly an hour, without the practitioners' intervention.

It is midmorning; the children and practitioners are outdoors. In front of the kindergarten building – there is a big area with a sandbox, swings and a couple of small huts. At the opposite end, there is a shed for toys and outdoor equipment. Tables and benches are located in different places in the outdoor area. Kai, Erik and Sjur (all 5 years old) are sitting around the table furthest away from the practitioners, who have taken places around one of the other tables, conducting some walks and talking with the children, trying to have an overview.

3.7.1 Free-Play Outdoors – Not All the Three Boys Are Drawing

Kai has brought a drawing book from home. The book and some boxes containing pencils are on top of the table. Erik is allowed to colour with Kai, and they sing together. Kai asks Sjur to find a skin-like colour. He finds the pencil and asks if he could draw too, but Kai answers that he is not allowed to draw before he himself is ready. Kai

orders Sjur to find a yellow pencil, which he does. Then Kai tells Sjur that it is not his drawing book. Erik replies: 'it is only ours!' Sjur objects: 'But I should just draw'.

Sjur continues to sit next to the boys, who are drawing, while he knocks two pencils together and sings. Kai says: 'It is my book, only one at a time'. Erik asks 'why?' Kai doesn't answer but invites him to his home, where he also has markers. Kai and Erik continue to colour. Many pencils fall to the ground, and Kai orders Sjur to 'take them up again!' He asks Erik: 'Do you want to draw him [the figure in the book], or do you want to draw there instead?' Sjur comments on the colours they are using and offers Erik a pencil. Kai comments: 'It's the colour you already have'. Sjur repeats: 'It is the colour you already have'. Kai replies to Sjur: 'Don't imitate me! I decide who is going to have brown hair. You have to take up the pencils!'

The kindergarten teacher Maia comes and asks if another boy can join in. Kai suggests that he can tear off a sheet for him. Sjur comments that he will get two drawings, one on both sides. Kai replies to Sjur: 'It's not you who decides. Stop imitating me! You are not allowed if you say it to me!' Sjur responds: 'I am not saying it to you'. Kai and Erik continue to draw and sing. Then Erik says to Sjur: 'Stop imitating me!' Sjur replies: 'I am not imitating, Erik'. Erik repeats: 'Stop imitating!' Sjur replies again: 'I am not imitating you'. Sjur, then Erik, place two pencils across in the box and sing together. Kai addresses Sjur: 'Take it away'. Sjur does what Kai orders him to do. Kai says to him: 'Look at what you are doing!'

Per (assistant) arrives and takes a picture. The observer says that the boys have been drawing for nearly an hour, but one (of the boys) has been waiting all this time to draw. Per replies: 'They find a way to do it'. The observer answers: 'Yes, it is obviously better to sit there' (to Sjur). Erik leaves the table but returns. He lays down on the ground and continues to draw. Sjur also lays down on the ground. Kai is left behind at the table, shouting: 'Who wants to draw?' Many children run to the table. Linn (assistant) comes and takes copies from the drawing book, which she hands out, including to Sjur. Sjur, Kai and some other children are now drawing, but Erik has gone away to the sandbox.

3.8 Bullying Analysed and Discussed as a Complex Exclusion Process

The analysis reveals findings which will be discussed according to the theoretical perspective presented in this chapter, highlighting the inclusion and exclusion processes from a democratic theoretical perspective. Hedegaard's model points to three levels of analysis, which the first level is divided in two: the individual (child), social (activity setting), institutional (the practitioners' practice) and society levels. These levels complement, but also glide into each other and give a sense of how complicated inclusion and exclusion processes can be. Although the children's intentions are not represented, the observation protocols, the written narrative from one of the practitioners and the focus group interviews with staff lend support for the interpretation of their perspectives (Hedegaard, 2008, p. 16).

3.8.1 *Individual – Relational Level*

In the excerpt, only three boys are presented in the drawing activity. The private artefact, the drawing book, seems to give Kai power (Myong & Søndergaard, 2013; Salmivalli, 2010, p. 14), which attracts the other boy, Erik, in an attempt to establish a closer friendship with him. Kai's exploration in achieving a closer friendship also occurs in the invitation to Erik to visit his home and to encourage him to personally choose the figure and colours he would like to draw. This attractive private drawing book gives him an opportunity to explore his power to decide who can join in as well as to define the position to Sjur (but not to Erik). In accordance with the traditional concept of bullying, he probably intends to exclude Sjur, but it is more likely a consequence of his attempt to establish a stronger friendship with Erik. For Kai, the exclusion of Sjur can be seen as a tool for his own inclusion (Helgesen, 2017; Myong & Søndergaard, 2013).

As long as Erik's interest in drawing persists, he accepts and supports Kai's leading role, although he asks why only one can draw at the time. Erik is motivated to draw and supports Kai's comments to Sjur, but he is also singing along with Sjur. In this situation, Erik seems to be more conscious about the drawing activity itself than to whom he wants to befriend. This is in line with what Nilsen (2005, p. 124) conceptualises as 'we-ness' or a common interest, depending on the situation and the attractiveness of the activity itself, more than to who is involved. This sort of 'we-ness', therefore, can change from time to time. When Erik gets tired of drawing, he simply leaves Kai and the other children behind.

Sjur awaits his turn to take part in the main activity, which is drawing. Even when another child joins later, and is allowed to draw, Sjur still has to wait, moving further back in the queue. He tries to get involved by singing, primarily to assist the other two, obeying orders from Kai, retrieving sticks from the ground. According to Perren and Alsaker (2006, p. 52), submissiveness seems to be characteristic of victims, but submissiveness might as well be a strategy for Sjur to try to be included in the ongoing drawing activity. He is demonstrating agency, trying to cope with the situation by serving the other two boys, commenting on and repeating the utterances of the others. He is not arguing loudly, screaming, demanding his turn to draw or explicitly defending himself. He only denies the accusation that he is imitating Kai.

Earlier research has revealed that children most often seek adults for help (Reunamo et al., 2015). However, all the while that Sjur awaits his turn to draw, he does not ask the practitioners for help. Research suggests that there is an expectation not to be childish or to seek help from adults, but to remain at a distance from practitioners. Reluctance to inform teachers about bullying can result from feelings of shame, fear of reprisal 'or fear their reports might be demised as non-credible' (Oldenburg, Bosman, & Veenstra, 2016, p. 66). Screaming or asking for help could have seriously stigmatised Sjur. To be seen as a snitch, or even worse, a victim, is not attractive to anyone.

It seems important for Sjur to be with Kai and Erik, although he does not participate in the preferred drawing activity. In a way, he occupies a border zone position,

partially making up one of the team (Wood, 2014, p. 12), and he can be seen as being internally excluded (Young, 2000; Schott, 2014). Sjur is actively taking part in the conversation but not in an equal way. His suggestions are not taken seriously. His behaviour is constantly criticised and corrected by the other boys. They address him in an antagonistic or hostile manner. Only once in the excerpt does Sjur repeat what Kai is uttering: 'It is a colour you already have'. This repetition can be interpreted as an attempt to support Kai, but Kai interprets it as a negative imitation. He also orders Sjur to stop imitating, even when this has not occurred. In the kindergarten teacher Sara's written narrative, it is also told that two other boys who are setting a trap for Sjur explain that their reason is because he imitated them so much. Sjur's so-called imitation seems to be a goal of contempt and a 'legitimate' reason for exclusion. According to Myong and Søndergaard (2013, p. 325), the goal of contempt can be randomly selected and seems to be based on the other children's definition of what Sjur has done, even when he is evidently not imitating.

Sjur probably does not define himself as an excluded victim. He patiently awaits his turn to draw. He also has one intention or project in common with the other boys (Hedegaard, 2008, 2012), to distance themselves from the practitioners, not giving them any signal which could call for their attention. In this respect, he is part of the group, doing the same project and contributing to a deal and unity with the other boys.

3.8.2 *Activity Setting*

The three boys belong to the same preschool group, but in the excerpt, they make up a small activity group (Hedegaard, 2012). It appears that they have different intentions and have different possibilities to acquire agency and to decide whom to be with. According to Lee (2001, cited in Löfdahl, 2010, p. 124), agency is related to dependence rather than independence, as everyone depends on others to be able to act. Moreover, access to power in the form of possessing attractive toys, such as a private drawing book, seems to generate power and attraction, albeit only temporarily.

It appears that the three boys, who were quiet and calm, are exploring access to power, trying out their own and the others' positions and agency. To have the possibility to conduct this exploration, the boys all understand that they have to avoid suspicions from the practitioners about what is going on. They tacitly agree to maintain their distance from the practitioners, not only in terms of space, but also by not engaging in behaviours such as physical force, crying or talking loudly or calling for the practitioners' suspicion about exclusion. They immediately accept when kindergarten teacher Maia asks whether another boy can join in. The three boys seem to do more than just reassure themselves about their own power. The children are exploring the world by subverting the rules and want to find out what the world will do when it is provoked (Henricks, 2010, cited in Wood, 2014 p. 11). It is important to see kindergarten as a place where children constantly try to create space and

manipulate the institutional conditions regarding the possibilities for inclusion and exclusion. Importantly, the three boys have common knowledge of how to avoid demands and expectations from the practitioners. This knowledge is developed and exercised by children within the institution and is not explicitly taught. It opens up the possibility for children to explore gaps and make room for their own activities (Markström & Halldén, 2009, p. 120), including the exploration of inclusion and exclusion processes (Löfdahl, 2010; Wood, 2014, p. 14).

3.8.3 *Institutional Level*

The practitioners told me that when the children are outdoors, fewer conflicts arise than when they are indoors, because there is more physical space and more possibilities for them to organise their own groups and play. Although the practitioners did go to the table where the three boys were sitting, they did not seem to wonder what was really going on between them. The calm behaviour and conversation seemed to protect them from the practitioners' attention. Teacher Maia even asked for another boy to be allowed to join in and was unaware that Sjur had been waiting and was being bypassed.

When I told the assistant (Per) what was really going on between the boys, he commented, 'They find a way to do it'. This response is consistent with expectations that preschool children are already socially competent and able to handle conflict (Franck & Nilsen, 2015). For the practitioners in this kindergarten, the expectations are that children themselves often find their own solutions to conflict. 'We try to intervene when there is a fight (assistant John) or 'when the children are arguing loudly' (assistant Peter). This is in accordance with research revealing that teachers are less likely to intervene when bullying is not physical (Yoon & Bauman, 2014, p. 312; Oldenburg et al., 2016, p. 65, Monks & Smith, 2006, p. 803).

In the group interview with the practitioners, I spoke about the observation of the three boys. I also mentioned the written narrative from one of the practitioners. The practitioners said that they are aware of Sjur's challenge to be included and that he had been better at seeking help from adults. At the same time, they saw Sjur as a boy who risked being invisible to practitioners. They had worked hard and Sjur had been better at voicing his opinions, but they think that self-assertion was an ongoing challenge for him. This interpretation is in accordance with cultural tendencies as well as earlier research focusing on the individual's lack of competence and ability to assert himself (Perren & Alsaker, 2006, p. 52, Lund et al., 2015; Kirves & Sajaniemi, 2012). Earlier research has also focused on individual social skills rather than on patterns of interactions between children or material and contextual factors (Schott & Søndergaard, 2014, p. 8).

The practitioners highlighted that, socially, school will be much more challenging. To be a schoolchild means to be more socially independent from adults. Therefore, Sjur had to settle conflicts himself. This is in line with theoretical perspectives that mute children's continuing development and maturity, which accentu-

ate their responsibility for their own choices, even at an early age. These perspectives can divert attention from the importance of adults and can lead to the risk of not seeing the point of engaging children (Hedegaard, 2009, p. 69–70). According to Hedegaard, there is a worry that too heavy a burden is laid on the individual child. There can also be too much focus on the individual child's lack of self-esteem and social competence as not reflecting social relations and context. The practitioners appear oblivious that exclusion can serve as a tool for inclusion in the group (Mouffe, 2000; Myong & Søndergaard, 2013).

3.8.4 *Society Level*

Free play is highly appreciated in Nordic kindergartens and according to the Norwegian Kindergarten Act, childrens' play is already mentioned in Chap. 1, Sect. 1.1: *The purpose and content of kindergarten*. Kindergartens "shall contribute to well-being and joy in play and learning [...] be a challenging and safe place for community life and friendship [...] and promote democracy and equality and counteract all forms of discrimination" (The Kindergarten Act no. 64 of June 2005, Amended in Act No.119 of 19 December 2008, p. 1.).

In Nordic kindergartens practitioners also have internalised an ideology characterised by values and ideas about the free child, especially valuing children's free outdoor play (Helgesen, 2010; Kristensen, 2014; Paavilainen, 2017). However, the practitioners in Viben kindergarten did not appear to be concerned about their own role of withdrawing from the preschool boys' free play outdoors. This subscribes to a romantic view on children and childhood. Children should be relatively free from adult intrusion and direction, enabling them to exercise agency, self-regulation, ownership and control and to direct their own learning (Franck & Nilsen, 2015, p. 4; Wood, 2014). This ideology draws on the kindergarten tradition and makes kindergartens different from school-oriented institutions (Markström & Halldèn, 2009, p. 115). However, free play, not even outdoors, is never completely 'free'. The physical spaces available, explicit and implicit rules and children's social networks continue to provide a framework for children's actions, although they do alter this (Paavilainen, 2017, p. 17).

Based on the analysis of the presented excerpt, it is important to comment on the Norwegian Framework Plan, which highlights that 'If a child experiences harassment or bullying, the kindergarten must deal with, stop and follow up on it' (Norwegian Directorate for Education and Training, 2017, p. 11). As we have witnessed in Sjur's position in the group, it is not always necessary a child's own experience of being bullied, which seems to be decisive. His position in the activity setting can be perceived as borderline, partially participating in the ongoing activity. In light of the theory of democracy, what is decisive is the lack of opportunity of equal participation and the antagonistic way of excluding. This perspective can lead to greater focus on exclusion as an observational phenomenon rather than mainly what an individual child experiences or perceives (Paavilainen, 2017, p. 66).

Also important is how realistic it can be to put an end to exclusion as a phenomenon. Myong and Søndergaard (2013 p. 340) warn about being blind to inclusion's own exclusion. As we have seen in the relations between Kai and Sjur, attempts to be included can result in exclusion (Young, 2000). These processes are interwoven in an unpredictable way (Myong & Søndergaard, 2013). Unlike strategies aimed at eradicating bullying as a chronological process from exclusion to inclusion, preventing bullying and promoting democratic formation demand everyday attention from practitioners. This assumes a consciousness about practitioners' responsibility to follow up on children's 'free play' on the basis of questions about equality and freedom – where everyone participates (Young, 2000). It demands insight into children's cultural formation as exploring and shaping of social relations, to be able to recognise power and positions at play and to constantly perform the pedagogical work of striving for democracy as inclusion in kindergarten. It is, therefore, not sufficient to focus on individual competence, lack of social skills, individual feelings or experiences of been bullied, nor is it sufficient to consider how institutional conditions and physical factors influence children's exploration of inclusion and exclusion processes. It is necessary to go beyond bullying events, armed with the knowledge and a deeper understanding of how to actively contribute to meeting others in an agonistic, not antagonistic, way and to strive to live together in plurality (Biesta, 2010, 2011).

3.9 Conclusion

A democratic approach to bullying does not deny or trivialise children's own experiences or feelings about bullying. There will always be the need to listen to and take every child's perspective seriously. However, Sjur does not seem to express experiences of bullying. Rather, he seems to hide what is happening to him, i.e. not being childish by asking for help. He is concerned about the common aim and project to have a physical as well as relational distance from the practitioners. It is doubtful whether Kai's attitude towards Sjur is rooted in aggression or intention to hurt. It seems more likely that his exploration of power and attractiveness to Erik explain this exclusion.

A more contextual understanding of what is going on *between* the children, though insufficient, seems to be necessary to understand, detect and prevent bullying. From the theoretical perspective of democracy, it seems expedient to look at children's cultural formation as a constant exploration of inclusion and exclusion processes. This perspective sees inclusion and exclusion as complex ongoing processes that can lead in awry directions. It does not call for a focus only on the individual child, nor does it call for universal strategies for the intervening in and the prevention and eradication of bullying. It demands that practitioners work daily to support the social and physical conditions of every child to be included in play. The aim of this work is to strive for the freedom of equal participation and to be together in plurality as a never-ending cultural formation process.

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Chapter 4

Children's Explorative Activities in Kindergarten Playgrounds: A Case Study in China and Norway



Hanne Værum Sørensen and Åsta Birkeland

4.1 Introduction

Through the more than 100 years of history, Early Childhood Education guidelines and practices in China as well as in Norway have weighted activities such as play, knowledge learning, skills and everyday work differently. During the first period of Chinese ECE, kindergartens were influenced by the thinking of Chen Heqin (Huo, Neumann, & Nanakida, 2015). He emphasized everyday activities as the basic curriculum, whereas the period influenced by Soviet ECE was emphasizing subject learning and skills. In China, recent educational reforms (Ministry of Education (MOE), 2012) have reformulated the importance of play in ECE (Huo, Neuman, & Nanakida, 2015; Pan, 2018) and exploration (Central Committee, 2018 in Hu, [this volume](#)). In Norway, there has been parallel institutions such as asylums (childcare centres), kindergarten and day care centres, which weighted activities differently. The asylums (childcare centres) focused mostly on everyday activities and developing working skills whereas the kindergartens weighted play. In Norway, various stakeholders are now questioning the dominant role of play within contemporary ECE and kindergartens face pressure to have more structured learning situations and focus more on the content (Einarsdottir & Wagner, 2006; Sommer, 2015; Øksnes & Hangaard Rasmussen, 2017). The situation in kindergartens in both countries is at a turning point that sees teachers, owners and managers challenged to reflect on how to change common practices to meet society's new demands and expectations (Chaiklin, 2014).

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Activities in the outdoor playground have different historical and cultural traditions in China and Norway. In ECE in China, outdoor activities have primarily been deemed a time for physical activity and training, whereas ECE in Norway has focused on outdoor activities as a valuable time for play. With new curriculum reforms, both countries focus on a wider range of purposes for outdoor playtime, such as physical training, learning activities and play. However, the practices of being outdoors are different in the two countries due to different conditions.

Traditionally, Chinese philosophy, such as Daoism, emphasizes human beings' harmony with nature (Cooper, 2014; Maki, 2016). With increasing urbanization and expanding cities, public parks have become even more important for Chinese citizens. People gather in the parks to do morning exercises individually and collectively. Activities such as martial arts (Gong Fu and Tai Chi) are quite common. The Norwegians traditionally have a strong and close relationship with nature. Activities in nature are highly valued in children's upbringing and cultural formation. Children are encouraged to be active in nature from a very early age by walking in the mountains, playing in the snow, skiing or swimming, as a way to let children learn that humans need to accept the power of nature, and learn to like the experiences that nature offer (Næss, 1973 in Karlsen, 2015).

In most kindergarten contexts, young children are perceived as active agents who learn about themselves and the social world through their participation in social situations in different institutional contexts (Hedegaard, Flear, Bang, & Hviid, 2008). Participation itself does not promote agentic children. Social situations and activity settings that urge children to explore the situations must be provided (Ødegaard, [this volume](#)) and thereby create possibilities for children to become agentic. In order to encourage and promote children's development of agency and cultural formation as agentic members of modern society, ECE institutions must provide conditions for children's cognitive, physical and social exploration (Hedegaard, [this volume](#)).

Prevailing assumptions in the Nordic countries seem to indicate that children's free play facilitates exploration, while teacher-structured activities limit children's exploration (Sommer, 2015). Another assumption is that children have an agentic position in play, and they do not have it in teacher-initiated activities. These dichotomies need to be challenged theoretically and through empirical work. We suggest that the concepts of *exploration*, *explorative activities* and *children as explorers* can be useful in crossing the border and disturbing these dichotomies. Exploration is a concept, akin to curiosity, that involves investigation and examination, testing opportunities, challenging rules and giving resistance (Ødegaard, [this volume](#)). The concept illustrates the importance of dialogical engagement from the kindergarten teachers. Although the teachers may have a plan for their activities, they are still attentive to and open for a focus shift when children are distracted of experiences in the situation (Ødegaard, [this volume](#)).

Through a cross-cultural case study of outdoor playtime in the playground in two kindergartens, one in China and one in Norway, we investigate how diverse societal, institutional and personal conditions (Hedegaard, 2012) in the activity setting – *outdoor playtime* – encourage children's exploration. By using examples from Chinese

and Norwegian kindergartens, cultural-historical varieties of conditions can be identified.

The concepts of environment and conditions are crucial in the analysis. We are inspired by Leontiev's theory of the role of the environment (Leontiev, 2005) and the cultural-historical perspectives on societal, institutional and personal conditions (Hedegaard, 2009). Following these theoretical perspectives, we will present examples of outdoor playtime from two kindergartens and discuss the examples with the question: What characterizes the personal, institutional and societal conditions for children's exploration in outdoor playtime in Chinese and Norwegian kindergartens?

4.2 Conditions for Children's Exploration

We base our study on a cultural-historical approach, understanding children's development in a *wholeness perspective* as a dynamic and dialectic process between the person's activities, intentions and motives, and the institutional traditions and practices, societal demands and material conditions (Hedegaard, 2009, 2012). Based on cultural-historical theory, we view children as active agents interacting with their surroundings (Hedegaard, 2012; Leontiev, 2005; Vygotsky, 1998). These perspectives will be our point of departure when we conceptualize children's explorative activities in the playground. Understanding development requires considering activities and interactions and the cultural setting as developed over historical time, which gives meaning to those activities and interactions.

According to Leontiev, the true unity that needs to be investigated is "the unity of subject and object, the personality of a person and his human reality" (2005, p.11). Children are individuals with different motives and competences that change over time as children learn and develop through experiences in different situations. The same activity can have different meanings in different practices for different children depending on their motives, interests and self-understanding. In addition, teacher-child interactions depend on the participants, time, place, situation and the interpretation of the situation. Kindergarten teachers have different personalities, personal values, thoughts and experiences that influence their pedagogical practice and decision making about the right action in a given moment. Kindergarten teachers are individuals that are educated and socialized to have specific pedagogical values and traditions. They need to follow curriculum plans and meet societal demands and expectations, but they also have to act independently in day-to-day realities of various interactions with children and communities.

In line with these ideas, we investigate different conditions for and styles of children's activities in outdoor playtime in Chinese and Norwegian kindergartens. We take the dialectic relation between children, the material environment and national factors (culture, traditions, values, political systems and the societal view of children) into consideration when we investigate the conditions for outdoor playtime.

Our analysis of conditions for children's explorative activities in kindergarten playgrounds in China and Norway builds on Hedegaard's (2009) model of personal, institutional and societal perspectives and the *activity settings*, which are planned and organized situations or routines in the everyday life in kindergarten, in which children are expected to participate. Conditions for social situations are shaped at different levels (Hedegaard, Fler, Bang, & Hviid, 2008; Hedegaard, 2014) including the society, the institution and the personal level, and the dialectic relations between these levels.

The societal perspective in Hedegaard's model contains the historically developed context of the society, where traditions and values are developed through generations and implemented in laws and policy documents. In Hedegaard's model of children's activity settings in different institutions (2012), the societal perspective is depicted as cultural traditions in the different institutions of society, reflecting different value positions. Societal conditions for early childhood institutional practice include location and housing, the kindergarten's physical and economic conditions, structures and routines of the day based on the societal demands, as interpreted by the kindergarten teachers and managers in cooperation with parents. These conditions influence the social practices and activity settings in which the children may take part. Societal conditions and political decisions also influence the education of the professionals responsible for the pedagogical practice at the institutional level of kindergartens.

Institutional practices in kindergarten create conditions for children's activities and the activity settings in which they participate. Parents' demands and expectations, and different children's personal developmental needs and problems, are also included in the conditions for kindergarten practice. The institutional level is the everyday practice in a kindergarten and in families. This practice has to be seen as working towards connecting and fulfilling societal traditions, values and anticipations with personal motives, education, values and ideas for the benefit of children.

The persons' perspective includes adults and children as participants in different institutional settings. The teachers in kindergarten and school are part of society, socialized through their own upbringing and education and their understanding of the demands and expectations put on them by society, the local municipality and parents. The children have their first social experiences in the family, where they are socialized into traditions and norms in their own family, before they meet and make meaning of demands and expectations from kindergarten teachers and other children.

Activity settings are shared activities, such as outdoor playtime (Hedegaard, 2012). Analysing and conceptualising what is going on in an activity setting, means investigating the societal and institutional conditions for the activity setting together with the demands on children and kindergarten teachers in the social situation. This means that it is the unit of children and their conditions that need to be focused.

4.3 Studying Children's Exploration in Kindergarten

The examples in this article are examples from a qualitative field study by Sørensen and Birkeland (2017). Children's activities in the outdoor playground in one kindergarten in China and one in Norway have been studied.

The kindergartens are typical in terms of the quality standards in each country. Both kindergartens emphasize outdoor activities. The Chinese kindergarten is working hard to implement the new demands in the curriculum guidelines about more outdoor time for children with a variety of activities such as gardening, animal care, physical exercise, play, games and projects. The kindergarten in Norway is an outdoor kindergarten, which means that the children and the kindergarten teachers spend most of the day outside. They often go on trips to other play spaces, parks, sport areas or natural settings to play, ski, ice skate or mountain walk. They also spend relatively more time in the kindergarten playground than the typical Norwegian kindergarten. Their lunch and afternoon snack are usually served outside, unless it is very cold or raining heavily. The kindergarten has a small bus, so they also can reach places that are not within walking distance of the kindergarten.

The fieldwork was carried out during March 2017 by obtaining photo and video-material from the playground in each kindergarten. The photo and video material from the kindergartens consists of 3 h of video and more than 100 photos taken during 7 days of observation in the Chinese kindergarten and the same amount of material from 5 days of observation in the Norwegian kindergarten. The data material also includes framework plans, descriptions of the playground and interviews with the principals and teachers. Birkeland carried out the empirical work in China and Sørensen did so in Norway. Both authors conducted a joint analysis of the material with Hedegaard's perspectives as a point of departure.

The two examples chosen for this chapter are observations of teacher-initiated activities in the playground. We have chosen the teacher-initiated activities because they illuminate more clearly the relations and interactions between the teachers and children in outdoor playtime. The example from China is a teacher-initiated game that was well prepared but that includes spontaneous interruptions by the children. The example from the Norwegian kindergarten occurred more spontaneously and was initiated by the teacher in response to the rain and cold.

As researchers, we are situated in the Nordic context, Denmark and Norway. Additionally, Birkeland has more than 15 years of experience with ECE in China (Birkeland, 2012, 2013a, 2013b, 2016, 2019), and Sørensen has several years of experience with outdoor activities in kindergartens in Denmark and Norway (Sørensen, 2013, 2016, 2017). Therefore, the researchers have both insider and outsider perspectives on the ECE practices in both countries.

The Norwegian Centre for Research Data, NSD, has approved the study ethically. As researchers, we have a thorough knowledge of young children's learning and development in ECE. We have insight into the legislation and purpose of the researched institutions, and we were ready to leave the role of researcher and take on the role of responsible adult in every situation during our research (Sørensen,

2014). We respect children's integrity, safety and well-being as well as the children's and kindergarten teachers' right to be anonymous in our research.

4.4 Children's Explorative Activities in Teacher-Organized Activities in *Outdoor Playtime*

For the analysis of children's explorative activities, we have chosen one clip of video observation from each kindergarten, where a teacher-organized activity related to physical activity and development and to health and well-being is taking place in the playground.

4.4.1 Case 1. The Jumping Relay – *Chinese Kindergarten*

A warm and sunny day in a playground in China

Children and kindergarten teachers are busy playing a game with Frisbees... when suddenly the sight of a kindergarten teacher on the roof catches the attention of some of the children: What is he doing? Why is he on the roof? Is he allowed to be on the roof? Does he know that it can be dangerous?

The weather is warm and sunny, and the air quality is acceptable for outdoor activities.¹ The children in the middle class have been doing their daily collective physical training, including Gong Fu,² in the morning outdoor time with all the 4-year-old children in the kindergarten, approximately 90 children in total.

The 30 children in this class and their kindergarten teachers have moved to another spot in the playground to do a jumping relay. The relay lasts for about 20 min. After the relay, it is time for children-initiated activities. The example illustrates how the kindergarten teachers act and interact with children in the teacher-organized relay.

The main teacher introduces the game where children are lined into three rows. Three children in front will start and jump as fast as possible to a turning point and then back to the line. Then the next three children will jump. The point is to be the first line to finish the relay. The children are divided into three groups and the teacher demonstrates how they are supposed to jump on both legs with the Frisbee between their thighs. The second task is to keep the Frisbee between the thigh and the lower leg and jump on one foot. The children start to jump. They are all focused and concentrated. There is a playful atmosphere and lots of laughter. When some of the children drop the Frisbee, the teacher helps and demonstrates how to try again.

¹The local authorities in China decide when children need to stay indoors due to weather conditions or the levels of air pollution.

²Gong Fu is a traditional Chinese martial arts-activity.

Until now, the children have been occupied with the relay. Suddenly, something unexpected happens, and there is a break in the activity.

Some of the children notice one of the male kindergarten teachers on the roof of the kindergarten. He is fixing a broken part of the roof. The children stop the relay and start shouting to him: "Be careful!" "Do not fall down from the roof!" "Make sure to have something to hold on to!"

Some of the children are laughing excitedly and some of the children are shouting and looking afraid. The teacher in the relay activity accepts the interruption and explains to the children why the teacher is on the roof. She joins in with their excitement and eagerness.

When observing the children, it is difficult to observe whether the children are exploring the use of the Frisbee, or whether they are obeying the teacher. Some of the children are much focused and ask questions about how to do it. The teacher explains the rules of the game. She demonstrates how to use the Frisbee and helps the children do it correctly. She is observant and listens to the children's questions. She is relaxed and the children laugh when she participates in the game and fails to keep the Frisbee between her thigh and leg.

There is a shift in the activity when the children observe the male teacher on the roof. The teacher is open to the children's reactions and questions when observing the other teacher. They explore the rules for walking on the roof and the possible dangers. Although the societal and institutional expectations and demands are to emphasize the importance of concentration in the game, this teacher seems to be flexible and allows for the children's distraction, which leads to curiosity, engagement and questions. She seems to understand why the children are upset and join in their anxiety.

The jumping relay was a structured activity, organized to meet the demands of children's physical activities. The game was fulfilled in a positive atmosphere and the kindergarten teacher allowed for distractions and joy.

4.4.1.1 Summary of the Jumping- Relay, Chinese Kindergarten

Kindergarten Teacher's Activities

The kindergarten teacher, Jingwei, had planned the activity. She organized the relay immediately after the collective physical exercise activities by dividing the children into three groups and explaining the rules of the relay. She was demonstrating use of the Frisbee, observing the children, answering their questions and correcting them in their use of the Frisbee. In addition, she took part in the relay laughing and joking with the children. When the children were distracted by the incident on the roof, she took part by answering their questions and asking them questions.

Children's Activities

The children were participating in the relay, they were modelling the teacher, competing, talking and discussing, laughing and having fun. Some children were occupied with the competition. Other children were more eager to find out how to use the Frisbee and modelling the teacher. Sometimes the children were engaged in playful

communication with other children while taking part in the game. All children were distracted and seemed to forget the game when they observed the teacher on the roof.

4.4.2 Case 2. The Chicken Game – Norwegian Kindergarten

A cold and rainy day in a playground in Norway

Some children are cold, maybe bored, waiting for permission to go inside... when suddenly the kindergarten teacher initiates and invites the children to play the chicken-game: What kind of a game is this? What are the rules? What is it like to be a chicken, hunted by the wolf? What is it like to be a chicken mother? What is the wolf's best strategy to catch all the chickens?

The weather is cold, it is a rainy³ Friday afternoon and the children have been outside since around ten o'clock in the morning and now some of them want to go inside the house. Observing that some children are freezing and inactive, one of the kindergarten teachers initiates *the chicken game* to engage the children in some collective play-activity and motivate them to be physically active. She invites the children to participate, by gathering 12–15 children to explain the rules. The main content of the game is the dialogue between the “chicken-mother” and her “chickens”, shouting to each other from either side of the play area and the hungry wolf running after the chickens. The leading role is the chicken-mother who controls the process of the game, while the role of the hungry wolf can be a bit scary, since the wolf is a dangerous creature, wanting to catch (and eat) the chickens. The role of a chicken provides the possibility of hiding in the large group, and feeling safe, but being a chicken is also risky because the wolf will catch them and eat them. Chickens who are caught become wolves and thereby their role in the game changes.

The oldest children choose to be the chicken-mother or the wolf in the beginning. The youngest want to be the chickens. The kindergarten teacher's facial expressions and body language show that she is listening to the children, and she tells them what to do in the role they have chosen. Two children are the chicken-mother and stand approximately 15 m away from the chickens. Their role is to call for all their chickens to come home. The chickens are the largest group in this game and anyone can be a chicken, the more the better. Two children are wolves, standing on the side of the area, ready to catch the chickens as they run over to the chicken-mother.

Before the game begins, the teacher builds up a collective imagination of a scenario with the chickens, the chicken-mother and the hungry wolf. By building up a play-scenario; the collective imagination of chickens and wolves, the teacher invites the children to play with her and thereby she motivates the children to be physically active on a cold and wet afternoon. She creates an imaginary dangerous situation, share it with the children and at the same time, she ensure the children with her

³In the west coast of Norway, it rains a lot, because the Golf stream provides warm winds and wet climate. On average, it rains 20 days every month.

facial expressions, hugs and verbal props, that it is play and fun (Fleer, 2013), and by doing this, she prevents boredom and unhappiness for the youngest children on the playground.

Chicken-mother shouts aloud: *Come home, all my children.*

Chickens answer, they are shouting too: *NO! We will not come!*

Chicken-mother: *Why not?*

Chickens: *We are afraid of the wolf!*

Chicken-mother: *What will the wolf do to you?*

Chickens: *He will eat our meat and drink our blood!*

Chicken-mother: *Come home anyway.*

Then there is a lot of running, screaming and laughing. The teacher participates in the game while being the instructor and a role model. When she plays the role of the wolf, she runs after the children shouting: *"I will come and get you,"* and when she catches someone, she gives the child a hug and a *"hello you"*, with a smile and laughter. The oldest children seem very familiar with the game and its rules, some of the younger children look surprised and excited. The air is filled with shouts and laughter, and cries of triumph and frightened delight. The game lasts about 30 min as a teacher-organized activity, and then some of the children continue to play the game on their own.

The chicken-game highlights how being part of an outdoor kindergarten and interacting dialectically with the weather conditions motivates the teacher to initiate group play to prevent the children being cold or possibly bored, which would be a hindrance to the goal of letting the children experience the joy of being outdoors for many hours in all types of weather. The collective imaginary play allow children to go in and out of the play-frame and thereby, as Fleer argues (2013), play can become the vehicle of abstract thinking.

4.4.2.1 Summary of the Chicken-Game, Norwegian Kindergarten

Kindergarten Teacher's Activities

The kindergarten teacher, Sara, initiated the game spontaneously, and she invited children to participate. Sara explained the rules of the game; she demonstrated what was expected in the different roles, helped children to choose a role and corrected children in their roles. Sara listened to children's questions and answered them. While she was laughing and joking with the children, taking part in the game, she was also observing children's activities and engagement, caring and comforting when needed. After a while, when the children were playing by themselves, she left the game.

Children's Activities

The children participated in the chicken-game, they modelled the teacher, competed, discussed, laughed and had fun. Some children (the oldest) were very eager to participate in the game and to play their chosen role. Some children (the young-

est) were more dependent on support from the kindergarten teacher. Sometimes the children were very engaged in playful communication with other children while taking part in the game.

4.4.3 *Summary of Our Findings*

The examples illustrate how kindergarten teachers act and interact with children during outdoor playtime, giving space for children's initiatives and exploration in a playful way that can be characterized as dialogical engagement.

4.5 Discussion of Conditions for Children's Explorations

In the following section, we will analyse and discuss our examples in terms of societal, institutional and personal levels/perspectives.

4.5.1 *Societal Needs, Expectations and Demands*

ECE is a historically-grounded social practice influenced by changes in societal conditions, such as changes in the ideas of what is important in children's everyday life and how kindergarten can offer the best possibilities for learning and development (Chaiklin, 2014). Historically, Chinese kindergartens value indoor activities as the best conditions for children's learning and development. Outdoor activities have been deemed a time for exercise and physical activity. In Norway, there is a strong tradition of believing that outdoor activities in nature offer the best conditions for children's cultural formation and learning and development.

Activities in Chinese kindergartens are structured by the new government guidelines (MOE, 2012) with detailed instructions about the goals of activities and children's achievements. According to these guidelines, children should achieve specific goals at certain ages. Another example of societal expectations are the expectations from the schools. The National Entrance Examination of all Chinese students fosters competition to attend the best schools and universities. This emphasizes academic knowledge learning and skills at an early stage. Parents and grandparents put equivalent pressure on children. After school classes for preschool children is quite common. Although the one child policy has ceased, most parents still have one child; this results in high pressure to be socially mobile. These conditions put high expectations on kindergartens to teach the children sufficiently so they can reach the goals described in MOE and later continue to the top schools and universities (Lyså, 2018).

The activities planned and fulfilled by the kindergarten teachers in Norwegian kindergartens are regulated by core values with roots in Christian values and in the Child Convention that states that children shall have their own voice and be brought up to become members of a democratic society. These values should be “promulgated, practised and manifest in every aspect of a kindergarten’s practices” (FP, 2017:7).

Despite the different traditions and expectations, the atmosphere in both kindergartens was warm, light and positive, without signs of stress or pressure to reach some specific goals, but with plenty of time and possibilities for exploration within the frame of the curriculum activities.

4.5.2 Institutional Organization and Demands

The institutional practice is to structure and organize outdoor playtime with regular physical activity and play in the activity setting: *Outdoor playtime in a kindergarten playground* in Chinese and Norwegian kindergartens. At this level, time, space, equipment, children-teacher ratio, human conditions and relations are relevant.

The Chinese kindergarten is a public kindergarten with 300 children aged 2–6 years in 10 different groups. The child-teacher ratio is approximately 12:1. The kindergarten is situated in a suburb and focuses on outdoor activities. At the institutional level, the traditions of structuring tasks and activities limited to 20–30 min is prevalent in Chinese kindergartens (Birkeland, 2019). This is a tradition from the Soviet-inspired era where the daily schedule was divided into subjects. Although educational reforms put more emphasis on individualized and child-centred activities, the time schedule in Chinese kindergartens has prevailed with few changes. This is also due to the institutional order. The indoor and outdoor space is limited and needs to be shared by different classes.

In the outdoor activity, the main teacher leads the activity and the assistant teacher supports the children and the teacher. The activity itself is mandatory as part of the outdoors activities. Firstly, there is 20 min with collective physical training, secondly there are collective games for approximately 20 min and finally there is free play for 40 min when the children can choose different activities by themselves.

The Norwegian kindergarten belongs to a private kindergarten-chain with 28 kindergartens. There are 90 children, from 0 to 6 years old, in six groups. The child-teacher ratio is 6:1. It is an outdoor-kindergarten, which means that the oldest children (four to six) spend most of the day outdoors in any kind of weather conditions. In Norwegian kindergartens, children spend between 1 and 2 h outside every day, and fulfil pedagogical learning activities, like art, language and science activities, indoors. In the outdoor kindergarten, the majority of activities are fulfilled outdoors in keeping with the philosophy of an outdoor kindergarten that all kinds of activities can take place outdoors. The kindergarten has a large playground and access to other outdoor areas, like public nature playgrounds, forests, parks and sports arenas. The activity setting *outdoor playtime* lasts from lunch to late afternoon, and the

game lasts for as long as the children are engaged. In the beginning, one teacher is engaged in the game, and later there are two kindergarten teachers and 12–15 children. The first teacher initiates the activity and interacts with the children, and the second teacher participates after a while. Children's participation in the activity is voluntary and only half of the children and kindergarten teachers present in the playground participate. Usually, the outdoor playtime is an activity setting where children can play what they want to, use the terrain, equipment and artefacts for running, biking, climbing, playing in the water or the mud, swinging etc. The kindergarten teachers supervise and participate based on what they think is needed for the children to have a good time in the playground. They also sometimes cook warm meals on a bonfire.

Despite different structural conditions for the kindergartens related to outdoor playtime, both kindergartens allowed children explore and experience the outdoor play possibilities. With several groups sharing the Chinese playground, the transition from inside to outside is quick. In contrast, the large space and the need for the children to dress appropriately for the weather make the transition from inside to outside in the Norwegian kindergarten more time consuming.

4.5.3 Kindergarten Teachers' Motivation and Engagement in the Activity Setting

Kindergarten teachers are trained professionals, but they are also individuals influenced by their background, traditions and experiences when they organize, lead and supervise pedagogical activities, and accept or reject children's disturbances and ideas.

The kindergarten teachers in the Chinese and Norwegian kindergartens follow the guidelines for the pedagogical practice related to physical activity and development. The Chinese MOE gives quite detailed instructions for the pedagogical practice and the activities related to physical activity, while the Norwegian FP offers a more open frame for the pedagogical practice. In the Chinese kindergarten, the teacher follows a plan, interacts with the children in a fun way and takes part in the Frisbee activity. She allows disruptions to the activity, especially when the children notice another teacher walking on the roof.

In the Norwegian kindergarten, the teachers allow the children to play in the playground as they want to, undisturbed but supervised. The kindergarten teachers support the children during the free play, and only intervene by initiating a game with some of the youngest children when they think it is necessary for the children's well-being and to avoid discomfort and cold. The teacher's intention by introducing the chicken-game was to encourage children to be physically active and prevent them feeling too cold and not wanting to be outside. The teachers observed, analysed, supported, participated in and enriched the game, based on the children's ideas. The chicken-game was a spontaneously organized activity. Although it was

not planned in advance, the game is part of the pedagogical activities used spontaneously and as necessary in the kindergarten.

4.5.4 Children's Motivation and Engagement

In the Chinese kindergarten, all the children in the class participated in the game. This was expected and none of the children seemed to question their participation. When the game started the children showed different levels of engagement. Some of the children seemed to be engaged in the competition, some in exploring the task with the Frisbee and some children were mostly engaged in playful communication with other children.

In the Norwegian kindergarten, the youngest children's intention was to participate because the teacher asked them to and because they were curious to see what would happen. Some of the children might have participated because their friends did. They seemed to like the teacher, and they have probably had some earlier experiences with her as a nice and funny person to be with, and as a warm, caring and playful teacher. The oldest children could participate if they wanted to.

The exploration in choosing different roles was evident when the children first chose a familiar and not overly demanding role as one of the chickens. Then some children tried out the more demanding role of chicken-mother, which involved initiating the task and engaging in dialogue. Observing this game allowed us to see if the children chose a role they were familiar with and if they during the repetition of the game chose to change roles from a chicken to either the chicken-mother or wolf. While the children seemed to be motivated and engaged in the game and having fun in their roles, some of the children were particularly courageous, especially the youngest chicken-children who teased the "wolves" by imitating and modelling the attitudes of the teacher and the older children. The children's laughing, jumping and running in the game highlighted exploration of a role in a game, challenging authorities and trying out one's strength and courage.

The following Table 4.1, sums up the conditions and expectations on the societal, institutional and personal levels.

4.5.5 Climate and Air Quality

We have argued that a wholeness approach is required, meaning that societal conditions and societal needs, institutional conditions and personal conditions must be considered. When discussing conditions for children's explorative activities in the outdoor playground, it is also necessary to take the climate (level of clean versus polluted air, quantity of rain and hours of sunshine) into consideration. This is illustrated in Table 4.2 as an elaboration of Hedegaard's model (2012).

Table 4.1 Conditions and expectations on societal, institutional and personal levels

Levels, conditions and expectations	China – jumping relay	Norway – chicken game
Societal level	Societal level	Societal level
National guidelines	Detailed instructions about goals and assessment	Recommends physical activity and outdoor experiences
Expectations from school system	National entrance examination with tough competition for social mobility	Schools expect children to be able to listen and focus on school activities
Parental expectations	One child policy expecting learning	Expecting social competencies and outdoor experiences
Institutional level	Institutional level	Institutional level
Time and space	Activity setting limited to 20 min	Activity setting lasts from lunch to late afternoon, and the game lasts for as long as the children are engaged
Human conditions	Two kindergarten teachers and 30 children	One (or two) kindergarten teachers and 12–15 children
Division of labour	The main teacher leads the activity. The assistant teacher supports the children and the teacher	Teacher 1 initiates the activity and interacts with the children.
Rules	Mandatory	Teacher 2 participates after a while
Artefacts and equipment	Frisbee, music	Voluntary, informal Playground equipment
Personal level	Personal level	Personal level
Kindergarten teachers' expectations and demands	Kindergarten teachers' expectations and demands	Kindergarten teachers' expectations and demands
	Participation	Participation
	Engagement	Engagement
	Dialogical engagement	Dialogical engagement
Personal level	Personal level	Personal level
Children's exploration	From following rules and instructions in a teacher-directed game to forgetting the game and fully concentrating on the incident on the roof	From a peripheral participation in the easiest role to a more demanding role, showing courage and daring to tease the other participants (the wolves)

Climate conditions influence outdoor activities in different ways. On the societal level, the Chinese guidelines and the institutional practices have rules for being indoors depending on air pollution and weather conditions. Children's clothing exemplified in this kindergarten makes it easier for them to go outside and inside repeatedly. In the kindergarten in Norway, clothing takes some time, and children need help from adults, to be ready to go outside. The children are trained and expected to learn from an early age to dress themselves for outdoor playtime. In addition, the understanding of children's health and well-being, physical activity and sun-exposure differs in the two settings.

External conditions such as the climate and weather influence pedagogical practice. The two cases revealed the relevance of considering climate in researching conditions for children's outdoor playtime activities. In the big cities in China, the risk

Table 4.2 Climate and air quality in relation to personal, institutional and societal perspectives

	Structure	Process	Dynamic
Climate, Weather and air quality	Society	Societal traditions and value demands	Societal conditions
	Institution	Practice demands for type of participation	Value-laden goals/objectives/motives
	Activity setting	Social situation demands on both children and others	Situated motivation/engagements/interests
	Person	Reciprocal demands for concrete ways of participation	Motive orientation/intention

of pollution is offering other conditions for outdoor activities. Many days per year, the children cannot be outside. The cold climate and rain in Norway encourage the kindergarten teachers to initiate some physical activities to secure the children's well-being and to keep their motivation for being outdoors for a longer time than if they were playing on their own. The rain also provides the Norwegian children access to water puddles and dirt/mud that are attractive possibilities for play activities.

4.6 Conclusion

The analysis of the two empirical examples from the activity settings illustrates how different conditions frame children's explorative activities. Interactions between kindergarten teachers and children were warm and respectful, despite of the different conditions in the Chinese and the Norwegian kindergarten settings. Simultaneously, they follow the legislations; they act in line with the values and the plan for the day in kindergarten. However, the kindergarten teachers in both settings met the children's ideas and initiatives with dialogical engagement that encouraged curiosity, play and exploration. The level, focus and method of exploration were different for different children. Some children explore their bodily abilities with a Frisbee, and some children explore their capacities in competition with others in the relay. Some children explore the feeling of being the leader of a game (chicken mother), a dangerous hungry wolf or a small chicken, hunted by the wolf. These findings can contribute towards conceptualising children's participation-as-exploration in teacher-organized activities in the playground. The examples challenge the dichotomy between understanding children's activities as exploration both in free play activities and in teacher-organized activities. Our findings indicate that there is room for children's exploration in teacher organized curriculum activities. We also found that an activity could easily shift from play to learning and back again in both kindergartens. Although we expected that the kindergarten teachers in China would be more focused on adhering to a plan, the teacher there gave space to children's exploration through her dialogical engagement. We expected that the children in the Norwegian kindergarten would play more on their own, but the teachers organized a game to support children's positive experiences of being outdoors and adopted the traditions and values connected to nature independent of the weather.

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Chapter 5

Conflict Analyses: A Methodology for Exploring Children's Cultural Formation in Early Childhood Education



Liv Torunn Grindheim

5.1 Introduction

In our contemporary society, education is often presented in a uniform and universal way to solve contemporary problems (Biesta, 2015). Through early interventions, early childhood educational (ECE) institutions are supposed to neutralise class differences (NOU, 2009), provide school readiness for bilingual children (Drange & Telle, 2011; NOU, 2011; Stortingsmelding, 2003–2004) and prevent behavioural problems and school dropouts (Webster-Stratton, 1999). Behavioural problems are often connected to children's inability to solve conflicts and to children's resistance towards planned activities and ways to behave. There seems to be a common aim to curb conflicts and resistance (Grindheim, 2013, 2017).

To obtain these aims, reforms, which can be interpreted as a political panic reaction to a more open and rapidly shifting society and globalisation, are to be implemented (Trippestad, 2017). These reforms, attempting to engineer a social utopia through education, are often implemented by equipping the individual child with previously defined competences; the earlier, the better. These reforms often refer to single-dimensional, causal research. Hedegaard (2009) and her fellow psychologists criticise research approaches that study child development from such a functional, one-dimensional perspective. She argues that 'demands for a scientific approach have led to several one-dimensional conceptions of development, where the focus has been on the development of different psychological functions and competencies' (p. 64). In line with sociologists and anthropologists (Corsaro, 1997; James, Jenks, & Prout, 1998; Rogoff, 2003), she emphasises the need to study children's social activities localised in time and space. To obtain an understanding of what to challenge and improve in the everyday practices of ECE, consideration

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M. Hedegaard, E. Eriksen Ødegaard (eds.), *Children's Exploration and Cultural Formation*, International Perspectives on Early Childhood Education and Development 29, https://doi.org/10.1007/978-3-030-36271-3_5

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must be given to the perspectives of both the involved actors—the teachers and the children—the specific activity that is to be performed and the conditions for acting. In this article, I see nature as a part of the context and as a part of the culture. I therefore relate to the conflict in the often-presented dichotomous concepts of nature and culture, as well as conflicts between values and motives versus conditions and demands, from four contextual perspectives: conflicts in the activity, institutional conflicts, cultural conflicts and conflicts in how nature is positioned in the activity, in the institution and in Norwegian culture.

Building on Dahlberg, Moss, and Pence (2007), quality is understood as accommodating diversity, subjectivity and multiple perspectives in temporal and spatial contexts (p. 103). Accommodating for plurality and variety can form a milieu for children from different classes, genders and ethnicities to develop, learn and achieve their cultural formation. To depict the multifactorial relations that work together to obtain better quality in ECE, there is, on the one hand, a need for rich material for analysis that emphasises both the context and the way in which individuals act. On the other hand, there is a challenge to analyse this material in a systematic and transparent manner that also includes the investigative and imaginative elements of activities such as explorative play. To find a way to meet these challenges, this chapter is structured around the question: *How can we analyse explorative play?* The aim is to illustrate a multifactorial, analytical method for analysis that is coherent and transparent, emphasising both the active participants and their context by starting with an everyday activity. Through the presentation of this method, we can see how a situated activity is closely connected to the larger context. The activity, institutional factors, cultural conditions and the construction of nature are woven into the present activity and are therefore dimensions that should be taken into consideration to improve pedagogical practices in ECE. It also indicates that research and methods for analysis should be constantly evolving. The basic ideas in dialectic approaches make space for challenging theories and methodology from experiences attained when doing research.

5.2 Constructing Theoretical Dialectical Knowledge

Any method for analysis is closely connected to an understanding of knowledge and how knowledge is constructed. Hedegaard (2008) outlines how conceptual knowledge is the core of scientific knowledge and points to two different epistemological approaches for knowledge construction: empirical knowledge and theoretical dialectical knowledge. I place my discussion of how to analyse explorative play under the construction of theoretical dialectical knowledge, understood as an approach whereby research material from everyday activities is inferred by theoretical concepts. At the same time, looking closely into the activities also calls for additional or new concepts to challenge what has been taken for granted in theoretical concepts. Several researchers point to the importance of more transparency when analysing experiences from observing or participating in the everyday activities in ECE

institutions (Nordenbo & Moser, 2009; Ødegaard, 2015). There have been some valuable studies, and I will point to those that have inspired my contribution to ways of analysing. All of them concern the activities, the cultural contexts in which the activities take place and the researcher's knowledge construction.

5.2.1 Constructing Knowledge by Emphasising Conflicts

Rogoff's (2003) analyses emphasise culturally embedded transitions. She outlines how 'cultural practices often bring individual development explicitly into relation with social and cultural expectations' (p. 152). These transitions, such as an infant's first laugh in the Navajo culture, starting school, losing a first tooth, getting married, parenthood and so on, form central shifts for a human as well as influence development. By pointing to transitions, she reveals how the expectations for what a child can manage are closely connected to the culture in which the children live their lives and thereby challenge the causality between age and normal development that is presented in individual psychological theories about children's development according to age. Rogoff (2003) argues that 'Instead of assuming that age transitions are inherent to children's biological maturation, independent of circumstances, it is reasonable to ask how children in a particular community become responsible enough to take care of themselves in the ways expected and supported in that community. The impressive changes that come with biological maturation are accompanied by powerful changes in communitywide expectations and opportunities for children's participation in the activities in the community' (p. 171). Thus, social and cultural perspectives are brought forward as important conditions for children's development, although her analysis does not offer tools to conceptualise the involved children's intentions in the analysed activities.

In line with Rogoff, Hedegaard (2009) illustrates how transitions from institutions such as home to early childhood education, or from early childhood education to school, represent a shift in what is expected from the children, and that the shift from—or among—different institutions condition children's experiences and development. Hedegaard (2014) outlines a model for analysis that illustrates four contextual perspectives that also are interrelated: the people, the activity setting, the institutional perspective and the cultural perspective (p. 192). At the same time, her model, in contrast to Rogoff's, describes children as intentional actors who influence their own, their peers' and their institutions' everyday life and development. According to Hedegaard (2008), 'The easiest way to understand a child's intentions is to note when there is a conflict where the child cannot do what he or she wants to do and cannot realise the projects in which the child is engaged, and the intention the child shows through his or her actions' (p. 19). In contrast to the goal of curbing conflicts, the tensions or conflicts between children's intentions and what is expected in the institutions they are attending are perceived as something that provides room for development. Contextual conditions can be depicted by tracing the conflicts that occur between children's values and motives versus the conditions and demands

from personal, institutional and societal/cultural perspectives. In this chapter, the way the involved children deal with these conflicts through play are understood as ways of exploring something that is important to them. Although there are many reasons for children's exploration in play, conflict is the central concept for exploration in my illustration of how to analyse explorative play.

Tensions or conflicts—labelled as dilemmas between ideologies as formulated in framework plans and ideologies underlying popular culture when it comes to violence and gender—are also forthcoming in Ødegaard's (2015) careful and transparent illustration of an analysis process. The dilemmas referred to are embedded both in the didactical practice in which the activities are performed and in what is of interest for the researcher. She illustrates how epistemological reflexivity on the making of knowledge from empirical data can be transparent through creating more distance to the activities by using analytic schemes that are expanded by theoretical concepts and perspectives. Thus, what at first glance was obvious is challenged by new concepts. In addition, a closer awareness of what was actually said and done, and how the involved child used artefacts (the telescope), gives new insight. Each step is explained and illustrates the importance of researchers rereading and reflecting to challenge what, at first, seems to be important.

I perceive the way Ødegaard (2015) constructs knowledge in her dialogue with research material and theory as theoretical dialectical knowledge construction. Hedegaard (2008) illustrates how researchers in this approach construct knowledge by explicit categories or the theoretical consideration, distance themselves from the specific situation, trace the specific research situation so that more general relations can be formulated, and build and use conceptual frames in order to create and understand the material in relation to the research aim. In line with Ødegaard, Hedegaard (2008) points to the analysis as an intentional orientation of the researcher. Therefore, the ways in which the participants interact, the conflicts between the various participants' intentions and the projects in the activity, and the competences and motives that can be seen in the participants' interaction in their social situations are to be conceptualized. In my outline of how to analyse explorative play, a videotaped situated activity is at the core, and interactions are emphasised by tracing conflicts between values and motives versus conditions and demands from several contextual perspectives. I also aim to make my analysis transparent, explaining my method and my aims—knowing that the researcher is an intention-oriented person and the constructor of knowledge.

5.2.2 Analysis from a Thematic Perspective

Hedegaard (2008) also refers to interpretation on a thematic level that makes it possible to formulate new conceptual relations within a problem area. The involved children in the material that forms the examples for how to analyse children's explorative play are engaged in imaginative role-playing. Role-play is also referred to as pretend play, fantasy play, imaginative play, free-flow play, dramatic play or

socio-dramatic play (Bruce, 1991; Fleer, 2010; Sadownik, 2017). In these kinds of play, the manifested imaginary situation gives a latent and implicit predomination of what roles the children might take; the children act out their performance attuned to the imaginary situation (Winther-Lindqvist, 2009).

The illustrating analysis theme (children playing dragons) is based on Vygotsky's (2016) texts about play, referred to as imaginative role-play (Grindheim, 2018). According to Vygotsky (2004, 2016), knowledge, imagination and creativity in collaborative play are the leading line of development in the preschool years, the sources of development and the zone of proximal development that determines the domain of transitions to which the child has access. Play, according to Vygotsky, has three components: In play, children create an imaginary situation; they take on and act out roles; and they follow a set of rules determined by specific roles (Bodrova, 2008; Vygotsky, 2016). Vygotsky (2016) states that all imaginative situations contain rules in a concealed form. He writes that there is 'no such thing as play without rules and the child's particular attitude towards them'. Thus, understanding play as free and spontaneous is challenged. In role-play, children are balancing the paradox that play, on the one hand, allows them to achieve unrealisable desires in an imaginary situation. On the other hand, children in play regulate their behaviour within the rules of the play. The contradictions and relations between the imaginative and reality are met in children's imaginative play (Vygotsky, 2004). Even though play cannot be performed without experiences from reality, the imagination also affects reality and children's intellectual development. Reality and imagination are interwoven. Therefore, conflicts between the theme of the play and children's intentions can also be revealed.

5.2.3 Analysis from the Perspective of Cultural Formation in Nature

In line with Vygotsky (2016) and Hedegaard (2009), children are seen as active in their learning and development. Children's learning and cultural formation are contextualised, situated, mediated and embedded in their given cultural context. Building on Ødegaard and Krüger (2012), cultural formation is understood as an always present and continuous process. Ødegaard and Krüger promote cultural formation as a descriptive concept that describes an act of humans in relation to the conditions in their given culture. Both the process (act) and the result of being a part of the activity are embedded in cultural formation. The children, the process, the activity and the context are all parts of the involved children's exploration and are traced through emerging tensions and conflicts. Understanding both the process and the result as cultural formation provides an opportunity for analysing how children are formed by their culture at the same time as they are influencing their own formation, the people they are involved with and their contexts.

Research done in kindergartens in the Norwegian culture raises the notion of nature. Witoszek (1991) states that nature is given a temporal and cultural dimen-

sion, in a transgression of the distinct nature/culture dimension in Norway. She claims that nature serves as a base for Norwegians' national identity. This identity is traced in the emphasis on outdoor activities, the happiness attained while staying at a remote family cabin, strong egalitarian impulses, the position of Norwegian farmers and Næss' (2005) in-depth ecological utopia, where humans, animals, plants, woods, and sea are connected in a holy peace. It is a place where there is no need for alcohol or stimulating drugs, because there is no boredom. From this, I conclude that nature is embedded in the cultural tradition in Norway and in Norwegian ECE—although culture and nature most often are seen as dichotomies.

Payne (2018) challenges the cultural-historical approach by addressing the necessity to take into consideration theorisation of children's experiences of the temporal-spatial dimensions of nature as part of everyday life (home, gardens, woods, open spaces, urban settings, neighbourhood). In contrast to Payne, I do not meet this need by a posthumanistic approach but by adding another perspective in the analysis. Instead of trying to overcome dichotomies (here, between nature and culture), which is a common aim in a posthumanistic approach (Braidotti, 2016), I emphasise the conflicts embedded in the dichotomous concepts to construct insight. I see this as coherent with the tension between children's values and motives while meeting conditions and demands in their contexts. Thus, both the different perspectives and the ongoing activity are analysed from an understanding of conflict as a core concept for further insight and knowledge construction.

5.2.4 Illustrating a Multifactorial Methodology for Analysis to Construct Theoretical Dialectical Knowledge

Fleer and Veresov (2018) point to many interesting and valued studies in ECE. The researchers they refer to also describe their contributions to knowledge in the field through more or less transparent analysis. Despite the outspoken need for more transparency when it comes to qualitative analysis, however, there is a limited number of articles with the main aim of illustrating how to do analysis when activities are understood as situated in institutions, society/culture and nature. To contribute to this area, I outline how to trace conflicts between values and motives versus conditions and demands from four contextual perspectives, which are inspired by Hedegaard (2009, 2014). The first perspective is in an activity that I label as explorative play, the second is from the institutional perspective, the third is from the cultural perspective and the fourth is from the perspective of how nature is positioned in the activity. This elaboration of the model is in line with my understanding of knowledge construction as theoretical dialectical knowledge. What happens in the activity challenged my theoretical framework, and the dialectical tension or conflict between material and theory constructed further insight about how to analyse explorative play.

5.3 Method and Material

Since the analysis is central to this article, I present only a brief overview of the method and material that form the foundation of my analysis.

The material that forms the basis for my analysis is from a study done in collaboration with a kindergarten institution in Norway from April 2016 to August 2017. Five teachers at this kindergarten made videotapes to illustrate children's activities that they found to be of special interest and value. I visited their institution to select the videos and interview the teachers who recorded the activities, meeting one teacher at a time as well as the children in the particular video(s). I visited the institution 11 times for 2–4 h to do the interviews. Altogether, I obtained 13 videotapes of activities that differ in length from 1.11 to 10 min—all followed by comments from the teachers who made the recordings; and seven videos also include comments from the involved children. The videos contain activities that took place over the period of 1 year and involve different teachers, children, activities and places, but all from the same institution.

The materials to illustrate how explorative play can be analysed are: a video (9 min and 17 s) of four boys playing dragons, the transcribed conversations with the teacher who recorded the video, the transcribed conversation with the involved children and their teacher, the local curriculum for this year in their kindergarten, the aims and tasks for Kindergartens in Norway (UDIR, 2017) and our Western (Christian) traditional interpretation of dragons (Kværne, 2012) and the Norwegian/Nordic closeness/understanding of nature (Witoszek, 1991). The recorded activity forms the basis for the analysis throughout all four perspectives in my analysis.

5.4 Analysis

Although how to do the analysis is at the core of this article, so is the question of the purpose of the analysis—the research question is an always relevant object in any research. My suggestions for a way to analyse draws on the purpose of the analysis, which is to discover what children are exploring in their play. What children are exploring can depict an important insight into their experiences, interests and everyday life. This insight can also reveal conditions, such as structures, routines and content, that can be challenged to improve pedagogical practices in ECE institutions. Since the activity forms the material basis for the analysis, I start the illustration of my analysis by presenting a short summary of the activity:

Four boys were playing dragons, 'flying' while running with their arms spread, using most of the room. They were sleeping in the area for family play, followed by sitting down on a bench and making up stories involving dragons that soon led to acting out the story instead of telling it. As dragons, they ran from the area for family play and were suddenly caught in a cage. Luckily, they were soon able to escape when one of them realised that they were

able to blow fire and thereby melt the lock on the cage. The dragons were also fighting, rolling over each other on the floor. Occasionally, they were transformed into crocodiles and firefighters, and they drove a car while attacked by other dragons. Thereafter, they were all involved in a war. After some time, one of the boys withdrew from the physical play and offered water to the dragons. A second boy also started to play a lesser part in the physical involvement, although the two who played lesser parts apparently still related to the theme of the play. After some minutes, the boy who served water to the dragons uttered that he wanted to play with Lego. He suggested it several times to the other boy, who also withdrew from the physical game. By the end of the video, the four of them had split into two groups of two, in which one group played with Lego and the other group continued their game of dragons (Grindheim, 2018, p.7).

The question that guided my analysis was: *What are the children in the video exploring while playing dragons?* Exploring was traced through conflicts caused by differences in values and motives while meeting conditions and demands in the context, from the perspective of the activity, the kindergarten, the Norwegian culture and the way nature is positioned in the activity. To make my analysis more transparent, I will illustrate my analysis in four steps, illustrated in five tables. The fifth table is a synthesis of the first four, and it describes how I interpret what was being explored from the conflicts in the activity, from an institutional perspective, from a cultural perspective and from a perspective that includes the position of nature. The activity of children playing dragons is at the core according to any level of analysis—it is the base for the analysis.

5.4.1 Conflicts in the Activity (*Imaginative Play*)

Material for analysis comprises the recorded activity and the notes on the children's and their teacher's comments about the video. According to the teacher, all four of the children were playing together for several minutes. That was also the reason their teacher made this video, and the collaborative play had gone on for a while before she started to record the video. She had never seen the four of them playing together in a peer group before. Despite all four playing together, there were several suggestions from one of the boys to start building with Lego. By the end of the video, the four of them had split into two groups of two, in which one group played with Lego and the other group continued their game of dragons. From the video and the comments, a conflict appears between playing together as four versus as two, in two-person groups.

In addition, the comment from the boys who were fighting, as dragons do, that they did not fight ('I tickled you') appears as a conflict between the theme of the play—being evil dragons that are fighting and killing—versus how friends act. Thereby, a conflict can be traced between the frames in the imaginative play and the children involved (Table 5.1).

Table 5.1 Conflicts in the activity

	Social situation	Values and motives	Conditions and demands	Conflicts
Activity	Four boys playing dragons, making stories, fighting, catcher in a cage, escape, driving cars while being chased in a war between dragons. They are also changing roles to become dragons, firefighters and crocodiles.	The children told us that 'this is the first time we are playing this kind of play inside'. 'We became friends'. When watching the fighting, the comment from the attacking boy was, 'We did not fight, I tickled you'.	Some knowledge about these big, ugly, dangerous animals Being a part of the game/play	Playing together for a long time span for the first time versus splitting into two two-person groups. We became friends (in the game) being friends/friendly (facing danger together as firemen, chased in a war) I tickled you (which is friendly) versus being dragons (fighting and killing)

5.4.2 Conflicts from an Institutional Perspective

Material for the analysis comprises the recorded activity, the notes on the teacher's comments about the video, the transcribed interview with the teacher and this kindergarten's plan for the year. In addition, some of the children's comments were seen as relevant to the institutional perspective. According to the teacher, the furniture in the room was not usually used for this kind of play. A conflict appears between the artefacts and the furniture and the usual use of the room versus the theme of play that requires space for running and collaborative movements involving the whole body. I interpret that as a conflict between the teacher's values and motives versus the conditions and demands in the institution, and a conflict between didactical practices aimed at prescribed definitions of good play versus making friends and making room for play where children are in control of the temporary content of their kindergarten (Table 5.2).

5.4.3 Conflicts from a Cultural Perspective

Material for analysis comprises the recorded activity, the notes on the teacher's comments, the Frameworkplan for content and tasks in Norwegian kindergartens (UDIR, 2017) and our Western (Christian) traditional interpretation of dragons (Kværne, 2012). According to the teacher, it was hard for these children to partici-

Table 5.2 Conflicts from an institutional perspective

	Social situation	Values and motives	Conditions and demands	Conflicts
Activity	The imaginative play of the four boys playing dragons			
Institution	In free-play time, children are divided in groups in the kindergarten	The teacher comments about why she made room for (this) play: ‘Play is a space for freedom and joy. These boys do have their needs. Here they are in control, having fun escaping from their everyday life’. ‘The good life for children is in play’.	According to the teacher, this kind of play was conditioned by ‘Making social play situations transparent and thereby accessible for children’. In the plan for this particular kindergarten, play is emphasised and described as activities that ‘give the children opportunities to face scary themes and the unknown. In play, they can cultivate each other and cultivate emotions and experiences’ (the plan for the year 2016, p. 4). ‘Materials to inspire (this kind of) play’.	According to the teacher: ‘There are limited room for these kinds of play (tumbling, fighting, walking, as you need when playing Captain Sabeltann) in kindergartens. The room they are playing in is usually not for role-play, but for activities on tables’ (games, drawings, painting, etc..), versus the teacher’s valuing of the children’s initiative, the activities they are generating in the given and planed didactical practice and even the plan for this kindergarten.

pate in peer groups, and in more regulated and prescribed required activities. They needed to meet in a common theme that also required openness for variety of ways to act, close to experiences that were of importance for them. From this, a conflict emerges between kinds of play that are often emphasised in education versus influence from cultural fiction’s creatures. In addition, a conflict appears between worries for changes in our democracy, children leaving school, emphasis of early interventions to prevent behavioural problems and crime versus play as the leading line for children’s development (Vygotsky, 2016). I interpret this as a conflict between being dragons and crocodiles that are not good friends, not socially competent nor good citizens (Kværne, 2012) they fight, they are lonely and they abduct

Table 5.3 Conflicts from a cultural perspective

	Social situation	Values and motives	Conditions and demands	Conflicts
Activity	The imaginative play of the four boys playing dragons			
Culture	Attending early childhood education in Norway	The dragons in fairy tales have been of historical interest for decades (Kværne, 2012). As imaginative creatures, they give room for a variety of ways to play and explore what is important for them, also nonverbally.	According to the teacher, 'it is hard for these children to engage in groups of children'. Formation of 'good citizens': 'By participating in the kindergarten community, the children shall be able to develop an understanding of society and the world in which they live. Kindergartens shall promote democracy and be inclusive communities in which everyone is allowed to express themselves, be heard and participate. All children shall be able to experience democratic participation by contributing to and taking part in kindergarten activities regardless of their communication and language skills' (UDIR, 2017, pp. 8–9)	Play that is emphasised in education versus influence from cultural fiction's creatures, film, media, dinosaurs. Being dragons and crocodiles versus being 'good citizens'. Worries for changes in our democracy, children leaving school, emphasis on early interventions to prevent behavioural problems and crime versus the children's proximal zone of development.

the princess to have company versus the aim that 'all children shall be able to experience democratic participation by taking part in kindergarten activity' (UDIR, 2017, p. 8). The activity of playing dragons does not appear as an arena to experience democratic participation, nor learn social competences, let alone seeing play as an activity in which children manage to regulate their behaviour within the rules of the play (Vygotsky, 2016; Table 5.3).

5.4.4 Conflicts from the Perspective of Nature

Material for analysis comprises the recorded activity, the notes on the children's and their teacher's comments, and Witoszek's (1991) outline of the Norwegian/Nordic attachment to nature. According to the children, they never played dragons inside

Table 5.4 Conflicts from the perspective of nature

	Social situation	Values and motives	Conditions and demands	Conflicts
Activity	The imaginative play of the four boys playing dragons			
Nature	Outdoor play performed inside	The free child, nature as the best place to be, 'play as freedom', according to their teacher	Scandinavian outdoor/wildlife (Næss, 2005; Witoszek, 1991).	According to the teacher, 'This play was inspired by the weather, storms'. versus cultivated activities inside The logocentric and anthropocentric approach versus the eco-centric approach

before. A conflict emerges between dragons, the children and outdoor activities versus family role-play, (socially) competent children and indoor activities. Their teacher's comment that the weather/storms inspired their dragon play also forms a conflict to cultivated, indoor, temperate environments for play. In addition, the involved children's activity put the humans in a lower position than in the logocentric (the overall focus on language and cognitive skills) and anthropocentric approaches (the overall focus on humans)—dragons as representing nature are at the core. From this, I assume that a conflict emerges between logocentric approaches and anthropological approaches versus the eco-centric approach in which nature and non-human agents are seen as a part of the situated activity (Table 5.4).

5.4.5 *The Conflicts and What Were Explored*

From these tables, the next step in the analysis was to figure out what the children were exploring. This is illustrated in Table 5.5. The content in the middle column, labelled 'Conflicts' in Table 5.5, is the same as in the column 'Conflicts' in the four tables already presented. My interpretations of what the children were exploring are presented in the column on the right labelled 'Exploring' in Table 5.5.

From the conflicts outlined in the **activity**, I assume that the involved children were exploring how to be a part of a peer group. In addition, they explored how to relate to the theme in the play versus their intentions of making friends by changing the dragons into crocodiles and firefighters, and dragons that were involved in a war fighting other dragons. Thus, they were facing danger together, as friends do. From this, I assume that the involved children were exploring friendship and danger, anger and evil, and even being a danger.

Table 5.5 The conflicts and what were explored

Perspectives	Conflicts	Exploring
Activity	Playing together as all four in conflict with splitting into two, two-person groups. Dragons who are fighting and killing in conflict with being friends, tickling each other and facing danger together.	Interaction in a peer group Friendship Danger, anger and evil or being a danger/being evil
Institutional perspective	Quiet activities on the table in conflict with a place for running, moving and fighting. Educational content in conflict with media-inspired content. Didactical practices aiming at prescribed definitions of good play in conflict with making friends and making room for play where children are in control of the temporary intent of their kindergarten.	Place Space Artefacts Media-inspired experiences Their teacher's didactical understanding
Cultural perspective	Being dragons and crocodiles in conflict with being 'good citizens'. Worries about changes in our democracy, children dropping out of school, low scores on the PISA test, emphasis on early intervention to prevent behavioural problems and crime in conflict with the children's proximal zone of development.	If and how themes and experiences of importance for the involved children can be a part of the content of ECE How to socialize and educate young children
Perspective of nature	What to do outside in conflict with what to do inside Nature in conflict with culture.	Influence of the content in the ECE institution Different ways of participating indoors in ECE institutions

From the conflicts outlined from an **institutional perspective**, I assume that the involved children were exploring place, space and artefacts. The irregular use of the room supplied by their teacher gave the children the space to explore more media-inspired, multicultural themes (dragons are a part of different cultures). Dragons that are imaginative creatures is a concept that is hard to define. Therefore, playing dragon forms a contrast to prescribed definitions of 'good' play. From this, I assume that the children were exploring their teacher's didactical understanding and play themes (dragons) that are of relevance for them.

From the conflicts outlined from a **cultural perspective**, I assume that the children were exploring how themes and experiences of importance to them can be a

part of the content of their kindergarten. The conflict between conditions and demands for education ‘to save’ the future versus the values and motives from the children to play the socially incompetent dragons indicates that the children were exploring what content can be a part of ECE. It can also be assumed that the children were exploring how young children can be socialized and educated.

From the conflicts outlined from the **perspective of nature**, I assume that the children were exploring relations among nature, a cultivated indoor milieu, climate and humans. The involved children’s exploration involved their whole body within the dramatic frame of the dragon play; they were fighting, rolling around on the floor and running to hide. In addition, nature is a part of their exploration and thereby their cultural formation. From this, I assume that the children were exploring their intra-relations to nature, indicating a more eco-centred perspective than an anthroposophical and logocentric perspective. It also paves the way to depict the impossibility of heading towards only previously defined competences, since humans (including teachers) cannot escape from nature and other actors, such as the involved (uncultivated) children, when conditioning educational practices. Thereby, the limitations for rational, cultivated humans (such as teachers) to be in total control of their practices were explored and challenged.

5.5 Concluding Reflections

My multifactorial analysis illustrates how a small-scale analysis that commences from an everyday activity can give insight into how the dialectical relations in different contextual perspectives interact. By presenting this methodology, we can see how a situated activity is closely connected to the larger context. What play themes are possible to be involved in, institutional factors, cultural conditions and the position of nature are woven into the present activity and are therefore perspectives that need to be taken into consideration when improving pedagogical practices in ECE.

Despite aiming at transparency and coherence, reaching these aims is a complicated task. There is a great deal of information presented in a compact form, the researcher (me) has made many challenging choices with regard to what to present and what to leave out, which call for a reflexive research practice. The epistemological position and the concepts for analysis, followed by the perspectives in the extended model, are meant to make these choices more transparent. The researcher’s interpretations are thereby based on several perspectives, and so the interpretation process paves the way for several opportunities for drawing conclusions that are not valid. Nevertheless, the systematic and multifactorial analysis helped to open up the empirical material and, to a larger degree, to avoid superficial and earlier, biased interpretations. It gave room for the unexpected, because of the variety of factors that were taken into consideration to investigate what the children were exploring. Therefore, this way of analysing represents the opposite of liner causality. Further, the aims for curbing conflicts are challenged. Conflicts emerge as important both for children’s development and for the researcher’s insight.

The four perspectives, including the perspective of how nature is positioned in the material for analysis, emerge through the process of analysis. The theme of the play is dragons, who are indeed not cultivated and never will be. The idea that children are being cultivated by playing these creators appears as a conflict to cultural formation. Moreover, the Nordic (Norwegian) idea resuming that humans are cultivated through nature, appear at first glance as a contradiction or in conflict with a cultural-historical approach. My experiences while doing the analysis and outlining it in text indicate that research and methods for analysis should be constantly evolving, in line with or in contrast to the changing society, changing nature and researchers who are in a constant struggle to learn and understand more, at the same time as aiming to find ways of doing research and analysis that are sustainable. It seems as though the basic ideas in dialectic approaches that emphasise conflicts make a larger space for challenging theories and methodology from (unexpected) experiences attained when doing research.

In addition, using the concept of exploring allowed for more than putting cognition, language and humans in the centre. Even though exploration is a concept that is closely connected to human activity, it leaves an opening for extending the overall focus on language and humans—there has to be something to explore. The aggregating, changing and improvisation in children's imaginative play also indicate that it is impossible for humans to be in 'full control'—and neither can the researcher. An awareness of conflicts from a variety of perspectives could help in coping with the uncertainty of never being in full control but continues our struggle for transparency and new insight when it comes to both the object of study and the methods for how to construct knowledge.

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Chapter 6

Dialogical Engagement and the Co-Creation of Cultures of Exploration



Elin Eriksen Ødegaard

6.1 Introduction

A continuous inquiry exists regarding how the older generation can best create conditions for children to survive and live good, responsible lives. Cultures and nations have had shifting ideas and ideals for how to introduce children to the cultures in which they live and how to regulate education. Cultural traditions are the foundational drive that is expressed when societies govern educational processes, shape the conditions for life experiences and support or hinder dialogue and ‘bridge-building’ between persons, whether intentionally or not. There is an interdependence and organic relationship between cultures and education, but changing conditions at a personal, local, societal and global level also drives individuals and communities to explore, discover, create and, thereby, drive change. Both children and adults, through living with others, are shaped by the organic interplay with the local culture: nature, landscapes, materiality, discourses, relations and societies.

This chapter will outline a new culturally and worldly sensitive pedagogy that is relevant for children for their everyday lives and, hopefully, for their future. The aim is to argue for, discuss and outline conditions for a pedagogy that promote exploration and how they contribute to children’s cultural formation in the complex context of early childhood education and with hope for a sustainable future. The conditions and characteristics of explorative practices, found in earlier literature and experiences, interact in dynamic ways and are therefore difficult to grasp. Central to the chapter is the attempt to visualise how characteristics of explorative practices interact with some central conditions in local settings. A model for children’s exploration as dialogical engagement is formulated. Moreover, a setup of binary pairs of

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educational cultures, principles and practices is presented to answer a curiosity about what the characteristics in cultures of exploration will be. By such a setup, the importance of pedagogical dialogical engagement is highlighted. This model could serve as an analytical tool in analysing pedagogical practices and discourses where children and teachers are, or attempt to be, explorative and sensitive to problems, relationships, signs and sensations when working and playing together.

In this chapter I will outline and discuss a pedagogical model that can serve as a thinking tool and as a means to move away from unsustainability within a broad cultural-historical and sustainability framework. The framework includes both social and environmental dimensions, in which space, as well as global and local concerns, is considered in a pedagogy that is relevant for teachers, children and families today for active citizenship that values diversity and the survival of nature.

6.2 Cultural-Historical Perspective and Ecological Inspiration

The chapter is first and foremost anchored in a cultural-historical approach, drawing on, among others, dialogism and concepts like heteroglossia, speech genres and Mikhail Bakhtin's loop-hole. The chapter argues that dialogism is central to cultures of exploration. The term 'dialogism' is most commonly used to mean the quality of an example of discourse that is defined by its relationship to other instances, both past, to which it responds, and future, whose response it anticipates (Shephard, 2013). The positive connotations of dialogism are often reinforced by a contrast with 'monologism', which in pedagogy refers to the refusal of authoritative discourse. 'Dialogism' refers to the literary work of Mikhail Bakhtin and the Bakhtin circle and to the diversity of socially specific discourses (heteroglossic, carnival and the multivocal analytic approach) in research as well as in pedagogy inspired by Bakhtin's work. In pedagogy this implies the role of a teacher who orchestrates the diverse voices in a classroom and raises awareness of how cultural expressions wander and how spoken and bodily language, positions and performative actions are linked through time and place.

Also, Seth Chaiklin and Mariane Hedegaard's arguments and ideas for a radical local pedagogical approach (2005) are a thinking tool for creating awareness of the local and the global in framing and recognising children's experiences, and they are set out in order to argue for a respectful exchange when considering the content and values of the 'what' in exploration. The professional teacher will always have an official mandate (e.g. curriculum or framework) and a personal ethos and drive when meeting, taking up and further building upon children's initiatives. This is how the local content can develop within 'frames of frameworks'. Through examples, I will illustrate how a pedagogy for explorative practices will always have 'something worth exploring', such as a content, a third space, which will be further developed in this book (e.g. Eikset & Ødegaard). Cultures of exploration in early childhood education introduce a promise of a pedagogy where the teacher co-creates

kindergarten content when operating in practice, in planning and meeting children and families in their local community and in considering activities, relations, place and space. Discourses on early childhood education (ECE) can be roughly constructed as follows:

1. Child-centred: highlighting what goes on in institutional practices ‘here and now’, often concentrated around ‘play’ and ‘children’s participation’. Childhood and the recognition of its value ‘in its own right’—not only as a waiting period—is an underlying value.
2. Teacher-centred: highlighting didactic aspects and children’s learning in education. It can also be research-focused regarding conditions for children’s play, learning, care and formative development. The aims will often be higher-quality education.
3. Complexity- and micro-centred: focusing on conditions for pedagogical practices, often highlighting the plurality and interconnectedness of children and teachers’ practices. It explores how bridges are connected from the material to social and ‘common worlds’ outside the walls of a kindergarten and how things intersect. The aims will often be of a critical nature or be related to disclosure; however, it also aims to combine more perspectives to gain new insight on relevance for pedagogy and education.

The research position underlying the model suggested in this chapter is within the last category: the complexity and micro-centred discourse. I agree with researchers who suggest that it is timely to decentre children’s voices as only unique and genuine and childhood as a protected period with romanticised connotations, as also discussed in childhood studies (Alanen, 2009; Kjørholt, 2004), early childhood and cultural-historical studies (Chaiklin & Hedegaard, 2013; Matusov, 2009; Ødegaard, 2007; Rogoff, 2003; Samuelsson, Kultti & Pramling, 2018) and ecological and ‘non-human’ – ‘more-than-human’ studies (Braidotti & Bignall, 2019; Ingold, 2011; Pacini-Ketchabaw, 2017; Spyros, 2017).

6.3 A ‘Glocal’ Awareness and Moving Away from Unsustainability

As children today live complex situational local lives, and as the pedagogical mandate for the professional teacher within early childhood settings will need to consider the best interest of *all* children, local and micro-orientations as well as ‘glocal’ awareness is necessary. ‘Glocal’ conceptualises the idea that globalisation does not necessarily penetrate every aspect of the local culture, traditions and views. Despite globalisation, local conditions can be adopted, held on to and transformed to something beyond what was there beforehand. As already stated in the introduction to this book, it was Roland Robertson (1995) that introduced the concept of ‘glocalisation’ in his classic *Glocalization: time-space and homogeneity-heterogeneity*,

where he comments on the assumption that globalisation refers to a large-scale phenomenon and that what one thinks of as local is in fact constructed in a trans-local setting and will often occur in a large-scale locality. He also advises against the taken-for-granted view that globality is a consequence of modernity, as what we call modernity has developed historically in different places without any direct connection between them. Roland Robertson (1995) critiques the polarised concept of the global and the local and instead invites the reader to a more dynamic understanding of them.

For my agenda here, I will present an example to illustrate the connections. On Earth, we now experience warmer, wetter and wilder weather in the local land where I live, and it is common knowledge that these weather events are due to global warming and environmental changes. In the autumn of 2018, on the west coast of Norway, where kindergartens are situated under mountains and in narrow valleys, roads and schools were closed down due to flooding. Heavy rain created new waterfalls in places where waterfalls had never existed. Children were evacuated while a heavy stream of water found new ways into the playground within minutes, and the inside of the kindergarten building rapidly filled with water. Suddenly, what we called 'everyday practices' were disrupted by critical events and emergencies.

Climate change impacts children's lives every day, whether it be through the sun that dries out the soil and makes growing and maintaining water supplies difficult or through extreme storms that destroy families' homes and roads to schools and kindergartens.

A 'glocal' place awareness can frame pedagogy within the larger boundaries of sustainability or aim for practices towards sustainable futures. This will require a teacher's eye for pedagogical practices concerning local landscapes, places and weather systems (Ingold, 2018; Myrstad & Sverdrup, 2016; Ødegaard & Marandon, 2018). Curricula will need to address core conditions for survival from a general attention to well-being and to responsiveness for emergencies and crises (Liu & Liu, 2008). As part of a professional responsibility, we need to understand the structural systems that operate at a societal level, and be able to analyse and reflect on our own biases and prejudices and habits (Nolet, 2017). What happens when habits and knowledge are disrupted, and professional judgment must operate on an immediate impulse or aim for a future-oriented new professionalism? What are the concerns in the best interest of the child? What matters for children from a perspective of well-being and generational survival? What skills are the most important to learn? Will they be critical and creative digital and media skills or academic reading, writing and mathematics, or will the most important skill be of another kind? Activities such as digging, pulling, building, knitting, sewing, sawing, composting, deconstructing and reconstructing historically belong to everyday life, handicraft and work life.

For example, when the teacher takes on an indigenous viewpoint, a 'more-than-human' pantheistic way of knowing, being and acting can easily be actualised. Even if this is not the case for all persons with an indigenous identity, the first principle of the Treaty binding the United League of Indigenous Nations (2007) proclaims that humans are part of, and inseparable from, the natural world and that this gives rise to a shared commitment to care for, conserve and protect the land, air, water and

animal life where they live. The standardisation of knowledge and ways of learning will easily carry the risk of violation towards local values and heritage (Fuller, 2007) as well as children's initiatives (Sandvik, 2012). My argument is that sustainability has an obvious cultural dimension that actualises a wide range of important content areas relevant for early childhood education, such as local heritage, arts, the diversity of nature, the internet and indigenous culture, among others, as well as the pedagogical practices actualising a wide range of important content areas. The cultural and creative dimensions of sustainability need to be given more attention. My argument will be that a pedagogy that opens the floor for explorative practices within a frame of values will support sustainable futures in contrast to a standardised curriculum with a strong teacher-centred approach will easily be blind and ignorant to local culture and lead to 'unsustainability'. Also, a strong child-centred 'here and now' approach can be unsustainable, as it leaves too much responsibility to the children alone and ignores the value of generational knowledge and responsibility. To make change that aims for sustainable futures, it will be necessary to work against unsustainability, in which children's everyday lives and needs are not valued, followed up or maintained, because unsustainability can destroy relationships, be harmful to people and it will eventually be empty or could jeopardise humankind and the planet in the long run. A wider understanding about culture is also needed in order to analyse and understand how societal structures as well as environmental dynamics work out (Fleer, Hedegaard, & Tudge, 2009).

One way to work against unsustainability is, in my opinion, to elicit the role of the teacher with the above-mentioned inspiration. According to Jayne White (2016), dialogic pedagogy in the early years shifts the emphasis of the teacher from a facilitator of an external curriculum, activity or project to one of a partner, co-learner, investigator and provocateur (p. 65). I will in the following section turn to the concept of exploration and a model considering dialogical engagement as the key teachers' approach in the early years. I will add to that approach inspirations from ideas of holism, 'glocalisation' and the 'wayfarer' as a model of the teacher, addressing a worldview of sustainable futures into education (e.g. Ingold, 2011; Ødegaard, 2015, 2018a).

6.4 A Pedagogical Model of *Exploration as Dialogical Engagement*

Today, *exploration* is a concept seen in recent ECE frameworks, such as the *Norwegian Framework Plan for Kindergarten Content and Tasks* (Ministry of Education and Research, 2017). This framework plan states, 'Through interaction, dialogue, playing and **exploring** (my emphasis), the children shall have the opportunity to develop critical thinking, ethical judgment, ability to resist and action competence so that they can contribute to changes' (p. 8). The concept of exploration entails a dynamic process and a positive verb. The concept is also mentioned in the

framework plan to perceive children as agents who make sense of the world and learn. In this framework, exploration is regarded as a crucial, complex practice—a wheel for play, learning and participation (i.e. agency). The concept of exploration can be etymologically traced to the meaning of investigation and examination (Harper, 2001–2012). *Explore* is derived from the Latin *explorare*, which entered the English language around the fifteenth century (Lawrence, 2010).

The concept of exploration can be said to refer to a play- or curiosity-related action, a social situation that affects what and how objects and relations are explored. However, exploration, as a concept, can also be differentiated from play and curiosity, but never with clear distinctions. In the past, literature has often conceptualised ‘exploration’ as a fixed sequence of behaviours with relatively stereotyped patterns across situations and species, as well as an open concept proceeding curiosity and play (Schoggen & Schoggen, 1985, p. 78). Exploration and curiosity are close in definition, as both imply seeking information and initiating behaviour and can therefore be seen as proceeding play as well as being central for play activities to be developed and sustained.

In my inquiries¹ into understanding what exploration is and what it means for children’s meaning-making and development, I have been searching for the characteristics and how such a concept and activities relates to similar concepts and practices such as creativity, improvisation and open-ended dialogue, and I have found examples of literature reviews relevant for understanding exploration and the distinctions between close concepts (Schoggen & Schoggen, 1985; Sawyer, 1997, 2011a, 2011b).

A dialogical understanding of culture as dynamic required a figure that could illustrate movements and a complex set of conditions for exploration and its characteristics. The shape of what could be a loop, a halfway loophole or a spoon was chosen to indicate dynamics, movement, process and change. The metaphor of the loop is inspired by Michael Bakhtin’s writings² (1973) about loopholes. He writes with reference to loopholes taken by the hero in a novel: //... “altering the final meaning of one’s words, as a side glance or a shift of focus. //... The loophole makes the hero ambiguous and elusive even for himself. In order to break through to his self the hero must travel a very long road (Bakhtin, 1973, pp. 233–34)”. This metaphor of a loophole can indicate the moves and manoeuvres, the ‘journey’, it can take for the professional teacher to learn from what happens in events. Whether it is an emergent feeling, a motivation to listen, a long-term transformative experience or a sudden understanding, the metaphor signifies the possibility for a teacher to adjust to the multitude of voices and events taking place in an early-year setting. A loop is the aesthetic shape of a movement, a change or a point of professional learning, becoming a self-reflexive professional in the ongoing co-explorative activities and

¹The research group ‘Kindergarten as an arena for cultural formation’ at Western Norway University of Applied Sciences has for many years worked together on understanding, conceptualising and operationalising the concepts and practices of exploration and cultural formation. I will acknowledge the dialogue in the research group.

²He analyses the novels of Dostoevsky (Bakhtin, 1973).

events. A potential other meaning and discovery is visualised by the shape of an open loop.

The model has the shape of a halfway loophole that contains a layer of key dynamics conditioning exploration, and at far left, at what is the end or the starting point, there is a handle to set off or end the dialogical engagement, or taking on a discourse, a specific genre of pedagogical performance that carries the possibility of change. The main drives and triggers for explorative performance in education are the body, experiences and conditions from sensations, movements, artefacts, materiality and symbols. Inside the loop there is a division between, on the left-hand side, the key notions to indicate where exploration takes place and, on the right-hand side, the characteristics of explorative activities. The shape of the model illustrates a pedagogical drive, an urge, with engagement, to understand the space in which children live, to move dialogically in order to take up children’s initiatives and to support and ensure that children’s right to participation in their own life is realised within a value frame of generational responsibility. As such, it is an idealistic model for the wider context of sustainable futures, meant to illustrate some crucial dynamics, drives and key notions for realising exploration, a pedagogical practice that allows multiple ways of knowledge. The importance of the teachers’ engagement and the close relationship between nature and a holistic play-driven pedagogy was evident through literature from early on in educational history (e.g. Comenius, 2012; Fröbel, 2012 [1861]; for further reading, see chapter Eikset & Ødegaard in this book and Ødegaard, 2018b) (Fig. 6.1).

In the following section, I will describe the composition of the model in attempts to theorise exploration as dialogical engagement. Being dialogical means, according to Michael Holquist (1990, p. 21), that reality is always experienced. Being (as

Exploration as dialogical engagement

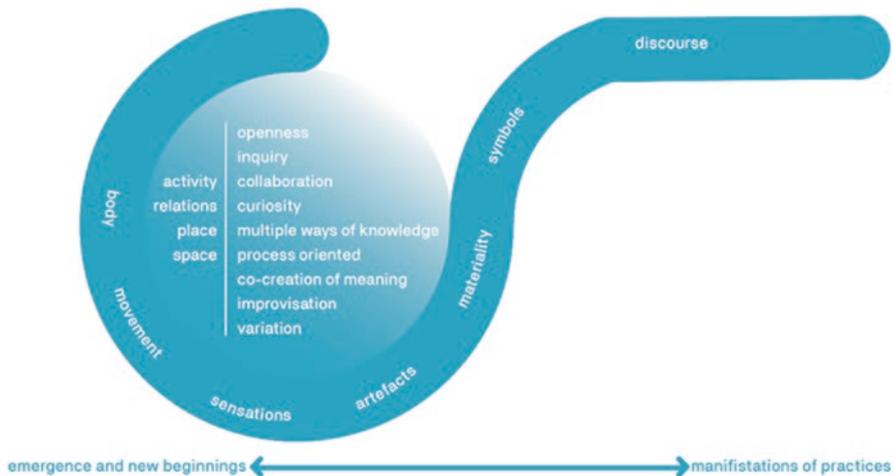


Fig. 6.1 Exploration as dialogical engagement

in being alive) is simultaneous: it is always a co-being, which means that when I write ‘teacher’, it always implies the ‘child’, and vice versa. This means that the situatedness of the teacher is a multiple phenomenon; the task is not just given, but there is a ‘drive for meaning’, where meaning is understood as still being in the process of creation (p. 24). However, what is experienced from a particular position. Bakhtin has formulated this as the ‘Law of Placement’ (Holquist, 1990). This is a concept referring to the unique spatiotemporal coordinates we live in. A perception can only be achieved from a unique point in the spectrum of possibilities. This also then means that an event and an activity will always be perceived differently, even if being alive is simultaneously living and co-existing.

Bakhtin uses ‘person’ as synonym for ‘self’, and the person will have a voice. According to Bakhtin, this voice is not a unique voice, but a voice embedded with historical voices. Meaning is viewed as an emergent phenomenon, integrating aspects of the immediate, the social and the historical context of performance (Bostad, Brandist, Evensen & Faber, 2004, p. 2). This is expressed in the model by a timeline.

6.5 Time—Emergence and Manifestations of Practice

The model consists of a timeline in order to illustrate the inevitability of time and process as fundamental in pedagogy. The emergence, the possibilities that lie in new and vague attempts (Sawyer, 1997), needs to be central in pedagogical frameworks where participation and democracy are the wider goals and values. At the same time, a professional pedagogical practice cannot only be in the vague beginnings. Manifestations and concretisations of ideas and initiatives must be followed up and developed in professional practice. The model therefore consists of a timeline from emergence to manifestations to highlight that explorative activities are practices where process, such as time, is central. The model visualises how cultures of explorations need to consider *time*. Time is both the here and now and the future (i.e. being and becoming); it is, at the same time, connected to the physical and social worlds. *Becoming* indicates ‘changing to’, ‘moving towards’ and ‘formative development’ and actualises the life history of persons, artefacts and signs and what that means for pedagogy. Temporality in the thinking of children and childhood contributes to more nuanced understandings of children and their future lives.

Being a child and *becoming* a child, as well as the process of practising as a teacher, will inevitably imply a manifestation of time and place (i.e. *chronos* and *topos*); *being* is constantly also *becoming*. *Being* a child is not a static position (i.e. stagnation) but rather a condition of movement in the social and physical spaces made available for children (Uprichard, 2008). *Becoming*, therefore, does not need to be understood in the context of a long time span needed to mature but as constantly generating practices (Borgen & Ødegaard, 2015, p. 10). *Becoming* conceptualises the constant temporal movement, which is also visualised in the model presented later in this chapter. A discursive creation of a dichotomy of *being* and

becoming is, therefore, not a productive one. In addition to the dimension of time, explorative activities will always be situated in space. In the model, space is a key word in line with activity, relations and place to illustrate how they operate in fluidity with the more specific spectrum of practices of exploration.

6.6 Characteristics of Exploration in Pedagogy

When searching for an understanding of exploration, it can be productive to look for negations. There are many similar notions to exploration, some more overlapping than others. To ask, ‘What is exploration *not*’? in an educational setting might help to clarify and make distinctions between exploration as a concept and a particular activity and practices characterised by exploration. In a Bakhtinian framework, a possible way of anchoring the model can be as a speech genre³ (Bakhtin, 1986), but the characteristics of exploration in early childhood pedagogy go beyond the spoken word, so the understanding of a speech genre must include speech as body (Linnell, 2009). Exploration practices can be verbal, silent practices, driven by body, performance and doings. In a study on people with hearing impairments and vision loss, Per Linnell describes how they orient themselves in the material, sensational and symbolic world (2009). This study gives a relevant reminder for early childhood research and pedagogy. Whether it be words uttered or bodily senses expressed, each perception must be understood as a link in a complex chain of other expressions.

Oliver Escobar (2009) offers, from a post-empiristic⁴ and dialogic⁵ orientation, a synthesis of contrasts between adversarial (i.e. argumentative) and dialogic communication (p. 55). Escobar’s research fields are policy studies and democracy; however, key principles are productive for digging into understanding the conditions for exploration in an ECE setting. With inspiration from Escobar, I will reconstruct and add some relevant dichotomies in order to make it clearer what pedagogical principles and practices we are talking about when discussing exploration and what kinds of pedagogical cultures and practices might support exploration within the field of ECE.

Table 6.1 *Contrasts Between Monologic and Dialogic Educational Cultures’ Principles and Practices* offers an overview of some key contrasts between the discursive practices⁶ of adversarial and dialogic communication.

³Bakhtin (1986) critiqued the way Ferdinand Saussure understood language as words and sentences, ignoring the cultural historical subsystems of language. A speech genre is a precondition for understanding communication in meaningful ways, as it organises the speech in similar ways, in style, structure and content.

⁴The rejection of strict empirical methods as seen by modern empiricists. Post-empirists are also post-positivist.

⁵The most influential thinkers in this orientation have included Mikhail Bakhtin, Martin Buber, George Herbert Mead and Paulo Freire.

⁶What Escobar calls adversarial, I will articulate as monologic after Mikhail Bakhtin (1981), since Bakhtin already has a range of concepts well-suited for understanding pedagogical principles and practices.

Table 6.1 Contrasts Between Monologic and Dialogic Educational Cultures’ Principles and Practices

Monologic educational culture	Dialogic educational culture
Rules and regulations	Inquiry
Cultural mode of certainty and stability	Cultural mode of uncertainty and negotiation
Confrontational	Collaborative
Emphasis on performance	Emphasis on relationships
Outcome-oriented	Process-oriented
Communication as transmission	Communication as dialogue
Expertise as superior knowledge	Expertise as polyvocality
Ignoring some soft forms of knowledge	Embracing multiple forms of knowledge
Transfer of culture	Show, tell, follow up and create new elements
Show and tell	Cultures of transformation
Persuasion	Co-creation of meaning
Argumentation for one way	Creating spaces for participation
Cultures of dominance	Cultures of dialogue
Framing	Creativity and improvisation
Attempts to narrow and specify	Attempts to discover new combinations, new transfer, new methods and solutions
Cultures of closing	Cultures of opening
Uniformity	Variation
Attempts to standardise	Attempts to widen perspectives, giving new experiences
Cultures of one size fits all	Cultures of difference as a resource

In Table 6.1, I have displayed characteristics and practices of educational cultures set up as dichotomies (i.e. monologist versus dialogic). The concepts from this table are chosen to indicate the core characteristics of exploration as dialogical engagement, as illustrated inside the loop of the model. The principles and practices presented here will be ideal types; in real life, these two orientations will often comprise hybrids in complex communication. The role of the teacher will be different in these two binaries. In the monologist culture of education, the teacher will be merely a judge or referential organiser. In the dialogic culture, the teacher is merely a guide and participant. According to Bakhtin (1981), we do not communicate in a vacuum; rather, we will always exist in response to things that have been said before and in anticipation of things that will be said in the future. Monologic refers to a principle and practice where a single person or organisation is dominating or monopolising a conversation or discourse, while dialogic culture refers to the understanding of communication as always being in relation to something else (Bakhtin, 1981; Nesaria, 2015). Educational dialogic cultures can be set up as dichotomies on the theoretical level. Real-life situations will most likely have elements of both, but it is

also likely that they will exhibit dominant patterns of either monologist or dialogic practices.

In this section, I will further highlight one of the key words, *improvisation*, in order to give a deeper sense of the overlap with exploration and illustrate how this key word relates to time, emergence and manifestations at the bottom of the model. Keith R. Sawyer's (1997) innovative work on understanding improvisation is relevant to the attempt to elaborate on exploration. In his effort to describe improvisation, Sawyer also uses the term *emergent* to describe how children improvise in play. According to Sawyer, the emergent will often be *heteroglossic*⁷ (Bakhtin, 1981) because each child participating will have a slightly different understanding of the play frame (Sawyer, 1997, p. 48). The emergent will also contain the socio-relational dynamics resulting from the flow of the play drama and will be regulated by the continual change during the play process. *Improvisation* is, as such, not a synonym for exploration; rather, while improvisation will contain fantasy and variations, exploration is a wider concept that embraces improvisation. Both concepts imply time—historical, present moment and future time—as emergence unfolds in time. In order to understand exploration as a process, the emergent will open up for understanding exploration as a movement that will eventually manifest and that can be observed and acted upon. The emergent, a time span in a flow of interaction, will supplant understandings of *exploration* as a concept belonging to research and pedagogy. The manifestations will be moments to grasp. In pedagogy, as in research, it will not be possible to grasp every aspect of the complex nature of institutional life at once. The model can offer a simplification, with suggested manifestations relevant for understanding exploration.

6.7 Activity, Relations, Place and Space

Human *activity* takes 'place' in 'space'. When activities are planned for, carried out and evaluated in the curricular context of early childhood, they are situated in space, at a certain place. Activities are the obvious manifestations, but climate change affects food supplies, shelters and new migrant patterns. Local environments, such as urban city landscapes as well as rural agricultural, mountainous and water landscapes are the world of the child as well as the teacher. These thoughts represent an 'outwardlookingness' (Nairn, Kraftl & Skelton, 2016, p. 6) that considers geographies. Geographies are also considered at an activity level by Marilyn Flerer and Mariane Hedegaard (2010) to illustrate how, in a case study from a Peninsula family, children had rapid movements from room to room to ensure that they could take part in events. Adults also had this 'roaming behaviour' ('geographical roaming' [p.

⁷Bakhtin (1986) argues that heteroglossia (in the novel) means the coexistence of, and conflict between, different types of speech: the speech of characters, the speech of narrators and the speech of the author. He defines *heteroglossia* as 'another's speech in another's language, serving to express authorial intentions but in a refracted way' (Holquist, 2002).

12–14]), moving around as participation in everyday life events and activities. Such a geographical roaming can also be articulated as spatial meaning-making. In pedagogy, an awareness of the cultural dimension of spatial meaning-making creates an understanding of children's bodies and movements in a more resourceful way than in linear education, where the task of the teacher is to create cultures for listening and disciplining the body for sitting down in teacher-directed activities.

Space, in its most fundamental forms, relates to the surfaces and volumes of earth (Nairn et al. 2016), and it is of high actuality for early childhood pedagogy in times where posthuman ecologies challenge the 'human only'-centred paradigms (Braidotti & Bignall, 2019).

Space is also a notion of interest in pedagogy as a metaphor: 'participatory agentic space', which represents the curricular space in which children can move and act in flux with the ecological frames of institutions (Ødegaard, 2007). Children in kindergarten may have a 'participatory agentic space'; nevertheless, it will be a regulated space within the systems, structures and control of the curriculum and the teacher. The curricular space contains the activities and everyday practice made available to them. A teacher that will plan for activities must consider that an activity is set in certain locations and that those locations will constitute one of the many dynamics and conditions.

Place refers to the local and the global and bears the possibility of encouragement and engagement with the decolonising pedagogy in diverse early childhood settings. Children and teachers will always be situated locally in place. Children can sometimes have their own territorial places but will nevertheless, most of the time, spend time in shared localities in families as well as in institutions. A dynamic understanding of place (Fleer & Hedegaard, 2010; Massey, 1991, 2005; Tobin, Hsueh & Karasawa, 2009) enables the teachers to ask and search for understandings of what place, local or global, means for children and families and, through that, answer accordingly with sensitivity. Thinking with place actualises a 'glocal' curriculum. Such a curriculum is inevitable wherever we live, but it can be silenced through education. A high awareness of the co-existence of the global and the local is necessary in pedagogy, along with the concept of space, because children who are born today are beginning their lives in the Anthropocene⁸ age (Steffen et al., 2011; Ødegaard & Marandon, 2018). Natural and material forces and human forces are seen as intertwined and interdependent, and they play out locally.

An important dynamic condition for exploration as dialogical engagement is *relations*. Relations embrace both the interpersonal dialogue and activities and the relations to the conditions mentioned in the curve in the model. In the following section, I will elaborate on how dialogical relations are fundamental in pedagogy that is characterised by exploration as dialogical engagement, as illustrated inside the loop in the model.

⁸The age of the Anthropocene was proposed in 2000 as a new phase in the history of humankind and of the Earth. Academics (Capra, 1982; Kagan, 2013) and the Intergovernmental Panel on Climate Change (Lee, 2018) agree that the world is close to a tipping point and that humans have had a damaging impact on planetary processes.

6.8 Illustrations and Discussions of Conditions

The last element in the model is the key concepts that indicate human and non-human conditions. In real life there will be a wide spectrum of conditions for explorative pedagogy. The model picks up on some selected conditions, such as body, sensation, movement, artefacts, materiality and symbols, all of which are examples of conditions that constitute entangled complexities handled in dialogical engagement. In the model, these concepts are placed in the layer with the shape of the halfway loop to indicate that these are the main drivers and triggers for explorative performance in education.

In the following section, I will give examples and discuss these and more complex conditions to elaborate on these bodily, material and discursive conditions.

The core point in this effort of presenting a model of exploration as dialogical engagement is an interest in children's exploration and meaning-making processes—in how children shape themselves and are being shaped in a dynamic wave, where personal, structural and discursive conditions operate in a flux. The philosophy of dialogism implies an approach to understanding culture as a living tradition. Culture, as a concept, is open, like 'art' and 'play', and needs Culture an articulated perspective. I view culture dialogically, implying that culture has ethical, epistemological and aesthetic dimensions. Culture is embodied, central to meaning-making and a core matter for everyone (Bostad et al. 2004).

The process of a person's self-formation—the constantly changing state of becoming a person—will always be conditioned. When persons are agentive and manoeuvre in their own lives, they are always acting in relation to someone, something and somewhere, which in turn shapes the conditions of what is possible to act upon, how to act and when.

In addition, places and artefacts—whether material or intellectual—will offer something to the exploration. One example is the descriptive study of two teacher-researchers exploring mathematical artefacts with children in an early years institutional setting (Pettersen, Volden, & Ødegaard, 2016). Besides the descriptions of how children explored the mathematical materials and a corresponding model on a tablet, the pedagogical findings demonstrate how the researchers as teachers and young children's activities can be driven by curiosity and a motive or drive to make meaning and to explore. Of special interest to the researchers as teachers was the children's surprisingly deep interest in the activity. Some children were deeply engaged for hours, while other children went in and out of the activity. The researchers suggest three main characteristics of the activities that might explain the deep explorative involvement. First, the activity was open-ended in time. Second, it was introduced as a shared, voluntary activity. Third, it introduced tangible artefacts (i.e. material bricks and shapes) and changeable artefacts (i.e. a tablet with models and applications). The activity was staged on the floor, which supported the open-ended character of the activity, and the researchers as teachers were engaged with the children, which demonstrated cooperation and co-creation. This description illustrates some core aspects highlighted in the model of exploration as dialogical engagement.

How signs and discourse constitute conditions for cultural formation and explorative practices can be illustrated by a comparative study of semiotic landscapes. In an analysis of the discursive conditions for teachers' linguistic practice with multilingual children in Norway and Germany, Anja Pesch (2017) used Bakhtinian concepts of utterance, speech genres, voice, discourse and ideology. She found that, even if the ECE in both countries viewed multilingualism as a resource in verbal communication, the staff in the German kindergarten held a more dynamic view of multilingualism, and a multilinguistic practice was observed in the early years' institution. By studying the semiotic landscapes, Pesch observed, that while the Norwegian kindergartens related their semiotic landscapes to national identity (e.g. flags), such national signs were absent in the diverse German kindergartens, because people's national identities are sensitive and were not found to be relevant in the German context. Meanwhile, in the Norwegian context, the national origin was considered most relevant, as signified through flags on the wall. Pesch let us see how the conditions for ECE institutions are connected to a wider discourse on national and transnational practices and that symbols such as text, photos and flags can be seen as manifestations of cultural practices.

Children are exposed to symbols, learning material and role models in everyday life outside the fences of an ECE institution as well as inside. We can call these conditions *discursive*, as also suggested in the model of exploration as dialogical engagement. Next, I will present an example of the discursive conditions created by a global media event that changed a symbolic discourse, e.g. girls as passive and Latinos as inferior, as North American media stereotypes occasionally do.

Dora the Explorer is a show that is becoming global through the success of Nickelodeon, a children's cable network.⁹ Nickelodeon launched in 1977 as the first cable channel for children. It airs productions from 5:00 a.m. to 10:00 p.m. every day in 75 countries across the globe and is a powerful conditioning activity for children's formative development.

This show is a worldwide phenomenon seen in 74 countries. The main character is a girl in kindergarten, and each episode is built around a series of recurring events that occur during Dora's travels around the world. She carries a backpack and is accompanied by her talking anthropomorphic monkey named Boots. In each episode, Dora and Boots meet obstacles or puzzles that they have to solve. Dora seeks the viewers' help in solving the problems they face. Dora is an agentic, explorative child, challenging the ideal of the dutiful and well-behaved girl. She is also of Latino heritage, a heritage occasionally stereotypically presented in the media as uneducated and possessing limited language skills. The producers' view was that it is, in fact, expected that a child (i.e. a girl of Latino heritage) can be agentic in explorative ways.

Dora was considered a favourite among American children and was watched by 25 million viewers each month (Ryan, 2010, p. 56). Nickelodeon, as well as a range

⁹ *Dora the Explorer* was a show at Nickelodeon airing from 2000–2014, but episodes are still repeated. The co-creators are Valerie Walsh and Chris Gifford (Larsen, 2014).

of television companies, many parents and ECE institutions all over the world made *Dora the Explorer* a new ideal: the explorative agentic child—a girl. This show changed the rules of what sold in the market of preschool television (Ryan 2010). *Dora the Explorer* will serve as an example of how a television show, developed by former teachers and a television company, can change expectations and set a global model for an agentic, explorative child. This television program was the result of professional pedagogues trying to create programs for young children that opened the floor for exploration, and can be considered a media version of ‘glocal’ teachers. Thus, the discursive space was broadened through technology (Cvetkovic, Olson & Olson, 2013).

An important aspect for pedagogy in early childhood will be the interest in new mediations (e.g. a new show targeting children, like *Dora the Explorer*) that present new ideals, heroes and antiheroes to children. The songs that are sung, the pictures presented, the narratives performed and other uses of media, toys and teaching equipment are all creating conditions for what the child may take up and explore (Schei & Ødegaard, 2017; Cvetkovic et al. 2013; Mollenhauer, 1983). Institutions are structured by the knowledge that lies in the way things are done and structured: routines, habits, rhythm, pedagogical dramaturgy and the signs and symbols chosen.

6.9 Meaning-Making and Participatory Space

I will now turn to the most fundamental aspect of a human’s social setting: that of meaning-making (Chen, 2001). Meaning-making aligns with cultural formation as persons draw meaning from, or add meaning to, events, activities and experiences. Meaning-making constitutes the explorative practice, however meaning- or sense-making alone, is not enough.

In this sense, a person’s meaning-making is a shared construct. Meaning co-exists with a person’s movement and involvement in the world. Cultural formation operates between the dynamic and continual interaction of the person’s world and the wider discursive, material and relational reality. The essence of living is to make sense of one’s experience of being (Chen, 2001, p. 322). Mikhail Bakhtin (1986, 1999) argued that meaning has a heteroglossic nature, as the social space is fundamentally interpersonal and enables both appropriation and transformation of the voice of the other. To live means to participate in dialogue: to ask questions, to give attention, to respond, to agree and so forth (Morson & Emerson, 1990, p. 60).

Based on Bakhtin’s work (1981, 1986), I developed a concept of *participatory space* (Ødegaard, 2007, pp. 95–99) to explore the process of narrative collaborative meaning-making and to argue that educational settings are not ideal. Even if a teacher is interested in children’s worldviews and needs, the educational setting will always delimit what is possible for the teacher to follow up on later. A participatory space is a dynamic space. In educational institutions, power will be exercised for the simple reason that teachers will have a mandate, a call or a task. Even if the children are given rights to participate and influence their own lives, through laws and

regulations, children's participation in educational settings will nevertheless be influenced by material and relational interaction with the teachers and other children. If an ECE institution is to foster a culture of exploration, this culture must have characteristics that encourage explorative action. Even if we succeed in finding some characteristics for the pedagogics of exploration and cultures of exploration, as I intend to do here, there will still be unpredictability (Ødegaard, 2011). How an activity will develop depends on the teacher, the children participating, the material and the cultural traditions. There will be emergences observed as movements, utterances and positioning the body in certain ways in certain places, but whether the new beginnings will progress to manifestations of narratives or activities depends on heteroglossic conditions. A participatory space is opened if, for example, shared narrative meaning-making is facilitated. Extended conversations, the places where activities unfold and the artefacts that are made available and used are shaping content and, thereby, cultures. In our case, we could say that when shared explorative activities begin, a *participatory space* is opened.

Also, Mörtenböck and Mooshammer (2011, p. 127) develop a similar concept of *social space* where, as a result of dialogue, there emerges a complex map of intensities whose distribution develops out of reciprocal points of contact. According to Birgitta Busch (2014), such a social space is not structured according to an overarching plan. She uses the Bakhtin concept of heteroglossia to propose a pedagogy with 'open spaces of potentialities, where the polyphony of voices, discourses and ways of speaking—all linked to different social-ideological worlds—is not kept out, but seen as a constitutive feature' (Busch, 2014, p. 38). She underlines that this Bakhtinian concept allows us to connect linguistic forms and historical social relations.

6.10 The Relevance of 'Exploration' in Early Years Pedagogy in the 'Glocal' Landscape

In this current era of globalisation, most early childhood policy- and curriculum-making processes are closely linked to their national challenges, professional and political discourses and the future-oriented global economies. Globally, we can see that ECE is increasingly seen as an arena for social mobility and lifelong learning (Field, 2006). Local teachers' practices are, however, personal and relational. The conditions for such practices are deeply ideological and political. What teachers can or cannot do and engage in with children, and what artefacts they choose or are expected to use with children, are entangled in structural, philosophical and ideological preconditions (Ødegaard, 2015, p. 44). Teachers will identify, understand and act upon those conditions. A local curriculum is both discursive and embodied and negotiated over time; it becomes entangled in the nation-state's political ideas and national historical events as well as the country's contemporary challenges and situations. Teachers live in semiotic and material landscapes that regulate and

habituate the space and possibilities for teachers' practices and the awareness attached to them.

Professionals, families and children live as 'glocal' citizens, in the sense that technology is available for people on smaller or larger scales throughout the world. People using and participating through the internet, cell phones and digital play are engaging in activities that go beyond a country's territorial borders. The internet is a medium for globalisation. Critical voices argue that technology, media and the internet facilitate the dominance of Western culture and help eliminate the diversity of cultures and identities of people groups around the world. Science, technology, engineering and mathematics (STEM) education has, for many years, had strong advocacy globally, and the driving force has been the belief in the capacity of science, computers, engineering and mathematics to solve problems and create better societies. Criticism has also been raised towards the dichotomy often made between STEM and the arts. Wider perspectives, generic skills and both technical and more 'fuzzy' abilities are necessary if we are concerned about sustainable futures. The critical skills put forward are (a) to learn to learn and (b) to love learning, both skills that equip students to continue to follow their interests in life (p. 27). The ability to foster and liberate curiosity, creativity and exploration is central, whether it is called 'play' or 'learning'.

6.11 Conclusion—Cultures of Exploration

From the outline above, cultural formation processes are ever-present and continuous. Systems of structures and discourses (e.g. political, legal and economic) as well as systems of beliefs and ideologies govern practices—sometimes directly and other times indirectly, in subtle ways. Local practices are made up of social dynamics, cultural talk and manners. In this chapter, I have considered exploration as dialogical engagement, and pedagogical practices are seen as enacted in institutions inhabited by persons who interact in a myriad of emergent events. Institutions and pedagogical practices constitute—and, at the same time, are included in—social, political and symbolic conditions for explorative and cultural formative practices. I have presented a visualisation through a model of exploration as dialogical engagement, described by examples, and argued and discussed complex aspects of exploration. I have elaborated on the concept of exploration as well as similar and overlapping concepts. With inspiration from Escobar (2009), I have reconstructed and elaborated relevant dichotomies of a spectrum of notions that can characterise what exploration pedagogy is and what it is not. In this effort to conceptualise exploration and cultural formation, I can suggest some pedagogical principles and practices relevant for discussing exploration and what kinds of pedagogical cultures and practices might support exploration within the field of ECE.

Through examples and discussions above, I have shown how, for example, material and symbolic artefacts are made available and that material as well as conceptual artefacts play a crucial role in cultural formation. When people use artefacts

that are made available in society at large, they engage in continuous processes, some of which might be explorative while others might not. Either way, cultural formation will be a continuous process of becoming, and certain practices and pedagogical content will be shaped.

Bakhtin's concepts (e.g. 1981) are considered useful because concepts in dialogism provide a conceptual system that can capture the complexity and dynamics often experienced in ECE practices. This chapter has, therefore, presented a model of *exploration as dialogical engagement* and outlined a set of crucial contemporary conditions for cultures of exploration. The attempt is anchored in arguments and examples for this new culture-sensitive thinking tool. Moreover, the model encourages a pedagogical idea that goes beyond a child- and teacher-centred approach by suggesting the dialogical engagement that requires dynamic communication and historical understandings. Children and teachers are explorative and sensitive to problems, relations, signs and sensations when working, playing and being together.

In order to move forward, I will emphasise the need to establish a committed leadership and involvement from stakeholders such as staff, children and families. In order to create pedagogical cultures of exploration, it could be promising to involve researchers and collaborators that can support the process of changing cultures and building knowledge and experience. Exploration is manifested in a complex matrix through body, movement, sensations, artefacts, materiality, symbols and discourses.

The model is called *exploration as dialogical engagement* to underline the demand for commitment by leaders and staff in building cultures of exploration. The characteristics of such pedagogical practices can be summarised as:

- Openness towards the world and children's and family's experiences and narratives
- Inquiry and curiosity towards multiple terms of knowledge, acknowledging emotional and performative as well as academic knowledge.
- Co-creation of meaning and improvisation in everyday activities
- Collaboration with stakeholders and partners
- Variation of cultural resources and topics
- Process-oriented with a high awareness of possible new beginnings and manifestations

Exploration as dialogical engagement could serve as a pedagogical thinking tool in pedagogies valuing and implementing culturally responsive practices and exploring practices and worldviews of sustainability.

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Chapter 7

Historical Roots of Exploration – Through a Fröbelian Third Space



Andrea Synnøve Blomsø Eikset and Elin Eriksen Ødegaard

Gerd's Story of Exploration in a Fröbelian Kindergarten

Let us introduce Gerd,¹ who as a child went to a Fröbelian kindergarten in the 1930s.

I went to a Fröbelian kindergarten, and Fröbel had the idea of shaping something from a variety of materials, like paper clips, clay and sewing on paperboard and fabric. In my kindergarten it was called working hour, but the idea was still the freedom and joy of the opportunity to choose material and to shape something. We did not have toys in kindergarten; so, what we had were the things that we made, like little baskets and paper cups. We used templates, which were easy, and the point was to learn to use the tools, like scissors, needle and thread. There was a closeness to nature; the songs that we sang had content that followed the year's cycles. In this way, we could more easily pay attention to natural phenomena. We learned to live with nature, which was also important to Fröbel. Just outside the fence was this little pond; it was a freezing pond during the wintertime, and we were allowed to slide on the ice. We did not have ice-skating shoes, but when entering the ice, we could look down under the ice. I remember very clearly, one cold winter day on the frozen pond, we discovered an ice-covered straw on the ice. I lay down to study the straw and discovered that the stiff straw also was down under the ice. I could see it clearly through the glassy ice. I was completely fascinated by the phenomenon. It was exciting to see straws being both under the surface and coming through the ice surface. This was quite an experience for me.

¹Gerd Wicklund-Hansen (1927–2015) was a former kindergarten teacher who, as a child, went to the only Fröbelian kindergarten in Bergen, Norway. Later she was educated at the Fröbel Institute in Copenhagen, Denmark. The vignette is developed from the transcripts and from a series of life story interviews for a project on the Norwegian kindergarten pioneers.

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7.1 Play and Exploration in Friedrich Fröbel's Educational Philosophy

The vignette introduces us to a local and historical reception of a Fröbelian pedagogy. Through memories, we get closer to the experience of the child's exploration of her environment surrounding her kindergarten in the 1930s in Norway. She remembers how cold ice and a straw in a freezing pond fascinated her. This memory is located in an institution, so we need to consider the teachers who were close by when the child explored the phenomenon of a straw being in the freezing pond at the same time as being above the ice surface. Even if teachers are invisible in Gerd's story, a teacher will have created the conditions for these explorative activities that she remembers.

References to Fröbel are often seen in early childhood educational research, especially in topics such as play, learning and pedagogical ideals, and in the origin of early childhood pedagogy, even if there is not much empirical research directly inspired by Fröbel (Johansson, 2018). It is timely to revisit Fröbel's texts to look for qualities. He left behind rich material, some of which is well known as his play gifts, and the rest of it not yet having been elaborated. When taking on the task of tracing the early roots of exploration as a pedagogical approach, starting with Fröbel was an obvious choice and point of departure. A special focus in this chapter is on how conditions for children as explorers are articulated and how the teachers' practices are described. We have used the pedagogy of *the third space* as a lens for discussing the space for exploration in an institutional pedagogical practice.

Play is not an activity belonging to childhood alone, rather it is a fundamental human activity (Karoff & Jessen, 2014; Sutton-Smith, 1997). In our context of early childhood education (ECE), however, a historical perspective of a play-based curriculum is relevant for the purpose of tracing the roots of exploration as a concept and practice. In this chapter we approach this search by combining text analysis and personal accounts as illustrations from a life story project.² The aim is to understand exploration from a Fröbelian *third-space* perspective through and beyond a textual analysis.

A play-based curriculum entails joy that can drive exploration and learning. In a Norwegian context, play is often linked to notions of nature where childhood is a time of innocence and purity. Often, when looking at broader international discourses on play, this view can be traced back to philosophers and pedagogues such as Rousseau, Pestalozzi and Fröbel (Ailwood, 2013; Sutton-Smith, 1997). This chapter will add to that body of knowledge by going beyond such labelling of historical pioneers. We will give special attention to how activities are articulated and proposed as explorative practice in classical texts by Fröbel, and we will also draw on the narrative of a Norwegian kindergarten teacher who grew up attending a Fröbelian kindergarten as a child – later to become a Fröbelian kindergarten teacher

²Excerpts can be viewed on the webpage Kindergarten Pioneers; <http://prosjekt.hib.no/barnhagepionerene/>

herself – in order to illustrate exploration as a pedagogy of a *third space*. We will trace and discuss how Fröbel's ideas and ideals meet past and current educational challenges for the kindergarten teacher and we will argue for *exploration* in early years' pedagogy for the future.

Ideas of children as explorers and other ideals in ECE can be traced to European educational philosophy and early ideas about the child in educational settings. Herein, we will study the conditions for *children as explorers* in kindergarten, the child's activity and the practice of the teacher in milieus inspired by Fröbel's philosophy. We have selected two texts for this purpose: *The Education of Man* (Fröbel, 1885, 2005) and *Pedagogics of the Kindergarten* (Fröbel, 1909). As a first step we analyse *The Education of Man* (Die Menchenerziehung; Fröbel, 1885, 2005), first published in Germany in 1826, over a decade before Fröbel opened his first kindergarten. Fröbel had an eclectic background with studies in surveying, topography, mathematics and crystallography, and he also worked as a teacher for the children of the von Holzhausen family (Bagger, 1916) prior to this publication. He was influenced by the new political winds in Germany and France, driven by a desire to change the way of thinking about children and their upbringing (Wulff, 1947). This book was an early attempt to address the role of the teacher and the role of the child in kindergarten didactics in European philosophy concerning ECE. In this writing process we have used two different English translations of the book, one by Jarvis (1885) and another by Hailmann (1987), in order to validate or data, as time and translators can change the meaning of texts. The second text, *Pedagogics of the Kindergarten* (Fröbel, 1909), first published in 1861, is a collection of publications by Fröbel, meant to educate kindergarten teachers about key elements of practices in kindergartens.

A *kindergarten* can be seen as an institution structured by existing historical knowledge. Educational institutions will be structured by the knowledge based in the ways of thinking that can be articulated in texts such as theory, policy documents, frameworks and curriculums. Texts can therefore create conditions for what kindergarten teachers and children are allowed and encouraged to do and what kinds of activities are possible in a kindergarten. Some texts such as Fröbel's have had an impact on practices to a larger or smaller extent for over 190 years. A text is thus a mediated artefact that creates conditions for thinking, understanding and practice. The aspects of children as explorers and how this will relate to cultural meaning-making, activities, play, learning and the use of artefacts are of interest when studying exploration as a concept with historical roots. The main question we explore in this chapter is: *How does the practice of 'exploration' appear in Friedrich Fröbel's texts from the perspective of a Fröbelian 'third space'?*

7.2 Tracing Exploration Through Friedrich Fröbel's Educational Philosophy

The history of early childhood educational philosophy and education influence contemporary understandings of ECE. Even if the history of education in Western countries can be traced back to ancient and medieval times, it is relevant to cover one of the most influential early years' philosophers in modern times when tracing educational roots for exploration. We lean on a perspective where play-based learning in kindergarten is in a historically-located place in time and space, which gives meaning to the social practices and to the professional task and mandate. Persson and Tallberg Broman (2017) suggest that history is mediated in what is referred to as a vertical (i.e. contemporary) and a horizontal (i.e. historical) complexity. The *vertical complexity* is made up of the material, mental and social dimensions in a place that is shared in the early childhood educational settings of today, while the *horizontal complexity* is the historically-located place (Persson & Tallberg Broman, 2017, p. 190). We try to overcome the simplification of seeing history primarily as a background for contemporary practices and understandings. Since play often comes to the forefront in the early childhood research of today, especially in the Nordic tradition, and because we consider exploration as a process connected to play, we started our study with the expectation of finding early traces in Fröbel's texts.

We are not alone in such an expectancy. Among others, Nina Lieberman (2014) writes about playfulness as a kind of light-heartedness found in children's activities, especially in their imagination and acts of creativity, behaviours that do not necessarily disappear when humans grow up, as a sense of humour, manifest joy and spontaneity also belong to adulthood. She describes how Fröbel's philosophy is a central historical clue to understanding how play and playfulness are fundamental for human growth (Lieberman, 2014). Fröbel's (1782–1852) philosophy of education and his didactics for kindergarten teachers are commonly and globally understood as a play-based and child-centred approach for learning activities under the guidance of a trained teacher in a child-friendly institutional setting (Prochner, 2017). Even if his philosophy of education has been a travelling idea where local varieties may cause confusion about whether to adapt the didactics to existing educational cultures or to oppose them, Fröbel's ideas are widely seen as a play-based approach in opposition to educational cultures of recitation and strict discipline (Wollons, 2000; Wulff, 1947).

Even if Fröbel's transnational influence has been strong, only limited amounts of Fröbel's works are available in English or in other languages (Johansson, 2018). In Germany, Helmut Heiland has made substantial contributions to the field (e.g. Heiland, 1992, 1998) and there has also been Fröbel-inspired research and advocacy in Anglo-Saxon countries (May, Nawrotzki, & Prochner, 2017; Wollons, 2000).

Fröbel's philosophy and his emphasis on both play and a holistic approach to the education of young children might be understood historically as being born between two revolutions. He lived in a period of transition between a feudal society and civic society. The ideas influencing Fröbel were individual freedom and social equity.

From biographical accounts, we know that Fröbel had a childhood with strict home-schooling and little experience of parental care and love. His drive and motivation for freedom and joy for the child comes through in his philosophy and didactic with the Fröbel gifts (Rockstein, 2015; Wulff, 1945). According to a recent Fröbel interpreter, Tina Bruce (2012), play and communication can help children transform experience from movement and sensing into abstraction and symbolic possibilities. Play is a natural behaviour for children; in the great outdoors, they seek out and enjoy the challenging experiences, where risk, uncertainty and adventure are central elements (Bruce, 2012). Let us read about *play in childhood* in Fröbel's own words: 'Play is the purest, most spiritual activity of man at this stage, and, at the same time, typical of human life as a whole – of the inner hidden natural life in man and all things' (Fröbel, 1885, 2005, p. 55). Fröbel was concerned with the freedom to learn, in combination with appropriate guidance. His view of play was that teacher guidance – creating curiosity in the play activity and for the experiences of a child – is critical for children's learning and development (see e.g., Fröbel, 1885; Moore, Edwards, Cutter-Mackenzie, & Boyd, 2014; Pramling Samuelsson & Johansson, 2006). To put it in Fröbel's own words: 'And then the play with the ball, in harmony with the bodily and spiritual development of the child, is seen by us to be a means of education, training, teaching, and learning, altogether as a genuine means of life' (1909, p. 141).

7.3 The Holistic Approach and *the Invisible Third*

As Fröbel clearly has pointed out in his life's work, attending kindergarten is part of a child's holistic education. As pointed out in the foreword by Hailman, the translator of one of the editions of *The Education of Man* (Fröbel, 1885, 2005), Fröbel's aim was to educate the child through self-activity. He wished to cultivate selfhood and repress selfishness (Hailman in Fröbel, 1987, 2005). His idea of a kindergarten did not take departure in the parents' need for supervision, as seen in political argumentation in many countries (Hultqvist, 1990), rather it was a place for holistic education based on children's premises.

Fröbel considered play, joy and nature as central to education and as a way of being and becoming a member of society; creating social bonds and acquiring knowledge and skills are part of early childhood. Education can, in this sense, be seen as both a cultural-historical and a social-relational phenomenon. This view of education explains a process where the child is living in cultural (i.e. ideological, relational, geographical and material) and societal (i.e. governed) worlds, both by exploring their *inner selves* and by exploring the world they live in.

Fröbel states in *Pedagogy of the Kindergarten* (1909, p. 239):

The knowledge of isolated and external phenomena may occasionally be a guidepost pointing our direction, but it can never be a path leading to the specific aim of child culture and education; for the condition of child education is none other than comprehension of the whole nature and essence of humanity as manifested in the child, and the most complete

possible realization and representation of the same, from the first appearance of the man as child and throughout the whole course of life. No education which fails to hold this aim consciously and persistently in view can, strictly speaking, claim to be an education worthy the nature of man.

In this statement, Fröbel formulates a holistic approach to ECE by stating that isolated knowledge and external phenomena cannot be the dominant route for young children because children comprehend wholeness. Links can be made to the contemporary wholeness approach seen in childhood-inspired cultural, historical and pedagogical approaches. How a child explores the world, continuously develops as a person and learns and influences the world are simultaneous and relational processes (Hedegaard & Fleer, 2008; Ødegaard & Koreponova, 2013). The term *cultural formation* embodies children's and teachers' activities, their use of artefacts and their practices of meaning-making and learning (Ødegaard & Koreponova, 2013). The word *play* might be connected to exploration because exploratory and active play is central in children's learning and participation in society (Fleer, 2013; Hedegaard, 2016).

Fröbel explains how the shapes in nature inspire children to sense and reflect on their world in a direct way so that they can make sense of their experiences. This laid the foundation for the well-known *Fröbel gifts*, a philosophy and didactic approach that originated in Germany and later spread globally. Fröbel imagined that the gifts would teach the child to use location as an educational aid and inspire the child to discover the connection between human life and life in nature. Also, similar to other cultural-historical understandings, the gifts create a bond between the adult and the child who play with them; this bond is called *the invisible third*.

The invisible third is a formulation in which we have taken a special interest. It occurs in Fröbel's texts as central to pedagogical views and we will show how he articulates it.

The word *explore* was not found explicitly in the texts we have looked at; however, that does not necessarily imply that words meaning *connected to* or being synonymous with the word *exploration* were not there. However, the words *play* and *activity* were the most common words in the book *Pedagogics of the Kindergarten* (Fröbel, 1909), while *activity* came up in *Education of Man* (Fröbel, 1885) as the most common of the chosen associated concepts we searched for. We searched for connections between the concepts of *play* and *exploration* and discovered that *exploration* was not mentioned explicitly as a concept; hence, *play* was most prominent in his vocabulary. In *The Education of Man* (Fröbel, 1885), the word *play* is used 87 times in 288 pages. In *Pedagogics of the Kindergarten* (Fröbel, 1909), *play* occurs 994 times within 400 pages. This indicates that the kindergarten was certainly a place for play, according to Fröbel. We will now turn to the question of how a kindergarten is also a place for exploration and how such a practice is articulated in Fröbel's texts. Let us further study how Fröbel writes about play in *Pedagogics of the Kindergarten* (Fröbel, 1909). The book is divided into themes according to types of play (e.g. movement plays). Fröbel writes a poem as an instruction for playing with the ball (Fröbel, 1909, p. 240):

The ball may now be set in motion, either by the activity of the child or that by the mother.

Let it, therefore
 Its power to prove,
 Stir and move,
 Go and come,
 Roll and run,
 Hop and swing,
 Go low, then high,
 In circle fly,
 Go far, come nigh.
 From one place to another then
 The little ball can roam again.
 But it can also hide itself,
 To tease the little one;
 Away into dark can go,

Or fly towards the sun. All this the little child can learn, Can gladly in the ball discern, And learn to trust his strength in turn. What rich, what active life and thought, the ball to this young child has brought! The life in both but one life stays. Though it so many forms displays.

We can read this poem as an illustration of how the child strives to make his or her inner life outwardly, objectively perceptible. He claims that the child tries to do what the child sees done. As we read it, Fröbel illustrates all the varieties he sees possible in play with a ball. He writes: ‘As the ball stirs, moves, goes, runs and rolls, the child who is playing with it begins to feel the desire to do likewise’ (1909, p. 241). He establishes a connection between the material (outer) world and the human (inner) world. We could say that Fröbel, in this poem, suggests the pedagogy of exploration through the illustration of all these varieties and possibilities for playing with a ball, which is often stated as a holistic approach to pedagogy. The ball was considered the first ‘gift’ for a child. He also claims that ‘all of these perceptions should all be fostered at the same time’ (Fröbel, 1909, p. 241). In the introduction to the poem, Fröbel writes that the ball may now be set in motion, either by the activity of the child or the mother.

Activity is a word associated with exploring and *the invisible third*, which could be found in the two texts. But the word search was only an indication of what phrases and words we could find in the texts. While doing the initial reading, we found elements of *creativity* and *imagination* as central points in the texts that were describing the relationship between the artefact and the child. The imagination used when playing with the play gifts is clearly a central point in the pedagogy of exploration for Fröbel. In *The Pedagogics of the Kindergarten* (Fröbel, 1909) he writes about the importance of the consideration of the presence and the absence of an object and its utilisation for play. Fröbel argues for repetitions, that the mother (or teacher) repeats the same experience in different ways with the same object. For example, by hiding a cube in her hand while she sings to the child: ‘I see now the hand alone. Where, oh, where can the cube be gone’ (Fröbel, 1909, p. 84). With gaze and attention, the mother (teacher) leads the child to her hand and the child’s hand. The mother (teacher) continues by concealing hand opens and sings ‘Aha! Aha! – My hand has hid the cube with care, while you looked for it everywhere. See

it is here! Look at it dear!’ (Fröbel, 1909, p. 84). The play continues by only concealing parts of the cube and in these ways, by singing, hiding and concealing, Fröbel argues that the mother (teacher) is bringing the child into more intimate connections with the expression of a cube (Fröbel, 1909). We can see how the song, the playful attention, the encouragement of imagination, the close relation between the mother (teacher), the child and an object are described. These relations occur in other texts through the metaphor of *the invisible third*. Fröbel (1885) gives attention to the importance of self-activity in the pedagogical setting:

But the answer partially found by himself is more to the child, and of more importance to him, than half hearing and half understanding it: this last causes indolence of thought and mind. Therefore, do not always answer your children’s questions directly, but, as soon as they have sufficient power and experience, give them the conditions to find the answer by their insight. (p. 51).

In this excerpt, we see traces of the invisible third. There is a bond between the adult and the child, and it is invisible. This excerpt could also be read as an argument for agency and participation, a recommendation to give children the space to find answers, to explore. The pedagogy found in Fröbel here points to the pedagogical approach of exploration and the teacher’s practice of dialogical engagement as proposed by Ødegaard (Chap. 6, this book).

7.4 Exploring Conditions for *the Third Space*

Our close reading of Fröbel (1826, 1885, 2005, 1909) makes it clear that the central pedagogical elements of conditions fostering children’s exploration can be found in his texts after all. Before we present some close readings, to illustrate this point we will turn to some contemporary readings about the third space.

There is a variety of research about the pedagogy of the third space (see e.g. Bhabha, 1990, 1994; Gupta, 2015; Gutiérrez, 2008; Williams, 2014), but these theoretical frameworks are not directly connected to the theory of the invisible third presented by Fröbel in 1885. Our aim in our literature research has therefore been to find research that explicitly combines the theory of the pedagogical third space, ECE and (if possible) Friedrich Fröbel. Kindergartens create conditions for children’s formative development,³ the content of what happens in kindergartens and how kindergarten teachers shape their practices (Ødegaard, 2012). It is in these practices and conditions that the third space can appear. This can be further illustrated by selected elements and aspects in this model, proposed and presented by Ødegaard (Chap. 6, this book).

Kafai, Peppler, Burke, Moore, & Glosson (2010) write specifically about Fröbel’s gifts and their importance in a digital age when connected to construction in textiles

³ *Formative development* is one of many translations of the Norwegian concept of *danning*. Other translations are *cultural formation*, *becoming* and *bildung*.

(sewing) and digital tools. In their findings, they find a third space between the play space of design (online and offline) where the playground is around a computer, the virtual play space where design can be shared online in groups and, finally, a third space where digital tools such as *LilyPad* open a public space because the design can literally be worn in public (Kafai, Pepler, Burke, Moore, & Glosson, 2010). Here, the interpretation of the third space is connected to personal, digital and physical community with others during play. The space is online and the materiality is digital. The aim of using *LilyPad* might differ from kindergarten to kindergarten, and the relations between the *players* are different than if you created a physical design in a kindergarten.

Akhil Gupta (2015) writes about the pedagogy of the third space in a different context:

Educators have to stop feeling compelled to side with one particular approach and begin to acknowledge the fact that both experiences are equally important. Educators have to begin to feel comfortable with pedagogical hybridity, and the notion of a pedagogy of third space. (p. 269)

This is an acceptance of how educational ideas from both India and the West are starting to co-exist in an empowering way for the teachers using this approach in a direct way. In Gupta's (2015) text, Fröbel is not mentioned by name, but the origin of Euro-American ideas of ECE (e.g. Montessori and Reggio Emilia) is stated as a basis for the *hybrid model*. While Maria Montessori (1870–1952) was affected greatly by intellectuals such as Pereira, Itard and Seguin, it would be 'absurd' to suppose that she was unaware of Fröbel's works (Standing, 1957, p. 40). Gupta's (2015) theory about the third space and pedagogical hybrids is grounded in the colonisation and globalisation of India, and in strong influences between the coloniser and the colonised. Here, the hybrid – the third space – manifests inside the classroom practice. Gupta (2015) describes how teachers experience the debate of academic versus child-centred pedagogy every day and how this debate is not resolved. A public debate such as this might affect the discourses in both culture and the system, as we know policy is built on both. May (2016) points out that this debate and the swinging pendulum between these two approaches has been going on for years. In the pedagogy of the third space, Gupta (2015) concludes that one universal pedagogy for all children may not exist, but we, rather, need to create conditions for a curriculum that integrates expectations, aspirations and the struggles of those who actually experience it intimately, and that teacher education needs to prepare and guide teachers in 'diverse way of teaching and learning' (p. 270). With this in mind, we move on to Fröbel's texts about the pedagogy of the third space.

What is formulated as *muss unsichtbar ein Drittes*⁴, in the original manuscript of *The Education of Man* from 1826 (pp. 20–21), translated by Josephine Jarvis (Fröbel, 1885, p. 9):

⁴He formulates: 'Alle wahre Erziehung und Lehre, aller wahre Unterricht, der echte Erzieher und Lehrer muss in jedem Augenblicke, muss in allen seinen Forderungen und Bestimmungen also zugleich doppelendig, doppelseitig sein: gebend und nehmend, vereinend und zerteilend, vorsch-

All true educators must at each instant, in all their requirements and designs, be at the same time two-sided, giving and taking, uniting and separating, dictating and following, acting and enduring, deciding and setting free, fixed and movable; and the pupil must be so also. But between the two, educator and pupil, demand and result, there must be an invisible third – to which educator and pupil are alike and equally subjected – to choose the best, the right necessarily proceeding from the conditions, and voluntarily expressing itself. The quiet recognition, the clear knowledge of the choice of this third, and the serene submission to the choice, are what must express themselves in the educator undeviatingly and purely but must often be firmly and earnestly expressed by him. The child, the pupil, has such a correct discernment, such a right feeling for recognizing whether what the educator or father expresses and requires is expressed by him personally and arbitrarily, or generally and as a necessity, that the child, the pupil rarely makes a mistake in this.

We see through the translation of *The Education of Man* (Fröbel, 1885) what conditions a third space: the close and engaged relationship between the child and the teacher. The dialogical role of the teacher is described in the relationship with the child: giving and taking, deciding and setting free, being fixed and being movable. *The invisible third* is described as a choice – a place between the teacher and child where they are equals – and they both choose to move in the right direction according to the conditions around them. We interpret this *movement in the right direction* as an opening for exploration. As Fröbel describes, this happens in *instants* – situations where the teacher and child explore together. They can move towards a place of exploration through dynamics such as opening a participatory space (Ødegaard, 2007) for multiple ways of knowing.

Gerd Wicklund-Hansen's narratives, as presented in the vignette of this chapter, can exemplify what this *invisible third space* can contain and how this is connected to the practice of exploration. Wicklund-Hansen's story explores the third space in Fröbelian kindergartens. She shared her experience from a study trip to the Netherlands in 1947:

There I discovered that the interpretation of Fröbel varied. I got a shock when I saw how the pedagogues used the Fröbel gifts. I was used to a playful approach to the boxes with the wooden shapes. I believed the pedagogue should create a curiosity; they would shake it to make sounds, asking what is in here, use facial expression to support the curiosity and slowly, slowly removing the lock, revealing what was inside the box, but in the Netherlands children were sitting by the table with a box in front of them and on the teacher's order, the children were allowed to move the lock and take out the wooden shapes to build with them. This was not what we had been taught in Denmark and not at all what I remember from my childhood kindergarten.

reibend und nachgehend, handelnd und duldend, bestimmend und freigebend, fest und beweglich, und ebenso muss der Schüler, Zögling gesetzt werden; aber zwischen beide, Erzieher und Zögling, Forderung und Folge, muss unsichtbar ein Drittes: - das aus den Bedingungen notwendig hervorgehende und willkürlos sich aussprechende Beste, Rechte walten, ein Drittes, das Dritte, welchem Erzieher und Zögling gleich und ganz ebenmäßig unterworfen ist. - Das stille Anerkennen, das klare Wissen und das ruhige heitere Hingeben an das Walten dieses Dritten ist es ganz besonders, was sich in dem Erzieher und Lehrer schrankenlos und rein aussprechen, oft aber auch wohl durch, Ihn sich fest und ernst aussprechen soll.'

The shock that Wicklund-Hansen is communicating (i.e. what she explains as a misreading of Fröbel) can be explained by new historical research about the international varieties of Fröbelian pedagogies' implementation in local contexts. According to Nelleke Bakker (2017), not much is documented in the Netherlands when it comes to the international knowledge base about Fröbel's influence on ECE around the world. The Fröbelian kindergarten philosophy, however, was introduced by Elise van Calcar in her books representing the Fröbel philosophy and didactics (Bakker, 2017). Bakker describes this version of Fröbelian pedagogy as a conservative, maternalistic version of feminism, whereas van Calcar puts more emphasis on learning to think than Fröbel did in his original texts. Wicklund-Hansen expected to see the pedagogue creating conditions for curiosity by engaging with the children.

7.5 Roundtrip to the Future: Through a Fröbelian-Inspired *Third Space*

As we have shown, by tracing some historical roots, both philosophically and through personal accounts, the pedagogy of *the third space* is a room of exploration that the kindergarten teacher and the child must enter together. Exploration as dialogical engagement, as first enunciated in Chap. 6, was a pedagogical practice, also revealed in Fröbel's texts as illustrated in this chapter. Our claim is that the pedagogy of the third space found in Fröbel's texts (1826, 1885, 2005, 1909) echoes contemporary pedagogical research and pedagogical approaches that take heterogeneity and diversity seriously, as for example as proposed in Gupta (2015). We need the emergent space and the dialogical engagement of teachers to create participatory spaces for children (Ødegaard, 2007). The classic dilemma of the teachers' aim for education and the involvement and agency of the child will always play out in practice. To let a child examine a straw in a freezing pond (as in Gerd's story) instead of rushing to the next activity embodies the teacher's knowledge of the pedagogy of the (invisible) third space.

In the practice, leadership and aims of the kindergarten, we can open up for routines that include this approach of 'deciding and setting free' (Fröbel, 1885, p. 9). An approach and pedagogy of pure instruction only includes deciding, while with an approach of pure freedom, there would be no learning within kindergartens. A pedagogical hybridity, where teachers manoeuvre between goals and letting emergent activities be manifested through exploration, can be suitable in pedagogical contexts where children's participation is a right of the child. In the 1800s, children were preparing for serious adult life, work, family and community responsibility. Fröbel seems to have been ahead of his time, focusing on the natural play and ways of the child that can occur when conditions are made right for play and exploration. This influences the conditions for exploration which are indirectly described in his texts.

Following Fröbel's approach and drawing connections to contemporary cultural-historical approaches, we argue that exploration gives children opportunities to take part in the regulation of what is going on and to decide which routes to further follow up. It gives space for initiatives and negotiation between and among children and teachers. It allows them to explore together with peers and teachers and, hopefully, exercise self-control as individuals. Through exploration, they can expand their understanding and develop what they already know. In dialogical engagement with teachers and peers, we can see that exploration will imply the necessity of taking turns, being sensitive not only to the dialogue itself, but also to the material world, the places where activity takes place, the artefacts, the shapes of objects and the landscape, movements, the participatory space given and developed, and the manifestations that can be experienced. By exploring, they will be given opportunities to symbolise and use objects in a way that is meaningful and thrilling to them. There will be aspects of emergence as well as manifestations, some of which will often be invisible in children's self-organised play and activities as well as in pedagogical, organised activities. This is not a conflict-free zone or a problem-free pedagogical approach, as we have also briefly pointed to in the examples. Texts and practices can be read and implemented in many local and personal ways. Such a search for traces to the historical origins of a pedagogical approach to exploration in ECE can show how early years' pedagogues have, for centuries, opposed what then – and still today – can be experienced in settings where education is either teacher-centred or child-centred only. A pedagogical hybridity is necessary in diverse groups of children. The need for hybridity is not lessened with the digital technology that is entering the early years. Our challenge is to find new and innovative ways to engage with children in the practice of living, learning and formation.

From the nineteenth century until today, technology has evolved and is an integrated part of our daily lives. The integration of digital skills and knowledge in the kindergarten and school context is providing us with new areas of exploration in digital space that require a knowledgeable and skilful kindergarten teacher. According to the Organisation of Economic Cooperation and Development (OECD, 2018), in the era of digital transformation with all its consequences, children today need digital literacy as an essential life skill, which is just as important as physical health and mental well-being. If this is true, it is essential to ask ourselves what the consequences for the pedagogy of the third space are when we add a digital dimension to it. Does it have the potential for creating a new hybrid and will it affect the conditions we provide for kindergarten practice?

Appendix



Scan this qr-code to get access to a short movie about the researchers' journey to Germany in search of the historical roots of *exploration*.

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Chapter 8

Institutional Conditions for Exploration: Chinese Kindergarten Teachers’ Perspectives and Practices



Aihua Hu

8.1 Introduction and Background

It has been well documented in the existing literature that teachers play a significant role in the kind and quality of learning opportunities students experience (e.g. Paine & Fang, 2007). This applies to the kindergarten context. Teachers are the key personnel in determining the varieties and quality of activities kindergarteners can carry out. Adults are important mediators to motivate children’s curiosity and exploration (Chak, 2002, 2010; Flear, 2009; Murray, 2012). Through organizing different activities for kindergarteners, teachers contribute to the institutional conditions for their development. More importantly, there is a need to examine teachers’ philosophical beliefs and assumptions, as well as the corresponding pedagogies that developed from these beliefs and assumptions, since teacher philosophy has a bigger impact on children’s learning than their confidence to teach what they are supposed to teach (Flear, 2009). All mentioned above provide the rationales to examine how kindergarten teachers’ conceptions and practices are framed by employing cultural–historical framework and taking their perspectives and practices of children’s exploration as an example. In this chapter, kindergarten means the institution that provides care and education for children aged three to six in China.

Previous research has confirmed that exploration is central to and essential for children’s development and learning (Hedegaard & Chaiklin, 2005), because exploration, both indoors and outdoors, helps children build and strengthen brain pathways (Couture, De Sousa, Ferrazzi, Monosky, Papineau, & Tripathi, 2013; Robison, 2008) and facilitates their knowledge construction (Bruner, Jolly, & Sylva, 1976; Flear, 2009). Infants spontaneously explore the world (Kretch, & Adolph, 2016), especially when what has happened is different from their expectations (Stahl &

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M. Hedegaard, E. Eriksen Ødegaard (eds.), *Children’s Exploration and Cultural Formation*, International Perspectives on Early Childhood Education and Development 29, https://doi.org/10.1007/978-3-030-36271-3_8

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Feigenson, 2015), thereby developing their ability to learn (Schulz, 2012) and they can learn effectively (Bonawitz, van Schijndel, Friel, & Schulz, 2012). By the time they are in kindergarten, children are able to explore selectively (Legare, 2011; Schulz, Standing, & Bonawitz, 2008). Some researchers (e.g. Hammer & He, 2016; Hedegaard & Chaiklin, 2005) have included the concept exploration in their study as an approach for subject teaching/learning in different contexts. Nevertheless, the review of exploration-related literature for this study indicates that most research focuses on the contributions that exploration has made to child learning and development, while exploration in the ECE context is insufficiently researched or conceptualized. Neither is there much empirical research on exploration within ECE settings. The present research addresses this gap by investigating Chinese kindergarten teachers' perspectives and practices of organizing explorative activities for children through the lens of the cultural–historical framework.

Hedegaard (2002), who has extended Vygotsky's cultural–historical framework with the concepts of institutional practices and activity settings, initiated the use of the cultural–historical framework to study children's development through studying their daily activities. As such, Hedegaard and Chaiklin (2005) utilized the cultural–historical framework to research and conceptualize exploration in relation to learning of subject matter in school settings. Building on their study, the present study, anchored in cultural-historical framework (Hedegaard, 2009, 2012; Chap. 2), aims to explore the institutional conditions for kindergarteners' exploration by capturing ECE teachers' perspectives of exploration and their practices in everyday teaching related to exploration. Research should address the perspectives of those living an experience (Dockett & Perry, 2007). Here, teachers' perspective refers to teachers' conceptions of exploration and their views of conditions that influence their practices. Teachers' conception refers to their definition and views of functions of exploration in child development. Teachers' practices, in this study, refer to the exploratory activities that teachers have organized for children and their roles in them. The terms exploration and exploratory activities are used in this chapter. Exploration is an umbrella term, while explorative/exploratory activities are used to describe practices in kindergarten settings.

Government policies as a form of the social perspective, influence local practices and activities, thereby providing the rationale to look at national curriculum guidelines, relevant policies on ECE that have influenced kindergarten practices, and policies in ECE teacher education. In China, kindergarten-based curriculum builds on two national guidelines and local/regional curriculum if they have any. Kindergarten Education Guidelines implemented in 2001 is one of the two. The other one is Early Learning and Development Guidelines for Children Aged 3–6 released in 2012. In both guidelines, the word exploration appears. Among the five learning areas¹ listed in Early Learning and Development Guidelines for Children Aged 3–6, the word exploration appears 12 times under the topic of science while it does not really show up in the other four. In the most recent government policy, it is

¹The five learning areas are health, language, social development, sciences, and art.

emphasized that children should not only be given opportunities but also be provided with materials and support by the teachers to explore (The Central Committee of the Communist Party of China and the State Council, 2018). This statement did not appear in the previous version of this policy. This updated policy also emphasizes the importance of providing children with opportunities to explore on their own.

In terms of policies for ECE teacher education, two government policies—the National Curriculum Guidelines for ECE Teacher Education and the Professional Standards of Kindergarten Teachers—are analyzed to examine how the state stipulates teacher education concerning children's exploration. In the Curriculum Guidelines, although the concept exploration is not mentioned, it is pointed out that teachers should protect children's curiosity. The six learning areas listed in the guidelines give ECE student teachers opportunities to learn how to design activities for kindergarteners (Ministry of Education of the People's Republic of China, 2011a). In the Professional Standards of Kindergarten Teachers, one of the professional standards is that teachers should provide more opportunities for children to explore, communicate, collaborate, express themselves, and display their performances to support and promote learning autonomy among kindergarteners (Ministry of Education of the People's Republic of China, 2011b). Together, these standards indicate a change in the societal perspective on how exploration has been referenced in national policies. Contemporarily, policy makers have realized the importance of exploration in child development and set norms and discourse for ECE practices nationwide.

Teacher education/training here refers to both pre-service and in-service teacher training/education. As mentioned above, all ECE pre-service teacher education programs have to refer to National Curriculum Guidelines for ECE Teacher Education and Professional Standards of Kindergarten Teachers to make their own curriculum. As such, what preservice ECE teachers are supposed to learn in pre-service teaching education should be similar. However, as there are different levels of ECE pre-service teacher education (secondary vocational ECE teacher education, three-year tertiary education, and four-year university ECE teacher education), what ECE student teachers learn and the depth of the knowledge they acquire vary. Furthermore, in-service teacher education/training may also differ. According to different classifications, there are different kinds of in-service teacher education. This chapter categorizes the kinds of education/training according to their organizers: that is, trainings organized by different educational institutions and trainings organized by the kindergartens where ECE teachers work. In terms of trainings organized by organizers outside kindergartens, there are required trainings organized by the local government institutions and universities and voluntary trainings pursued by ECE teachers themselves for further study in universities. The trainings organized by kindergartens are usually tailored to the needs of the kindergarten and relevant experts are invited to do the trainings. These trainings (both pre-service and in-service) provide support but also create conflicts for teachers in their daily practices.

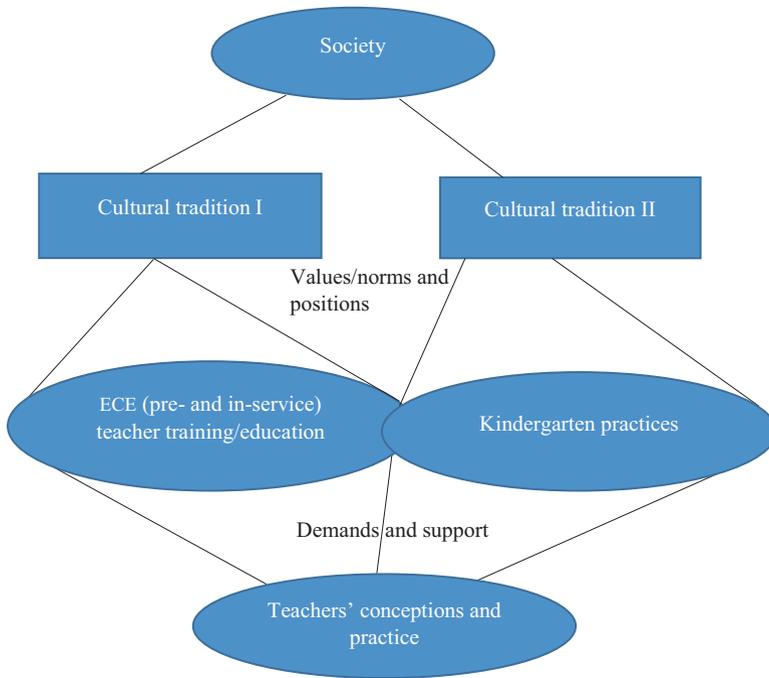


Fig. 8.1 Author's adaptation of cultural-historical framework from Hedegaard (2009)

As far as personal perspective is concerned, this chapter examines kindergarten teachers' conceptions and practices of exploration and the roles they play in children's explorative activities.

The visualized framework for this chapter is as follows in Fig. 8.1.

8.2 The Present Study

8.2.1 Research Question

As mentioned in the introduction, the major goal of present study is to understand the institutional conditions for kindergarteners' exploration through capturing ECE teachers' perspectives on how their conceptions and practices are framed in teaching related to exploration. To achieve the research goal, the following research question is asked: what are the conditions that frame teachers' conceptions and practices of children's exploration?

8.2.2 *Research Sites*

Data have been collected from three kindergartens located in Huining (Gansu province), Kunming (Yunnan province), and Shanghai. For confidentiality, their locations are used to identify them and distinguish them from one another. All are public and model kindergartens in their respective regions. Being public kindergartens means that they receive funding from the government, while being model kindergartens means that they are top kindergartens with exemplary practices and better resources than their regional counterparts. More importantly, as model kindergartens, they provide in-service teacher training to teachers of other regular or underdeveloped kindergartens in their regions and sometimes other parts of China. As a result, the conceptions and practices of exploration of the teachers in these kindergartens may have impact on many teachers especially in their respective regions. This makes it more significant to study the conceptions and practices of exploration in this type of kindergartens.

The three different cities are chosen primarily to support comparison and achieve the major goal of this study (i.e. how institutional conditions play a part in teachers' practices and, thus, kindergartners' exploratory activities). The regions where the three kindergartens are located are of different developmental paces and economic backgrounds that distinguish them from one another in terms of the resources provided to ECE.²

8.2.3 *Data Collection and Participants*

Data were collected in the form of documents, online open-ended questionnaires, and online interviews. Documents include "not only formal policy documents or public records but anything written or produced about the context or site" (Simons, 2009, p. 63). Documents here mainly include policies related to and curricula for ECE teacher education, ECE-related policies, curricula at different levels, introductions to the kindergartens, teachers' plans for exploratory activities, and the kindergartens' daily schedules. The documents were obtained via government and kindergarten websites, as well as interviewed principals and teachers. The information from the documents not only provided context for the research, but also "corroborated and augmented evidence from other sources" (Yin, 2003, p. 87).

Participants of the online survey were located through purposive sampling and approached through the gatekeepers - the principals of the three kindergartens, who shared the link to the online open-ended questionnaire with teachers and forwarded

²Every year, some agencies ranks the gross domestic product (GDP) of all cities in China and lists the first 100 cities. In 2018, Shanghai was ranked first, Kunming was in the middle (44), and Huining was not listed at all. For the list of the 100 cities, please refer to: <https://m.21jingji.com/article/20180814/herald/3b6d45d964f5a0977ed36b4d9aef8725.html>

Table 8.1 Information of participating teachers in each kindergarten

Location	Number of teachers in the kindergarten	Number of questionnaire participants	Teacher interviewees	ID for interviewed teachers ^a	Principal interviewees
Gansu	44	44	2	Teacher A	1
				Teacher B	
Yunnan	108	32	3	Teacher C	1
				Teacher D	
				Teacher E	
Shanghai	39	35	1	Teacher F	1
Total	191	111	6		3

^aThis is intended for the findings and discussion section when the interviews are quoted there

the researcher's WeChat³ account to teachers to be interviewed. Qualitative surveys can generate great data, be less daunting, and serve as a very quick and cheap way to collect (lots of) data (Braun & Clarke, 2013). In total, 111 kindergarten teachers responded to the open-ended questionnaires (refer to Table 8.1 for the detailed information) from late July through early August 2018. All questionnaire responses were valid. The purposes of the study and the voluntary nature of participation were disclosed in the introduction to the questionnaire.

Based on the preliminary findings generated from the questionnaire surveys, follow-up interviews with teachers for clarification and probing were realized through WeChat. Interviews with kindergarten principals were also completed via WeChat. The interviews were conducted from mid-November 2018 to early January 2019 at convenient times for the interviewees and lasted about 20 min on average. The interviews were intended to supplement and triangulate responses from the open-ended questionnaires. Further, four of the interviewed teachers also shared their plans for exploratory activities. To understand more about teacher education/training, another follow-up interviews with the previously interviewed teachers were conducted in June 2019. This online approach was necessary given the impracticality of travelling to the respondents' locations. The responses to the questionnaires and the interviews were conducted in Chinese and were collated and translated into English during the collection process.

8.2.4 Data Analysis

Cultural-historical framework was also utilized in the data analysis process. Policies related to and national curriculum guidelines for ECE teacher education, as well as the two national ECE curriculum guidelines and related policies, were analyzed as societal perspectives to understand the directions and frames they have provided for

³WeChat is an internet chat tool similar to Skype but more popular in China.

ECE teacher education/training and kindergarten practices. At the institutional level, themes like available resources, local climate, and environment and kindergarten characteristics fell under the category of kindergarten practice.

The data analysis process involved several stages using different functions embedded in Excel. All the responses to open-ended questionnaire were saved in one sheet in Excel with the responses to main questions being saved in separate sheets. This process allowed both an overview and individual coding of all collected data. After that, the initial codes were refined and reorganized into themes. For example, in the coding process, teachers' definitions of exploration were coded as "doing" or "thinking" and then put into different dimensions (e.g. the cognitive dimension, the behavioral dimension and so on). All these were put into the category of institutional perspective. Additionally, constant comparative analysis (Glaser & Strauss, 1967) was used throughout the analysis process to compare and contrast the data. Constant comparisons were made among (a) responses given by teachers in the same kindergartens and (b) responses given by teachers in different kindergartens.

The frequencies of some themes were quantitatively analyzed using embedded Excel functions, such as count-if, sum, and percentage. All qualitative data can be coded quantitatively, and quantitative coding makes it possible to complete analyses that cannot be realized with qualitative analysis (Trochim, Donnelly, & Arora, 2016). Take the teachers' conception of exploration as an example. The quantified analysis made it possible to detect that the theme "cognitive dimension" appeared more often among the 111 responses than the theme "behavioral dimension". The frequency graphs were created in Excel and then copied and pasted to the findings section.

8.3 Findings and Discussion

The findings are presented in terms of teachers' conceptions and practices, and they are discussed within the cultural-historical framework.

8.3.1 *Teachers' Conceptions of Children's Exploration*

As mentioned above, teachers' conceptions of exploration are examined in terms of their definitions of exploration and their views of the influences of exploration on children's development.

Different from the finding of Hammer and He (2016, p 461) that "the Chinese preschool teachers' understanding of exploration seemed to be related to developing investigative skills and a scientific attitude", participating teachers in this study have defined exploration from five dimensions. In terms of cognitive dimension, exploration is seen as getting to know new knowledge, studying the unknown, a learning

process, and a problem-solving process. As far as behavioral dimension is concerned, exploration is a series of different activities, using body to get in touch with the world, children playing with and interacting with the provided artefacts. Some teachers define it in both dimensions. They say that children use both their brains and their hands to discover and solve problems. In addition to these two dimensions, some teachers say that exploration is creativity, while others view it as a spirit to discover and study the unknown. Several teachers mention that exploration is a journey of children's autonomous learning processes. According to the quantified data, more teachers defined exploration within either the cognitive dimension or both the cognitive and behavioral dimensions. Figure 8.2 illustrates the quantified data for teachers' definitions of exploration within different dimensions.

In general, the responding teachers defined exploration from similar aspects. Nevertheless, there were differences. Teachers in Gansu defined and perceived exploration from relatively narrower dimensions than teachers from Yunnan and Shanghai. To explain the similarities in teachers' definitions, I argue that societal perspective has more influence. As mentioned in the introduction, exploration gains its due attention in Early Learning and Development Guidelines for Children Aged 3–6. More than 80% of the responding teachers have the knowledge that exploration is mentioned and encouraged in the national guidelines and recognize that, of the five learning areas, only the science learning area includes the word exploration. This explains why most teachers defined it from the scientific aspect in the findings of Hammer and He (2016) and from the cognitive and behavioral perspectives in this study. Additionally, in the policy entitled Professional Standards of ECE teachers, it states that teachers should provide more opportunities for children to explore, communicate, collaborate, express themselves, and display their performances to support and promote learning autonomy among kindergarteners. This explains why some teachers define exploration from learning autonomy dimension. As far as differences are concerned, local tradition and condition may exert more influence. According to the interviewed teachers and principal in Gansu, because of the kindergarten's limited resources, it is not feasible for them to provide opportunities

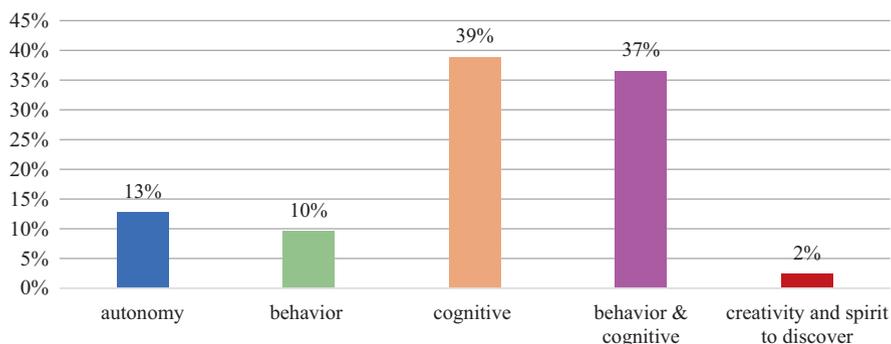


Fig. 8.2 Quantified data of teachers' definition of exploration from different dimensions (Note: Excel has rounded the percentage, so the total becomes 101%)

Table 8.2 Developmental domains and teachers' views of influences of exploration on children's development

Developmental domains	Specific aspects
Cognitive/intellect	Different ways of thinking like divergent thinking, creative thinking, independent thinking; motivation to learn more about the unknown; development of interests and potentials, problem-solving abilities; autonomy in learning; brain/intellect development
Social/emotional	Happiness; self-confidence; patience; enriched inner world
Physical	Mobilizing children; being lively and active; good learning and living habits
Communicative/language	Asking questions; discussing

for children to do as many varieties of exploratory activities⁴ as they wish. They make use of the available resource (open and large landscape) to provide children opportunities to engage in outdoor exploration. This, in one way or another, influences how they define children's exploration.

In consistence with findings of other researchers (e.g. Fleer, 2009; Legare, 2011) on the cognitive gains of exploration and their own conceptions of exploration, responding teachers think that exploration benefits children most in terms of their cognitive development. They believe that exploration helps children gain knowledge and abilities to solve problems. Meanwhile, this research finds that some teachers realize that exploration is helpful in cultivating children's autonomy to learn, which they see as an important quality that children should have for future learning. Additionally, exploration is seen as a channel to foster children's creativity and spirit to discover the unknown. At the same time, the teachers also mention how exploration impacts children's development in the social/emotional, physical, and communicative/language domains. See Table 8.2.

As far as the cognitive domain is concerned, the teachers mention that exploration helps facilitate children's thinking, including their ways of thinking (e.g. divergent thinking, independent thinking, and creative thinking). They also emphasize that exploration helps motivate kindergarteners to learn and discover more about the unknown. Exploration is seen as a way to develop children's interests and different potentials. Some responding teachers believe that exploration helps children develop their problem-solving abilities, because through exploration they can find problems and explore possible and different ways to tackle the problems individually or collectively especially with their hands. Another key function the teachers point out is that exploration is helpful in cultivating autonomy in learning among children who explore. Still other teachers mention that exploration supports children's brain development.

In the social/emotional domain, teachers talk about exploration is helpful in provoking happiness in children. They also believe that exploration bestows on the children with confidence in themselves because they gain abilities in solving prob-

⁴As mentioned in footnote 2, Gansu is among the poorest provinces in China.

lems through exploration. Some teachers relate that exploration fosters patience in children, which they think is good for their interpersonal relationships. Additionally, a couple of teachers say that exploration enriches children's inner worlds.

With respect to the physical domain, participating teachers believe that exploration is a good way to mobilize children in the way that children can move around and use different parts of their body especially their hands in the process. Some teachers say that exploration makes children livelier and more active. A few teachers mention that exploration in one way or another helps the children form good learning and living habits, because through exploration children learn to make plans and keep records.

The communicative/language domain is the least-mentioned of all the domains. Nevertheless, a couple of teachers note that exploration motivates children to ask more questions and discuss problems with peers.

When talking about the influence exploration has on children's development, all the teachers have mentioned its benefits for all four development domains of children, which I argue in one way or another is influenced by the national policies that promote exploration as a way to facilitate children's development. Additionally, the policies reviewed in the introduction advocate protecting and cultivating curiosity of children. Further, though most responding teachers mention all the four developmental domains as a result of explorative activities, teachers in Gansu focus more on cognitive development. To explain this difference, I argue that institutional practices influence teachers' perspectives on differences (as discussed above for definitions).

8.3.2 Explorative Activities Children Engage In

8.3.2.1 The General Exploration Process and Teachers' Role in It

In line with the finding of the open-ended questionnaires, the findings from the interviews with the teachers indicate that the exploration processes and what the teachers and children do before, during, and after exploratory activities are similar across the three regions. Figure 8.3 illustrates the process and what children and teachers do in it.

Exploratory activities take two forms: teacher-initiated and child-initiated. In teacher-initiated exploratory activities, teachers design what the children do based on suggested activities in either the national guidelines or the kindergarten-based curriculum. Teachers in all the three kindergartens also mention that some topics for exploratory activities are suggested by children during or at the sum-up step of the previous exploratory activities. Before activities, teachers will prepare necessary materials. Most of the time, the teachers engage the children in the exploration activities by asking questions or telling a related story. Different from the finding of Hammer and He (2016) that the whole exploration process is conducted according to teachers' detailed plans, this research finds that though most topics are initiated

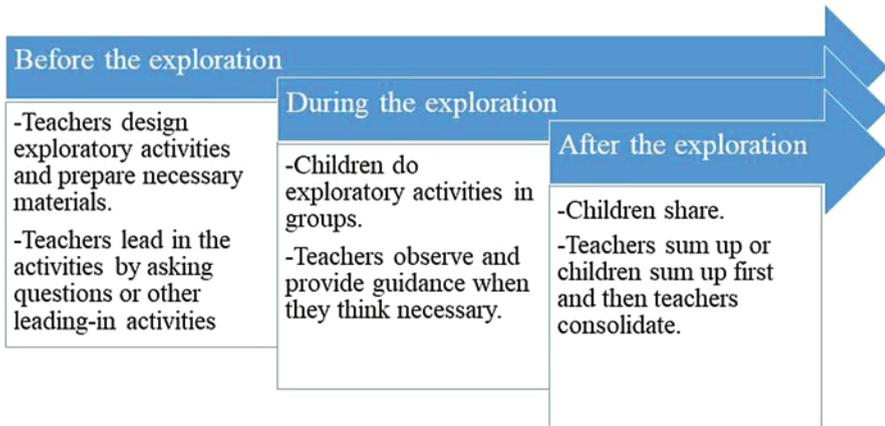


Fig. 8.3 The exploration process in the three kindergartens and the role of teachers

by teachers, children are given freedom to use their own ways to explore. The sum-up step is usually in two different forms according to time left. One involves the teachers summing things up, and the other involves children sharing what they have done, followed by the teachers consolidating what they expect the children to get from the exploratory activity. The interviewed teachers all agree that it is good to give children opportunities to share, as one of them recount, “*children usually have a lot to share after the exploratory activities*” (Teacher A). However, allowing children to share is not always possible because of their rigid daily schedule. According to the daily schedules shared by the teachers, one activity session usually last 40 min.

Child-initiated exploratory activities generally take place during free play. According to the interviewed teachers, what the children do are not necessarily exploratory activities, since they are up to the children’s interests. This finding is in line with the finding of Murray (2012) that “even when they were free to choose, not all children chose to explore” (p. 1221). The interviewed teachers in Gansu mention that child-initiated exploratory activities tend to take place outdoors during free play. Children in the Shanghai kindergarten may engage in child-initiated exploratory activities during two time slots: the morning (if they come to the kindergarten before the group activities) or after lunch (before their naps⁵), either alone or with friends. According to the interviewed teachers in Yunan, children have opportunities to engage in child-initiated exploratory activities twice a day during their outdoor free play. All the interviewed teachers mention that they do not really know what activities and play are taking place during free play unless they are approached for support, help or guidance. Nevertheless, they believe that the great majority of the children are exploring and playing in their own way according to their interests individually or in a group.

⁵Children in Chinese kindergartens usually have a two-hour nap after lunch.

In line with the finding of Hammer and He (2016), the interviewed teachers also identify themselves as the children's supporters, observers, and guides in the exploration process. The supporter role is evident before the exploration when the teachers prepare materials, and during the exploration, when children need more materials or help. The observer role surfaces throughout the day, regardless of what the children are doing. Finally, the guide role emerges when the teachers identify potential danger or when the children's practices are going in the "wrong" direction. According to the teachers, "*We don't intervene unless the children are doing something inappropriate that can cause danger to themselves or the whole group or they are doing things in a wrong direction. Then we'll do something to guide them to do the right thing*" (Teacher B). However, unlike the teachers in Hammer and He's (2016) study, who emphasize their role as teachers, the teachers in this study also see themselves as playmates of the children, often acting as if they, too, belonged to the group of children: "*I pretend that I do not know why certain phenomenon appears*" (Teacher C) or "*I explore together with the children*" (Teacher E). The interviewed teachers also describe themselves as supervisors who supervise children's safety and access to materials and ensure equal opportunities in the exploratory process.

From the similarities, we can detect the influences at both the societal (national curriculum guidelines) and the institutional (ECE teachers' professional training) levels. At the societal level, ECE student teachers are required to learn how to organize activities for children, while, at the institutional level, the interviewed teachers have learned how to organize activities for kindergarteners at both pre-service and in-service professional training. According to the interviewed teachers, the activities are of the same structure and process. The curriculum in ECE teacher training programs in China are formulated based on the national curriculum guidelines and professional standards of ECE teachers. Additionally, ECE teachers are instructed that they must play different roles according to the organization, types, and timings of different activities. Further, the influence of the kindergartens' schedules on kindergarteners' opportunities to share at the end of the explorative process is similar among the researched kindergartens, which conflicts with the requirement of the Professional Standards of ECE Teachers that asks teachers to provide more opportunities for children to explore, communicate, express themselves and display their performances to support and promote learning autonomy among kindergarteners (Ministry of Education of the People's Republic of China, 2011b). From this aspect, I argue that institutional practice exerts more influences on teachers.

The teachers' descriptions clearly show that they play the leading role in deciding what exploratory activities children conduct, and there exists so-called right and wrong in the exploration process. Children generally do not really have the freedom to choose what to explore. This practice in fact contradicts the teachers' conception that exploration is a process of problem-solving on children's own initiative. A possible explanation might be that teachers think their "presence and supervision is paramount for the children to engage in any type of exploration" (Chak, 2010, p. 643), which is one of the Chinese cultural traditions of the role of the teacher in students' learning (Hu & Szente, 2009). However, children can explore in their own

way in most scheduled exploratory activities. Furthermore, some exploratory activities are carried out at the suggestions of the children. These phenomena should be under the influences of both societal and institutional perspectives, as one of the interviewed teachers has mentioned that they are asked to involve children more and respect children as competent individuals by the policies and curriculum at different levels.

The differences in findings between this study and those of Hammer and He (2016) might be the result of recent reforms and policies in ECE in China, which require teachers to minimize their role as teachers, strictly restrict the “schoolification” of ECE, and implement play-based practices (refer to e.g. The Central Committee of the Communist Party of China and the State Council, 2018). Additionally, the differences may also be rooted at the institutional level, as the examined kindergartens were different. China is big and diverse, so it is natural that differences exist.

8.3.2.2 Common Exploratory Activities across the Kindergartens

Doing science-related exploratory activities is a common practice across the three kindergartens, as suggested by Early Learning and Development Guidelines for Children Aged 3–6. For example, all the kindergartens carry out exploratory activities to explore buoyancy of different objects which is a suggested activity in the guidelines. The guidelines also state that children should be supported in exploring the characteristics and features of some common substances and materials. As stipulated in the guidelines, the shared common topics for exploratory activities are to explore substances (e.g. water, magnets, and oil) across the three researched kindergartens and likely every public kindergarten all over the country.⁶

Another major common topic for exploration across the three kindergartens is natural phenomena, such as rain, wind, and leaves. Some teachers also talk about planting plants. According to the three principals, planting vegetables or other plants is very common in Chinese kindergartens for children to observe and explore the mysteries of the growing process of different plants. If they plant vegetables, they explore how they can make them food together with teachers and other staff after the harvest. They share their products with people in the kindergarten and sometimes with their family. All these we can see listed in the suggested activities in the two national guidelines that guide the formulation of kindergarten curriculum. Thus, I conclude that the societal perspective impacts teachers’ practices and that ECE policies direct institutional practices in two ways: the formulation of local and institutional curriculum and how teachers facilitate kindergarteners’ explorative activities.

⁶In china, there are both public and private kindergartens. Since the public kindergartens are funded and monitored by the government, they have to follow the national curriculum guidelines, while this is not compulsory for the private kindergartens. However, private kindergartens are increasingly monitored starting from the recent 2 years.

There are also some interesting findings concerning teachers' individual practices in terms of common topics. Though kindergarten teachers' conceptions of exploration and topics of activities (as stipulated in Early Learning and Development Guidelines for Children Aged 3–6) are similar across the three regions, the daily practices are diverse. Take the exploration of the buoyancy of different objects as an example. In Shanghai, they make use of a famous history story entitled "Chong Cao Weighs the Elephant"⁷ to explore the buoyancy of different objects. The kindergarten is known for its emphasis on classic Chinese culture/literature, which leads to the use of historical stories for the scientific exploration. In Gansu, teachers ask children to observe sinking and floating of different objects in water and explore the reason behind what they have seen. Then, the teachers further inspire the children to explore how to make the floating objects sink in the water. As such, I argue that these differences stem from the available resources and/or distinct features of the kindergartens.

8.3.2.3 Explorative Activities of Own Distinctive Features

Findings from the open-ended questionnaire reveal that children in Gansu kindergarten experience fewer varieties of exploratory activities than their peers in Shanghai and Yunnan. As mentioned above, the interviewed teachers and principal explain that, because of their limited resources, it is not feasible to provide advanced equipment for children to do as many varieties of exploratory activities⁸ as they wish. They make good use of the available resources to provide children opportunities to explore, especially outdoors. An example given by the interviewed teachers is taking children outdoors to explore the changes of the four seasons by observing, for example the changing shades of leaves in different seasons, experiencing the falling of snow and how to play with snow in different ways. The distinct features of the four seasons are visible in Gansu, making it possible for teachers to conduct explorative activities as planned. Furthermore, in Gansu, the interviewed teachers mention that when they design the exploratory activities, they consider children's interests. According to Teacher B, "*some of the contents of exploratory activities are suggested by children*".

A feature that distinguishes the kindergarten in Yunnan from the other two is that 8 out of the 33 responding teachers and the interviewed teachers and principal have mentioned that there are exploratory activities involving local cultures, especially

⁷This is said to be a true story about King Cao Cao. Once, someone gave him an elephant as a gift. People wanted to know the weight of the elephant, but it was so big that there was no scale that could weigh it. No one could suggest a way to weight it. Then, Cao Cao's son Chong Cao came up with the idea of using buoyance. They coaxed the elephant to a boat and marked the depth to which the boat sank with the elephant inside. Then, they drove the elephant to the bank and put stones into the boat to the marked line. Then, they weighed the stones. In this way, they learned the weight of the elephant.

⁸Gansu is among the poorest provinces in China.

different ethnicities.⁹ According to the principal and a document she has shared, the kindergarten is famous as an exemplary base for ethnicity education. Take the exploration of the foods of different ethnicities as an example. The kindergarteners are taken to a local food fair to explore and taste the different kinds of food there. They explore how the same raw materials can create different varieties and tastes of food. Afterwards, they share their exploration with their peers. The interviewed principal and teachers explain that they believe this is a meaningful and effective way to make good use of their unique culture (multi-ethnicity) for children to explore. They further explain that they have good outdoor facilities which offer children even more opportunities to explore.

The kindergarten in Shanghai has the richest varieties of exploratory activities among the three kindergartens. Around a half of the responding teachers in Shanghai mention that children can do exploratory activities in all the five learning areas, as explained by Teacher F: *“our children can do exploratory activities in all the five learning areas listed in the guidelines”*. Topics of exploration are diverse. In addition to science, exploration is integrated into math, sports, language, and art. A distinguishing feature of the Shanghai kindergarten is that it has an exploration room for children. Four teachers there also mention that they have a “nature corner” for children to explore nature and other topics that interest them. Some teachers mention that they create environment for children to explore with their bodies. One given example is that the walls are of different materials with some being hard or soft and others rough or smooth which provide children opportunities to explore the textures of different building materials. One thing worth mentioning here is that some teachers mention individualized learning/games intended for exploration as well. According to the interviews, the individualized learning/games are in different forms. The interviewed principal and teacher mention that, with both indoor and outdoor facilities and resources, children have the opportunities to do different exploratory activities.

The distinctive differences among the three kindergartens can be best explained by the differences in institutional practices. Based on the guidelines, starting from Shanghai, the ECE teaching and research department at regional or provincial level have compiled theme-based curriculum, which stipulate directions for local kindergartens to conduct teaching and activities. There are also kindergarten-based curricula. Among these three kindergartens, in addition to provincial curriculum, all have their own kindergarten-based curriculum, highlighting the unique features of the kindergartens and distinguishing them from other kindergartens. In terms of the dynamics across institutional practices, I argue that, though teachers share similar conceptions of children’s exploration, the available resources have provided different conditions for teachers to practice, resulting in more constraints on the practices of teachers in Gansu than on the practices of teachers in the other two locations.

⁹Yunnan has 52 ethnicities out of 56 total in China, making it the most diverse province.

8.4 Conclusion and Implications

This chapter has found that government policies in the form of curriculum guidelines and opinions on how to implement reforms influence institutional practices through influencing teachers' conceptions and stipulating directions for what and how to do. More importantly, institutional perspectives, including teacher training and kindergarten practice, play more significant roles in affecting what and how teachers organize exploratory activities for children in the researched kindergartens. The study shows that, while the societal perspective is important and influential for teachers' conceptions, institutional practices (teacher education/ training and kindergarten practice) play a more significant role in teachers' practices.

It is believed that this comparative study can inspire possible courses of action in China and internationally and have implications for researchers who want to utilize the cultural–historical framework to study teachers or other adults.

This research indicates that teacher education/training, as one of the practices at the institutional level, influences ECE teachers' conceptions and practices. This implies that high-quality pre-service and in-service education/training for kindergarten teachers are critical. It is undeniable that facilities and resources are important. At the same time, kindergartens can make good use of the available resources and cultures to provide opportunities for children to engage in local- and cultural-appropriate exploratory activities. Recurring themes from research, theories, and practice suggest that high-quality early childhood programs provide environments and experiences for children to explore ideas, investigate their theories, and interact with others in play (Ministry of Education, Ontario, 2014). The practices in the kindergartens in Gansu and Yunnan have set good examples. Besides, exploration can take place in different learning areas and in diverse forms, as in the Shanghai kindergarten. This aspect also calls for both good practices in kindergarten and quality teacher professional development programs.

Government policies and curricula at different levels are also influential in deciding what exploratory activities teachers organize and how they organize them for children. Policy influences teachers' practice, especially if they are mandatory (Synodi, 2010). This is especially true in China, which has a centralized government. As a result, it is critical that policy should be carefully made based on scientific and empirical research. At the same time, this study finds that teachers are not necessarily faithful followers of policies; rather, they are influenced by different variables at institutional level. This implies that teachers need good content and pedagogical knowledge to make sound judgments about daily practices, which also calls for quality ECE pre-service and in-service teacher education/training.

Available resources and local cultures are also influential factors that affect teachers' daily practices. Equality and equity in resource allocation is important for ECE development. In China, there exists a significant discrepancy in development paces and resource allocations among different regions, resulting in gaps in development and the progress of education. Some activities not necessarily just

exploratory activities require resources. As a result, it is important that the central government take measures to narrow the gap in terms of investment on education.

Indicated in findings that the formal exploratory activities in this research are mostly teacher-initiated. A balance of high and low contributions of teachers and children (Roberts & Tamburrini, 1981) in explorative activities should be implemented in daily practices. It is necessary for teachers to be part of children's activities, but not necessarily the initiators or high contributors. Through being initiators or with high contribution, children can learn to be autonomous and independent learners and probably will gain more. This is important for children's cultural formation in many ways. More importantly, there should be a balance between child- and teacher-initiated activities to realize the aim of holistic development (e.g. Miller & Almon, 2009; Waters & Maynard, 2010). This applies to both exploratory and other activities.

The findings have illustrated that because of the kindergarten schedule, children may not have the opportunity to share which supports children's cognitive and communicative development. Time limitations may make the children's exploration less beneficial (Murray, 2012). This implies that a flexible schedule for exploratory activities is desirable.

Finally, this study demonstrates that cultural–historical framework can be extended to explore teachers' daily practices and thus their development, in addition to examining the cultural formation and development of children and youth. This study considers only teacher education/training and work practices at the institutional level. Therefore, future research may consider adding free-time practices related to the research topic as another component at institutional level and collecting observation data to garner more complete findings.

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Chapter 9

Kindergarten as a Budding Explorative Scientific Community



Anne Synnøve Ekrene Hammer

9.1 Introduction

Major public policy issues, such as fighting climate change, feeding the world's growing population, preservation of biodiversity, and demand for sustainable development, require scientifically-educated and informed citizens more than ever before. Today there is a growing focus not only on the need for scientifically-knowledgeable experts, but also on the need for a scientifically-literate population in general, in order to have a well-functioning democracy. I quote the Committee on Science Learning, Kindergarten Through Eighth Grade: "A well-functioning democracy demands that its citizens make personal and community decisions about issues in which scientific information plays a fundamental role, and they hence need a knowledge of science as well as an understanding of science methodology" (Duschl, Sweingruber, & Shouse, 2007, p. 34). According to this view, the overriding aim of science education is to give every person the opportunity to take part in society, both when it comes to their career choices and when it comes to understanding and taking a stand on information related to socio-scientific questions.

Albert Einstein claimed: "The aim (of education) must be the training of independently acting and thinking individuals" (Einstein, 1966, p. 39). This statement is in accordance with governmental views on educational goals today, both in science education and in education more generally (National Research Council, 2012; OECD, 2018). The key question is then: 'How do we train or cultivate our children to become independently thinking and acting individuals?' There is no simple answer to this question but focusing on *science as inquiry* and the *practices of science* is one suggestion given by the scientific educational community (Crawford, 2014; Osborne, 2014).

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In keeping with current educational views that kindergarten is the first step in a child's education, kindergarten is included in policies and strategies for promotion of science and emphasized as an important arena for children's first experiences with science in several countries, including Norway (Kunnskapsdepartementet, 2015; National Research Council, 2012). The aim is that children's early experiences with science can stimulate and nurture their interests in science and lay a foundation for future science learning in school.

Several authors maintain that science is in a privileged position as a learning area in the early years because it coincides so naturally with children's sense of wonder and their curiosity to learn about the world around them (Eshach & Fried, 2005; French, 2004; Nayfeld, Brenneman, & Gelman, 2011). The Committee on Science Learning, Kindergarten through Eighth Grade, points to the fact that research show that young children *are* capable of complex thinking about science ideas and *can* engage in a range of science inquiry skills (Duschl et al., 2007). Eshach, Dor-Ziderman & Arbel (2011) assert that if we ignore the training of such skills in early years, we are missing an important opportunity for developing and expanding young children's scientific thinking.

Despite current understanding of the importance of supporting children's early interest in science, studies in both Norway and in other countries show that science-related activities are given low priority in kindergartens (Greenfield et al., 2009; Kallery & Psillos, 2002; Kallestad & Ødegaard, 2013; Saçkes, 2014; Tu, 2006). Various reasons are given to explain this. One is that kindergarten teachers' low level of scientific knowledge causes low self-confidence in teaching science (Andersson & Gullberg, 2014; Kallery & Psillos, 2002). High political focus on language and mathematics as learning areas and consequently little time spent on science activities is another factor discussed (Greenfield et al., 2009). A third reason could be a view on science and science education as mainly dealing with conceptual learning using teaching methods not considered as good educational practice in kindergartens (Andersson & Gullberg, 2014; Sundberg & Ottander, 2013).

The aim of this article is to contribute to a discussion on how science education can be put into practice in kindergartens in a way that strengthens children's interest in science and lays a foundation for developing scientific reasoning and thinking. I argue in favour of an approach in which children have opportunities to take part in a budding scientific community, characterized by children's and teachers' shared exploration of scientific phenomena and objects.

9.2 Learning and Development from a Cultural-Historical Perspective

As is the case in the rest of the book, this chapter is framed within cultural-historical theory of child development as originally formulated by Vygotsky (1998). As I see it, Vygotsky's theory as well as other socio-cultural theories, underpin a science

education in which children are given opportunities to participate in a community where exploration of scientific phenomena and objects is distinctive. There are two interrelated ideas from Vygotsky 's work that I find especially relevant in this connection:

- I. Social activities as starting point of learning and development.
- II. Learning and development as mediated.

9.2.1 Social Activities as Starting Points of Learning and Development

Vygotsky claims that learning and development are results of social interactions. This is a fundamental break from the traditional and individual oriented psychological view that inborn development of the individual is central, while the environment constitutes a more or less important source of influence. To Vygotsky, social interactions are the starting point of learning and development, not only a frame for individual processes; the development does not start as an idea in children's brains, thinking and ideas grow during participating in activities. He claims: "Every function in the child's cultural development appears twice: first on the social level, and later, on the individual level; first *between* people (*interpsychological*), and then *inside* the child (*intrapsychological*)" (Vygotsky, 1978, p. 57). This implies that if we want children to develop distinct abilities, we have to include and engage children in cultures where such abilities are prominent.

Further, Vygotsky emphasizes that the societal interactions that ground individual cognition are embedded in a culture within a historical frame. This implies that participating in social activities formed by cultural-historical traditions grounds development and cultural formation of the individual. The various cultural communities that children belong to provide meanings and reference points that children use to make sense of themselves and of the world around them (Backshall, 2016). From this point of view, one must ask what kind of societal institutions or communities children belong to and what activities dominate these institutions in order to describe and understand the conditions for a child's learning and development (Hedegaard, 2009).

Turning to science education in kindergarten, rather than focusing on what an individual child knows about the world around him or her, we ought to focus on the kind of science related activities that children are given opportunities to participate in (Roth, Goulart, & Plakitski, 2013). As I see it, this implies that children should be given opportunities to take part in a kindergarten culture in which practices of science, such as wondering, asking questions, planning investigations and trying to find out things in the world around them, are prominent. Fleer & Pramling (2014) put it this way: "If children are to learn to think and act scientifically, they need to experience a scientific environment" (p. 25).

9.2.2 *Learning and Development as Mediated*

An important perspective in Vygotsky's work is the view that learning is a precursor that pushes development (Vygotsky, 1978). He introduces the term *zone of proximal development* to highlight the fact that children can do or manage more with assistance from others than they can manage on their own. A child's zone of proximal development is defined as: "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers". (Vygotsky, 1978, s. 86). This suggests a science education in kindergarten in which children are stimulated and challenged cognitively, practically and socially. It also suggests an active role for the teacher in which she/he is a co-researcher as well as a co-constructer of scientific knowledge.

Vygotsky (1978) emphasizes that learning and development are mediated through culture-specific language, tools and activities. He underlines that language is both a means of communication and an individual psychological tool for thought and development. From this perspective, children's learning and development depend on society's ability to give children the words and concepts necessary to develop language as building blocks for thought.

Vygotsky (1962) distinguishes between everyday concepts (also called spontaneous concepts) and scientific concepts (also called academic or non-spontaneous concepts). The two groups of concepts differ in the ways in which they are introduced, learned and developed. Everyday concepts are the concepts that children learn in everyday life as a result of direct interaction with the environment. At the early stage, children are not very conscious of the meanings of the words, and the spontaneous concepts are unsystematic and closely connected to a specific situation. Scientific concepts, on the other hand, are concepts constructed and used in academic communities on a systematic, theoretical level. Normally, scientific concepts are introduced to children in school. Vygotsky claims, however, that everyday concept formation and scientific concept formation are strongly connected to each other and argues that everyday experiences and concepts lay the foundation for school-based academic learning (Vygotsky, 1962). The significance Vygotsky puts on children's early authentic experiences and everyday concepts for learning scientific concepts is expressed in the following quote:

Practical experience also shows that direct teaching of concepts is impossible and fruitless. A teacher who tries to do this usually accomplishes nothing but empty verbalism, a parrot-like repetition of words by the child, simulating a knowledge of the corresponding concepts but actually covering up a vacuum. (Vygotsky, 1962, p. 83)

This points to the importance of providing children with a variety of everyday experiences related to scientific phenomena and objects, as well as a rich everyday language related to these experiences. Through teachers' guidance during scientific activities, children will gradually develop higher levels of word meanings and scientific understanding.

When discussing mediators related to children's learning, it is also relevant to consider artefacts and objects that are available in the kindergartens and how they are used. Ødegaard (2012) claims that artefacts in the everyday life of kindergartens constitute important conditions for children's learning and cultural formation. Artefacts are not neutral objects; they are made for a specific purpose, they have a name, and they have a cultural and historical background. From this point of view, it is important to consider the availability and use of science-specific artefacts in kindergartens. By taking part in activities including use of science-related artefacts such as magnifiers, binoculars, balance scales and science related books, children can be included in a scientific culture and way of thinking dominated by curiosity and exploration.

Teachers' attitudes and the tasks and activities they introduce are also strong mediating factors in kindergarten communities. If we want children to develop abilities and attitudes such as wondering and asking questions, these abilities have to be present as cultural phenomena in children's environment (Fleer & Pramling, 2014). Children in the early years are imitators, and therefore teachers who model attitudes as raising questions and eagerness to investigate and find out of things create in children a desire to do the same.

Haddzigeorgiou (2001) claims that children's wonder is an important factor in developing an affective attitude to science. Wonder can be described as an affective emotion, a kind of arousal, which may motivate the asking of questions and the carrying out of investigations. She claims that children's science learning has to be considered from a long-term perspective, and consequently, it may be more important to develop an affective attitude to science than to focus on learning skills and concepts. We may think of wonder and curiosity as innate qualities we all share, but from a cultural-historical perspective, these qualities can also be learned and stimulated by participation in social communities in which such qualities are prominent (Fleer & Pramling, 2014).

9.3 The Concept of Exploration

With references to influential philosophers in early years education as Froebel, Piaget and Rousseau, Murray (2012) claims that exploration has been advocated as an important medium for young children's learning in early childhood education for centuries.¹ She states that exploration often is referred to as a programmed ability or process in young children, from which children develop knowledge, skills and understanding. Laevers (2000) argues that investing in the preservation and strengthening of children's *exploratory attitude* and *exploratory drive* is the best guarantee of a lifelong learning process. He describes exploratory attitude as an openness and alertness to the wide variety of stimuli in our surroundings and exploratory drive as

¹The historical roots of *exploration* are also elaborated in this book, Chaps. 2 and 7.

an urge to investigate and find things out. Furthermore, he states that such abilities can bring a person into a state of deep concentration and involvement, which may result in deep-level learning.

One important point of discussion related to children's exploration is how and to what degree teachers should be involved in the explorative processes. Laevers (2000) points to important interventions by the teachers, such as suggesting activities to children, offering materials that fit in in an ongoing activity, inviting children to communicate, confronting children with thought-provoking questions and giving them information that can capture their mind. These factors coincide with factors identified as decisive for children's exploration in a study conducted by Murray (2012). However, Murray's study also shows that children's exploration can be restricted by requirement imposed by the teachers.

Various institutional traditions understand children's exploration in different ways and consequently provide children with various opportunities to explore. (Chap. 2). Results from a comparative study conducted by Hammer & He (2016) exemplify that the interpretation of children's exploration may be influenced by culture and tradition. Focusing on preschool teachers' approaches to science education in a Chinese and a Norwegian kindergarten, they found that both the Norwegian and the Chinese teachers emphasized the idea that children should be given opportunities to explore as one of the main objectives for science education in kindergarten. The meaning of exploring seemed, however, to be somewhat different for the two groups of teachers. The Chinese teachers maintained that children should be curious, solve problems, experiment, try out ideas, classify, and record. These objectives indicate that the intended outcome of the exploration process was to develop investigative skills. In contrast, the outcome of the exploration process seemed not to be a central concern in the Norwegian kindergarten. The Norwegian teachers' notion of exploring seemed primarily to be related to children's autonomous experience of nature using their senses. The authors conclude that the Norwegian teachers' objective for the exploration process was for the children to develop a relationship with nature and an appreciation for, and enjoyment of, the natural world (Hammer & He, 2016).

In the newly revised Norwegian Framework Plan for Kindergartens (UDIR, 2017), children's exploration is emphasized throughout the whole document. The plan does not, however, elaborate on what is meant by *exploration*, which leaves room for different interpretations as to how children's exploration is understood and put into practice in the everyday life of kindergartens.

From a science education perspective, *children's exploration* coincides with *science as inquiry* and *practices of science*, which are the two dominating perspectives on science education today (Crawford, 2014; Osborne, 2014). It also coincides with the concept of *sciencing* introduced by Neuman (1972) to signify the importance of children's involvement in the processes or practices of science.

9.4 ‘Science as inquiry’ and ‘Practices of science’

Traditionally, science education has dealt with teaching distinct elements of accumulated scientific knowledge (*science as a product*). Today, however, good science education is associated with focus on the scientific methods or practices used to develop scientific knowledge (*science as processes*). *Science as inquiry* and *practices of science* are central perspectives in international governmental documents and strategies to improve science education from kindergarten to high school (K-12) (National Research Council, 2012). There is emphasis on the fact that science is undertaken by communities of researchers and that scientific knowledge is a socially negotiated, culturally embedded product.

In reform documents *Science as inquiry* has been a dominant approach in science education for about 50 years (Abd-El-Khalick et al., 2004; Crawford, 2014). However, even today science education in schools and kindergartens primarily deals with established knowledge and to a lesser extent the practices of science (Abd-El-Khalick et al., 2004; Kallery, Psillos, & Tselfes, 2009). The reason for this is likely to be complex. One reason highlighted in recent literature is that science as inquiry reflects a confusion of meanings and goals. Crawford (2014) advocates the following definition for teaching science as inquiry:

Teaching science as inquiry involves engaging students in using critical thinking skills, which includes asking questions, designing and carrying out investigations, interpreting data as evidence, creating arguments, building models, and communicating findings in the pursuit of deepening their understanding by using logic and evidence about the natural world. (Crawford, 2014, p. 515).

Regardless of the various meanings of inquiry, there should in all cases, be a central guiding question that leads investigation and exploration. Engaging children in investigations to find out things related to the natural world should be the centrepiece of science education. This is relevant for science education in kindergartens as well as in schools.

Instead of presenting science as inquiry, some reform documents define science education from kindergarten to high school in terms of eight *practices of science* that guide scientific reasoning and sense-making. The Framework for K-12 Science Education (National Research Council, 2012) cites the following eight practices to be included in science education:

- Asking questions.
- Developing and using models.
- Planning and carrying out investigations.
- Analysing and interpreting data.
- Using mathematics and computational thinking.
- Constructing explanations.
- Engaging in argument from evidence.
- Obtaining, evaluating and communicating information.

These eight practices are cultural-historical practices that dominate scientific communities and today it is generally thought that the best way to learn science is for children to be engaged in these practises.

Some of the practices such as asking questions, planning and carrying out investigations, discussing and argumentation may be just as relevant for children in kindergartens as for schoolchildren. However, practising science must take different forms in kindergartens than in schools. In schools, the practices of science have to be related to distinct content described in the relevant curricula. In kindergartens, science practices should relate to experiences in children's everyday life (Gomes & Fleer, 2018; Roychoudhury, 2014). The kindergarten curricula and guidelines are normally broad frameworks, which implies that the content in focus as well as the time spent on work with a theme can be open for children's motives and interests.

9.5 Sciencing in Kindergarten

Discussing science education in kindergarten, Neuman (1972) introduces the concept of *sciencing*. By verbalising science, he denotes the importance of children's involvement in practices of science. Neuman describes sciencing as activities where children are "given a chance to observe and manipulate a variety of artefacts and natural objects in ways that help them to recognize similarities, differences and relationships among the objects and phenomena" (Neuman, 1972, p. 137–138). He emphasises that in the process of sciencing children should be encouraged to extend their thinking beyond their immediate observations and discuss what they are doing and what they are observing with teachers and peers. Neuman highlights four practices of science that are particularly relevant in kindergarten: observing, inferring, classifying and communicating. Observing is highlighted as the most basic process as it is a building block for the other processes. Furthermore, he describes three categories of science activities in kindergarten: *incidental sciencing*, *informal sciencing* and *formal sciencing*. These categories have been subsequently used in analyses by researchers as Tu (2006) and Fleer, Gomez & March (2014) among others. In this section, I elaborate on the characteristics of *kindergarten as a budding explorative scientific community* based on Neuman's three categories of sciencing. I also reflect on what competences or qualities kindergarten teachers need to facilitate various sciencing activities.

9.5.1 Incidental Sciencing

Incidental sciencing is the result of an unplanned sudden occurrence that captures the imagination of one or more children, and which is capitalized upon by the teacher (Neuman, 1972). I will use a personal experience with two grandchildren as an example:

Jacob (3½ years old) and Mari (5 years old) had just moved from Norway to Texas with their family. My husband and I were over from Norway visiting them. One day on our way to the supermarket, we discovered a dead animal laying on the street close to the pavement. We drove past but the children started asking: “What could have happened to the animal? What kind of animal was it? Could it be a cat or a dog?” We decided that we should stop and go out of the car on our way home to take a closer look (luckily, the road was a smaller one and not loaded with heavy traffic). When we approached, we saw two huge birds flying up from the dead animal and positioning themselves in the tops of two high pine trees, and we noticed a strange smell. This gave rise to new questions: “Why was there such a strange smell? What did the birds intend to do? What kind of birds were they?” When we came close, we could see that the dead animal was quite crushed, and we concluded that it probably had been hit by a car. New questions: “Where did the animal come from? Why was it on the road? Where does it normally live?” Neither the children nor I had seen such an animal before. Even though it was crushed, we could see that it had a kind of carapace on the back or seemed as if it was plated all over. When at home, we searched for ‘animals living in Texas’ on the internet. We looked at many pictures and after some discussion we concluded that the dead animal was an armadillo and the two birds were vultures. During the rest of our visit, the children and I repeatedly discussed questions related to this incidental event.

This story shows how everyday incidents can engage children and stimulate interesting questions, which can form the basis for further investigations. The decisive issue is for the teacher to grasp this kind of incidences and encourage the children to engage in a process where both children and teachers wonder and want to find out more. Teachers’ own curiosity and their willingness to investigate the situation may be more important than their subject knowledge. When children ask: “What is this? How can this be?” it should be ok for the teacher to answer: “I don’t know, but let’s try to find out” (Tu, 2006).

Teachers should themselves be attuned and receptive to incidental episodes with sciencing potential. These could be a huge rainbow emerging on the sky above; birds singing on an early spring morning; icicles on a rocky wall in winter; or the teeming life in an anthill on a warm summer day. By showing their own wonder in such situations, teachers can call attention to natural phenomena that children may not themselves recognize (Fleer, 2009). Wonder and curiosity are contagious: if teachers see, listen, smell and touch, children will do the same. If experiences like those I have presented above are to be more than a here-and-now experience, they need to be elaborated in various ways and to be given attention over time. Fleer & Pramling (2014) underlines that wonder without further exploration may imply lost opportunities for learning. To follow up and extend the experience of the phenomena in kindergarten settings, teachers could for example, take pictures to use as documentation and starting points for experience-sharing and further exploration.

An important role for teachers (not only related to incidental sciencing, but to sciencing in general) is to use words relevant to experiences that could expand children’s vocabulary and give them tools for thinking and communicating about the phenomena under consideration. Teachers should use their language in a natural way that relates to their experience of the authentic situation, but keep in mind children’s abilities to give meanings to the words. For example, with young children experiencing icicles for the first time, the teacher might choose to use words such as

ice, icicle and *cold*, while older and more experienced children could be introduced to process words as *freezing* and *melting*.

9.5.2 *Informal Sciencing*

According to Neuman (1972), informal sciencing takes place when children manipulate and explore selected materials on their own. One key issue here is the quality and quantity of available materials. These could be magnifying glasses, scales, magnets, simple electrical equipment, floating and sinking materials, and various devices in the outdoor playground.

I will share a passage from a report by one of my kindergarten teacher training students, which illustrates how the availability of magnifying glasses can stimulate children's exploration:

In my kindergarten both the kids and the staff were interested in insects and other creepy-crawlies. One day we found a dead fly and a living spider inside the kindergarten. We caught them in a box with magnifier on top, so that we could see the small animals from different angles. Some of the kids were very engaged and I was surprised for how long time they kept on studying. The spider was let free in the afternoon, but the dead fly was kept in the box and studied the next day as well. (Kindergarten teacher training student)

Another key issue is that of how materials and equipment are introduced to children. Nayfeld et al. (2011) claim that science materials and artefacts can stimulate children's exploration because they both suggest and support scientific investigation. The researchers demonstrated, however, that adult-guided interventions are a critical factor in children's autonomous use of available science-related materials. They studied the amount of time that 3–5-year-old children spent using available science materials in the classroom during their free choice time, both before and after introducing a balance scale and showing how to use it. Baseline observations showed that children and teachers rarely spent time in the designated science area. However, after the teacher had introduced how to use a balance scale available in the science area, children's presence in the science area and their autonomous use of the scale increased dramatically. Observations of the children showed that they used their new knowledge from the given intervention during play. The children who were introduced to the scale also scored higher in a post-intervention knowledge interview than peers in a control group. The study shows that availability of science materials in itself is no guarantee of a high degree of sciencing; the potential in such materials depends on how teachers introduce and use the equipment and materials.

Kindergartens in Norway and other Nordic countries traditionally spend a lot of time outdoors (Moser & Martinsen, 2010). Spending time outside in nature can be an excellent opportunity for informal sciencing; children can gain a lot of first-hand experiences with plants, animals and other phenomena in an authentic context. They can explore creepycrawlies, flowers, icicles or whatever that catches their interest. However, there is a risk that we take children's exploring and learning outdoors for granted (Gustavsson, Jonsson, Ljung-Djårf, & Thulin, 2016). Again, teachers

should be aware of their position as role models. They should touch bark, moss, ice, and express how it feel. They should lift stones to find creepy crawlies, savour flowers, and listen to birdsong. Another important role of the teacher is to pay attention when children express their curiosity and to enter into a dialogue with them in order to nourish their interest and expand their understanding. Knowledge, in the form of useful generalizations, does not simply emerge from casual observation and experiences. If observations and experiences are to be developed into knowledge and understanding, children need to have a partner to communicate and discuss them with (Fleer & Pramling, 2014; Hammer & He, 2016; Hedges & Cullen, 2005).

9.5.3 *Formal Sciencing*

Formal sciencing (Neuman, 1972) refers to science activities carefully planned by the teacher but still open to children's influence. The shift from informal to formal sciencing can be gradual, but in general, planned science activities involve the teacher having more specific goals, introducing the activities, and structuring these activities at least part of the time. The goals may be for the children to develop skills related to the practices of science, or to develop conceptual knowledge about a specific scientific content. Formal sciencing may take various forms. It could involve guiding children in doing experiments focusing on practices such as asking questions, planning how to find things out, observing, reflecting, and communicating. It could also involve working with themes such as 'the weather', 'birds during different seasons' or 'my body' over a longer period. The actual theme has to be meaningful and authentic for the children. It may be chosen because some of the children express interest in that theme, or because a staff member finds it interesting and believes from experience that the children also will find it interesting.

As I see it, formal sciencing may have some important advantages. One advantage is that the staff can cooperate and prepare themselves. They can find out about the theme in focus before introducing it to the children, they can discuss which activities will be appropriate, and they can reflect on what the children should learn from the activities and which key words and concepts the staff should use in dialogues with the children. Another advantage is that all children can be included in the activities. Incidental sciencing and informal sciencing may favour children who often ask questions and get teachers' attention, while others who catch the teachers' attention less frequently can fall short in being involved in the practices of science. Formal sciencing may result in more equally distributed science experiences and learning.

9.6 Bridging and Challenging Beliefs about What Constitute Good Educational Practices in Kindergarten

Everyday activities in kindergartens depend on cultural traditions, societies' views on childhood, and on how we think children learn (Hedegaard, 2009). In this section, I argue that an approach to science education based on children's and teachers' shared exploration of scientific objects and phenomena, has the potential to both bridge and challenge various understandings of what constitute good educational practice in kindergartens.

In an international context, the Norwegian kindergarten (together with kindergartens in the other Nordic countries), has traditionally been part of a social pedagogical tradition with a strong focus on children's psychological and social development. Children's school readiness in the form of academic learning has been less focused as an expressed objective than in countries that situate kindergarten within a more academic tradition (Ackesjö & Persson, 2016; Alvestad, 2004; OECD, 2006, 2012). The pedagogy in the Nordic kindergarten has been and is still child-centred in the sense that children's interests and perspectives are central, and children have a lot of time to play and explore what they themselves find interesting, without too much interference from the teachers (Einarsdottir, 2006; Hammer, 2012; Strand, 2006; Wagner, 2006). However, during the last decades, kindergartens have changed from being part of the welfare system to being part of the educational system, which has meant a stronger focus on children's learning. In Norway political and social expectation about the content and tasks of kindergartens is incorporated in the *Framework Plan for Kindergartens – Contents and Tasks* (UDIR, 2017). The framework plan expresses a holistic view of learning that focuses on the development of the whole child. The concept of learning is closely related to socialization, care and upbringing in addition to the development of knowledge, skills and attitudes in seven various fields of learning, one of which is *nature, environment and technology*. The learning areas are, to a certain extent, the same areas that children will encounter again as subjects at school. As such, there is a connection between the Framework Plan for kindergartens and the curricula for Norwegian primary schools and an idea that children's experiences with the various learning areas in kindergarten can lay a foundation for their later learning in school. Today kindergarten teachers as well as scholars within the kindergarten educational community discuss how to implement the strengthened educational focus without losing the child-centred perspective and without making kindergarten school-like.

One issue at stake here is that of developing basic competences versus learning subject-specific knowledge. As I see it, teaching *science as practices*, supports learning and development of basic competences as well as scientific conceptual knowledge. Practises such as asking questions, investigating, explaining, and arguing can stimulate critical thinking and meaning making which are important basic competencies. Developing investigative skills require a substantial content to work on. By directing the investigations to natural phenomena and objects catching children's interest, children will acquire subject-specific content knowledge as well.

Another issue at stake is child-centred pedagogy versus a more teacher-led pedagogy. The strong focus that cultural-historical theory puts on teachers' roles may challenge a more child-centred pedagogy. Traditionally, from a child-centred viewpoint, children's exploration is related to children's autonomous freely chosen activities. It is assumed that children will explore, discover, and learn about the world around them if given stimulating surroundings. From this perspective, the teachers' role is primarily to prepare stimulating and engaging surroundings. From a cultural-historical perspective, however, the teachers' role is more prominent. Besides preparing a challenging environment, the teacher should be a co-researcher and co-creator of scientific knowledge, as well as a role model showing his or her own curiosity and eagerness to find out about things of interest (Cutter-Mackenzie, Edwards, Moore, & Boyd, 2014).

9.7 What Competences Do the Teachers Need?

Obviously, three years in kindergarten teacher education (as in Norway) cannot make teachers experts in all the learning areas children are supposed to encounter in kindergarten. By focusing on science education in kindergarten based on the *practices of science*, qualities and competences other than teachers' scientific content knowledge may be more important. The most important quality the teachers need to create kindergarten into a budding explorative scientific community is a sciencing or scientific attitude, which in short can be described as an openness to see and observe scientific phenomena and objects, and an eagerness and willingness to ask questions and find out about things.

The most important and challenging question is then: How do we stimulate and develop kindergarten teachers' and kindergarten teacher students' scientific attitudes? According to perspectives in Vygotsky's cultural-historical theory, the best way to develop such competence should be for the teachers and teacher students to take part in scientific communities characterized by such qualities. Practices as observation, asking questions, planning how to find out of things, discussions, and argumentations should therefore be given high attention during trainee kindergarten teachers' science education. I have played down the importance of kindergarten teachers' scientific content knowledge. This does not mean that the focus and outcome of the exploration processes is unimportant.

Andersson & Gullberg (2014) suggest that kindergarten teachers should be given opportunities to reinforce and practice their pedagogical competence related to science practices. Based on process-oriented work with in-service kindergarten teachers, they identified four pedagogical content skills that teachers can benefit from when teaching science:

1. Paying attention to and using children's previous experiences.
2. Capturing unexpected things that happen at the moment they occur.

3. Asking questions that challenge the children and that stimulate further investigations.
4. Situated presence, that is, “remaining in the situation and listening to the children and their explanations” (Andersson & Gullberg, 2014, p. 294)

The researchers claim that highlighting such pedagogical skills and directing them towards scientific practices may divest teachers of feelings of inadequacy and poor self-confidence in relation to their ability to deliver science education in kindergartens.

9.8 Closing Remarks

Children’s first encounter with science in kindergartens can lay a foundation for their later interest in science and development of scientific reasoning and thinking. These are skills of profound importance for future generations, both on a personal level, and as members of societies that must cope with global challenges that requires scientific reasoning and understanding. How kindergartens approach science education should therefore be discussed and examined closely. The aim of this chapter has been to contribute to this discussion.

The title *Kindergarten as a budding explorative scientific community*, points to my vision that children should be given opportunities to take part in kindergarten cultures dominated by openness to questions and eagerness to explore science related objects and phenomena. With Vygotsky’s theory (1998) about how children learn and develop as foundation, I claim that if we want children to learn and develop scientific attitudes and skills, they have to experience and be part of a community in which such abilities are visible and prominent.

In implementing an approach to science education in kindergartens based on the practices of science, teachers’ scientific attitude may be more important than their scientific conceptual knowledge. This should influence how we educate kindergarten teachers during their professional studies. Highlighting kindergarten teachers’ pedagogical competencies and directing them to scientific practices as suggested by Andersson & Gullberg (2014) may be one way to go. I anticipate future discussions and research on how to develop communities characterized by scientific attitude and practices in both kindergarten and kindergarten teacher education.

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Chapter 10

Musical Exploration in Everyday Practices – Identifying Transition Points in Musicking



Tiri Bergesen Schei and Elin Eriksen Ødegaard

10.1 Introduction

This chapter conceptualises exploration through narrative examples of children and teachers in music activities in kindergarten. First, the distinction between *music* exploration and *musical* exploration must be articulated. We argue that *music* exploration is the process of examining and being curious about sounds, rhythms and instruments, while *musical* exploration refers to musicality and the embodiment and sensitivity that happens when music becomes meaningful on a deep level. Christopher Small's concept of *musicking* (Small, 1998) is vital to our understanding of exploration within a context in which music instruments and the *doing* play an essential role. The concept of musicking underscores that music is a signifying practice that unites human beings; that is, it is relational in its *doing*. The relationship created when people do music is at the core of what musicking represents. To music is musicking:

'To music is to take part, in any capacity, in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performance (what is called composing), or by dancing.' (Small, 1998, p. 9).

Children are curious explorers of sounds and artefacts. From a child's perspective, sound can be created from artefacts that a teacher would not consider music instruments. These artefacts could be anything from stones, wooden pieces and water in a bowl to electronic devices and multimedia artefacts. The instruments might even be imaginary. If the teacher's perspective is that music instruments are only the traditional ones, like voice, guitar, piano, flute and drums, there is a

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discrepancy between the children and the teacher about what exploration that is possible.

Henceforth, our research questions are: What are the key elements of ‘exploration’ in children’s musicking practices in kindergarten, and what are the mediating practices for teachers when they prepare for such activities?

Our aim with this chapter is threefold. First and overall, we will add to current knowledge about the notion of *exploration* in early childhood pedagogical settings. We will do this by presenting relevant research in which musicking activities are in the foreground. We also present three narrative descriptions in the more specific context of activities involving music from our own research. It allows us to raise awareness of children’s and teachers’ music and musical exploration in institutional contexts and add to understandings of conditions for such pedagogical practices. This implies an implication regarding pedagogical knowledge of how institutional practices can open up or delimit children’s exploration with artefacts that can produce sound and, hence, become meaningful for children.

Second, we aim to contribute to analytic sensitivity concerning how ‘exploration’ as a notion in researching children in pedagogical institutions always will imply institutional conditions, such as being attached to the pedagogical mediated practices in question. We will pick up on the model introduced by Ødegaard’s Chap. 6 in this book, examining how body, movement, sensation and artefact are imbedded in the discourse and pedagogical practices. Cultures of exploration is characterised by co-creation; the teacher and the child are participants in explorative activities. Working with the three concepts of *music*, *musicality* and *musicking*, we open up the notion of *exploration* while we distinguish the *what* in pedagogical practices. For; what is explored, when children (and teachers) are exploring? Is it the process of examining and being curious about the elements of an artefact, for example when exploring an instrument, how it can make sound and rhythm, or is it the visible signs of attachment to the explored artefacts that we, as researchers, are curious to know more about? We want to highlight some of the complexity within the context and practice of music in kindergarten. Whether children are *musical* explorers or only *music* explorers is an interesting point of departure. Our understandings of the distinction between music and musical exploration might bring additional insight into how music can be significant to the cultural formation of children.

The third aim, at the end, is to indicate the implications of our new conceptualisations for early childhood education and research.

A socio-epistemological focus forms the basis of our theoretical argumentation (Ødegaard & Krüger, 2012; Schei, 2013). This perspective embraces a cultural historical approach and dialogical and discourse methodology; it implicitly requests that we see processes embodied in traditions, framed by discursive conditions and processed by dialogical engagement (Hedegaard, Fler, Bang, & Hviid, 2008; Schei & Ødegaard, 2017).¹ As this theorisation points out, conditions for how people do, experience, behave, present, feel and think; and how time, place, situation, artefacts and relationships are understood as dynamic mechanisms are important for chil-

¹ See Chap. 6 for an elaboration of exploration as dialogical engagement.

dren's cultural formation. According to cultural-historical theory (Hedegaard et al., 2008), each institutional collective has unique practices and traditions that emerge and guide different everyday situations and activities.

We present a theoretical construct for understanding children and teachers as musicking participants and cultural consumers. In this context, we go beyond teachers' engagement and participation. Both children and teachers engage in institutional practices, bringing their personal stories into the institutional frame. By presenting three narratives, we examine how children make meaning from sound through the elements of rhythm, melody and sentiment, and how they explore and express themselves with and through music. Previous research within the field of music pedagogy will be presented to add to the understanding of how the notion of musicking is variously understood. Few studies have been conducted on music and musical exploration in early childhood education using a cultural-historical approach.

10.2 How Music Works in Institutional Settings

Music is owned by everybody, young and old. Music is sound, timbre, rhythm, pitch. We are surrounded by sound, and we create sound, some of which we call music. Yet, it is strongly cultural, and it has numerous functions in everyone's lives. Experiences with music store tacit knowledge about meaning and belonging, and are strongly connected to emotions and identity work (Ruud, 1997; Schei, Espeland, & Stige, 2013, p. 38). Music affects us emotionally and can be found as modes of expression in every culture (Vist, 2011). Dealing with children's lives and well-being in families and in early childhood education, we see music connected to a basic condition for the formative development of children. While music touches a deep personal and basic emotional chord in humans, music is a cultural resource available to children, but always in particular ways, depending on how it is presented, what artefacts are available and whether it is considered important by those present. All these layers are mixed, and they are immensely important to distinguish. When giving attention to the power-relations in institutional settings, the teacher's role and undertaking is vital to highlight. Through three narratives in which music works in particular ways, we will add to this understanding.

We theorise with a focus on what children's music and musical activities in institutional settings can be and the pedagogical conditions for such activities. This allows us to consider the further complexities and conditions connected with musicking.

10.3 Musicking

Small (1998) uses the concept of musicking first and most importantly in connection with performing music. As we will elaborate, the concept gives resonance and seems to be efficient and useful in settings where exploration, not performance, is

the issue. It is not the music, itself, but what occurs between people *doing* the music that is the matter. A large variety of studies seem to agree and use the concept of musicking to explain and understand the doing and what that might signify. Frederik Pio and Øivind Varkøy suggest that musicking can be seen as a process of meaning creation. An artefact like a CD or a musical product does not have any inherent value until action is added. Then music becomes musicking (Pio & Varkøy, 2012, p. 106). Music is often seen as a tool for something else, like a means for language learning, but by understanding activities with music in accordance with the concept of musicking, the activity has value and meaning in itself.

Sven-Erik Holgersen has documented tacit participation from children ages 1–5 years as a strategy in which the participant does not articulate his or her experience, even if he or she is intensely directed towards the musical event and expression (Holgersen, 2002, p. 157). A child can be participating as a listener. Understanding participation with the concept of musicking, one could say all participation is important and meaningful for participants, because the meaning of music lies not in objects, but action, in what people do with music (Small, 1998, p. 8). Hence, its value is exclusively in the activity, itself, confirmed immediately by other participants. Musicking, then, is based on activity, and activity is embodied in a way that makes participants experience relational meanings, to the music itself and/or other humans.

Maria Wassrin has contributed with new knowledge about kindergarten children and teachers musicking together (Wassrin, 2016a). She discusses how the didactic identity of the subject *music in kindergarten* is being negotiated in relation to the notions of the term *children*, the term *music* and the term *pedagogical role*. She questions whether one- to three-year-olds are involved or whether they are invisible, subordinate and insignificant in musical activities. Wassrin uses three different negotiation dimensions, which she calls *discursive analytical levels*: The micro level is the face-to-face interaction ‘here and now’, analysed through video recordings of music lessons. The second level is the educational performance level, where the concepts ‘children’ and ‘music’, and children’s agency are elaborated and discussed through group interviews with four educators. The third level is socio-political. Here, Hannah Arendt and her term *public sphere* is used to understand studied music practices from a political and philosophical perspective. A public sphere is created through values like equality and pluralism. Age is challenged and negotiated; consequently, children and adults are perceived as equal contributors. Her analysis finds ‘[T]he children and the educators explored different ways of being together in music as communicative medium’ (Wassrin, 2016b, p. 128).

Jan Sverre Knudsen (2008) writes about children’s improvised vocalisations and how to understand such vocal expressions as learning and communication. He uses Michel Foucault to understand improvised vocalisations as ‘tools used to “act upon the self” in order to attain or reinforce a certain mental state or mood – happiness, satisfaction, anger or longing – in short, as a way in which children learn to know the self as a self’ (Foucault, 1988; Knudsen, 2008, p. 287). In his perspective, children have an inner world and an expressive outer world that is more undefined and transparent than for adults.

Exploring sounds is very much connected to children's culture, not necessarily noticed by teachers, but yet very present, writes Patricia Campbell (2010, p. 4). She argues children think aloud through music and music might be their expressive thinking at work, which she bases on their expressed thoughts and musicking behaviours. For children, music is socially and personally meaningful, which is visible when we spotlight how they explore and use music artefacts. She describes how they socialise, uphold their rituals of play and entertain themselves through music when they stretch their bodies, move rhythmically and use their voice in various ways, be they soft, hard, loud or fast. It is as if they have 'their songs in their heads' (Campbell, 2010, p. 3). We can understand how children are musically thinking through what they do with music – as if they have internal monologues (Campbell, 1998).

Claudia Gluschkankof (2005) presents musicking examples in her study of kindergarten children singing, dancing to recorded music and playing percussion instruments. She describes how adults often are unaware of the musical qualities and values inherent in such exploration, but they are unique modes of expressions. Children's self-initiated musical play is, according to Gluschkankof, understandable through several aspects. The sensory-motor aspect implies the aural, tactile, kinaesthetic and visual. Gluschkankof shows how children explore sound colours and timbre. '[I]ntensity, accents, duration, and even pitch, especially if they are extreme (very loud/soft, very long/short, very high/low)' (Gluschkankof, 2005, p. 329) are important to the children. She describes how children explore percussion instruments as physical artefacts, examining size, shape, material and smell. Moreover, children try out 'the actions that can be performed with it (e.g. shake, pluck, strike, carry around, look through etc.) and the consequences of the different actions (e.g. loud sounds, long sounds, light is reflected etc.)' (Gluschkankof, 2005, p. 330). She argues action is a way of exploring instruments, and sometimes, it develops into dramatic play. Gluschkankof describes how children are given the opportunity to explore musicking within the specific kindergarten's culture. They have both parallel, solitary and peer interaction, and the group leader is 'usually the child who is perceived as the one with more original *musicking* ideas' (Gluschkankof, 2005, p. 331). The way the teacher facilitates music exploration is crucial. She remarks the teacher's role is supportive, enabling children's self-initiated play and exploration with music.

Ingeborg Lunde Vestad has extensively researched how children use recorded music in their everyday lives in kindergarten and homes and how they play roles and position their affiliation with recorded music. This becomes visible through how they act, speak and make music meaningful (Vestad, 2014, p. 270). She argues that children's daily use of recorded music leads to their having clear subject positions with musical agency (Vestad, 2014, p. 259).

According to Pauline von Bonsdorff, the first signs of childhood aesthetics are rhythm and movement, as they are fundamental to humans, who right after birth turn towards others and communicate in multimodal and highly expressive ways. Infancy researchers have called this the 'communicative musicality' of babies (Malloch & Trevarthen, 2009). von Bonsdorff points to the striking similarity between the dynamic movements common to infants and performing artists. Vocal exchanges between infants and their caregivers have been analysed as musical nar-

ratives (Mazokopaki & Kugiumutzakis, 2009). von Bonsdorff argues that infants do not live in the moment only. Cultural practices like play and imagination, such as tickling, peekaboo and personal greetings, not to mention songs, narratives, pictures and objects are all shared situations (von Bonsdorff, 2015).

Sophie Alcock is a researcher who uses cultural-historical activity theory to understand children's aesthetic experiences, particularly their rhythmic, playful communication. 'Poetry, dance, drama, and music – *musike* – all involve communication and symbolic representation mediated by body movement, sound, and rhythm' (Alcock, 2008, p. 329). *Musike* is the ancient Greek word for music, a term that includes poetry, dance, drama and music. Children's rules, roles and communities are seen as forms of activity systems dynamically and dialectically connected through artefacts. Rhythmic playfulness can be chanting, moving and dancing rhythmically together. 'When children can play freely with artefacts, the mediating (transforming, internalising and externalising) process is likely to be a meaningful aesthetic experience for them...' (Alcock, 2008, p. 336).

We asked how the notion of exploration can open up our insight into how children and teachers communicate in activities involving music. We also asked about key elements of 'exploration'. The aforementioned research only gives indirect answers to our questions. However, the above researchers seem to agree that musicking, understood as activities involving music, are shared activities. What is extraordinary about Small's concept of musicking is that it implies the process of taking part, *in any capacity*, in a musical performance, which means that it is relational in its doings.

Using these concepts, we will now turn to the next step in our inquiry, namely, to investigate music and musical 'exploration' through three narratives.

10.4 Reconstructing Narratives to Understand Musicking Transition Points

In the following we present three narratives that were constructed through a process inspired by Barbara Czarniawska (2004, p. 652) and her guidance for reuse of narratives. The narrative construction is a recycling process whereby narratives provided in previous extensive fieldwork² are deconstructed and reconstructed for new purposes (Schei & Ødegaard, 2017). This is done to establish descriptive cases where elements of active collaboration and playful approaches to music activities are present. Our purpose with this deconstruction and reconstruction process is to inform our research questions. Unlike other qualitative data analyses that pull data apart, narrative analysis following Czarniawska's (2004) narrative analytical method

²Cases 1 and 2 are reconstructed based on video transcripts and field notes (Schei, 2012, 2013; Ødegaard, 2007), while case 3 is reconstructed from observation, field notes and a textbook (Schei & Duus, 2016).

synthesises and configures field notes to make a narrative case for illustrative purposes.

We define a *narrative* as a spoken or written text that provides a way of organising an event, activity or a series of activities which are connected and presented in a holistic format that includes contextual details and interpretations from the narrative researcher. The three narratives constitute approaches to children's and teachers' *musicking* exploration practices. We name the three narratives differently to decipher various layers of importance concerning what *exploration* might imply in institutional settings. After the presentation, we epitomise educational purposes and transition points for musicking exploration informed by *Exploration as dialogical engagement* (see Chap. 6), following a cultural, historical and discursive approach. All three events take place in kindergartens; activities are planned or spontaneous.

10.4.1 Narrative 1: Music Circle Time – Exploration with Music Instruments

In this first case, author Schei shows how one-year-old children and their teacher explore music artefacts.

The teacher sits in the middle of a circle, surrounded by ten one-year-olds and three from the staff. The room contains instruments of all kinds: small and big drums, guitars, bells, flutes and other artefacts: stones, wooden pieces, plastic bottles and bowls filled with water. The children are introduced to many of the instruments by their teacher. He shows them how they work, and how to play tones and rhythms on them. He presents melodies and songs with manoeuvres of excitement, and the children are invited to try the instruments and sing along. The children seem absorbed by what is happening. It is possible to see by their attention for long periods without noticing any distractions. As an observer of these gatherings during several months, I have seen again and again how they have become familiar with the instruments by watching the teacher showing them how they work, what is possible to do with them and how to hold and handle them. I register that what the teacher is doing is to introduce possible ways of being in the music with instruments.

What are the key elements of exploration in this narrative? The teacher is positioned in the centre of the circle in a routine activity: a planned music session (circle) time. Music artefacts are available and introduced by the teacher to the children. The children seem absorbed. We also see how the teacher positions children on the floor, in a traditional, routinised music session. Schei points out how children are institutionally disciplined through a regular activity such as a music circle time once a week, not only musically disciplined, but also how such activities condition children's continuous identity formation as subjects. The children depend largely on what the teacher chooses to present, and how. The way the teacher interacts with the children seems to create curiosity; they seem absorbed. When the teacher has a devotion to the children and their curiosity to explore instruments, it is possible to understand his professional work as a way of setting children in an exploratory mode by modelling them to be curious about artefacts, take initiative and try various instruments to

explore their possibilities. He calls for curiosity and co-creation of meaning. In the research film made during Schei's observation period, the teacher said in interview that these experiences were 'magical musical moments' (Schei & Bonete, 2011, track 3), but not without disciplined order. The children sit completely silent for long periods, and one might think they are not active participants. Instead, this is a way of teaching children to be attuned with the instruments. He awaits answers from children and gets them when he allows them to try instruments under his guidance. Then he is rewarded with children who enjoy exploring what sounds they can make with various instruments. Schei sees an engaged teacher in dialogue with children; such sessions can build children's expectations. Through this way of musicking, they are learning by observation and pitching in (Coppens et al., 2014). The field observer noticed the process from an emergent curiosity about the embodiment of musicking. The children soon were engaged in the musicking activity; they were focused and participating in the routinised way allowed in this institutional setting. The absorption and participation seen can indicate that the children had embodied the music activity. The transition point seemed to come gradually; an emergent interest was awakened, initiated from a pedagogical planned strategy. It was over time that the embodiment of musicking took place. By establishing a music session activity as an institutional routine, the teacher builds expectations for the activity. He establishes a pedagogical approach in line with exploration as dialogical engagement, a grip that seems to stimulate curiosity and a co-creation of meaning.

10.4.2 Narrative 2: The Sword Dance – Exploration through Rhythm and Imagination

In a study of the youngest children in institutional settings, author Ødegaard described the case of Captain Andreas, a boy going from 18 months to two and a half years during the case study (Ødegaard, 2007).

Already on my first visit to the kindergarten, Andreas, the boy who introduced the 'sword dance' in the kindergarten group, took hold of my hand and walked me to the photo collage of himself and his family, put up at the entrance hall among similar collages of every child in the group. He proudly pointed out a picture of himself in a Captain Sabretooth costume: a black captain's hat, a black coat with golden buttons and a pirate flag in one hand and a sword in the other. Andreas and his older brother had visited the captain's home base in an adventure park with their family during summer when Andreas was one year old. The photo in Andreas' family collage, which he had pointed out to me, was taken at this summer event. Later I observed how he took the initiative to play a CD from the universe of Captain Sabretooth from the composer Terje Formoe. This was a CD he had been given permission to bring from home to the kindergarten, and the teachers had allowed him to play the CD. At first the teacher helped him put on the CD, and he started to move. He walked rhythmically in a circle, and his arms came up with regular, waving sort of movements. The next day, this event was repeated, and two other children showed interest. The CD played the song on Andreas' initiative. He started to move with a regular rhythm in a circle, moving his arms attuned to the rhythm of the feet. I didn't see it at first, but suddenly I saw his imaginary sword. It was first when the other children, very quickly took his steps and waving move-

ments, and they went round and round attuned in the same move. I saw the three pirates swinging an imaginary sword, while walking with rhythmic steps in a circle. It was a dance, it was a play without a word, it was a play with imaginary artefacts. Eventually, more children followed, they formed a circle, and they could dance round and round for a long time. Andreas had developed a dance. I call it the sword dance.

In the narrative above, the key elements of exploration can be seen in the way children explored the dance through an embodiment of the music: finding a regular rhythm, a shared movement, waving arms, moving in a circle. After a while, the observer noticed the musicking. We suggest that it was the children's transition from exploring music to becoming musical that the observer could notice when she suddenly saw the children join together in a rhythm and in agreement over the imaginative elements in the play, the sword. That is, the music is embodied through a child-initiated activity.

This narrative does not foreground the teacher. Nevertheless, the sword dance is conditioned by teachers since it takes place in an institutional setting. Andreas is allowed to bring a CD from home, and the teacher facilitates the music being played. The children are musicking by dancing. Ødegaard proposed the concept of participatory space (Ødegaard, 2007). In an institutional setting, all activities are regulated through cultural and structural dynamics. Within these conditions, teachers and children have space for agency, for initiatives and responses, open-ended opportunities for child initiated play. This example shows how musicking is related to place and how music crosses borders between families and institutions. The family has made the music of Captain Sabretooth available for one of the children in kindergarten, and the staff allowed the child to play the CD brought from home. The sword dance is conditioned by a space to move, an artefact – a CD player, the energy of the activity raised by more children who were attracted to the dance and participated: a co-creation of meaning.

10.4.3 Narrative 3: Fictional Drama – Exploration in a Joint Community

Schei studied 20 improvisational art meetings between a musician, an actress and five-year-olds in kindergartens where the majority of the children were from immigrant backgrounds (Schei & Duus, 2016). The actress created a teddy bear named Mitwa as a protagonist. Throughout the art meetings, all improvisational work was spun around Mitwa's travel projects around the world, and the actress and children created virtual voyages. The musician played 'travel music' on his guitar when the children claimed that they had to travel by race car to catch an airplane to Palestine as soon as possible:

The musician starts to play a rapid and rhythmic melody on his guitar, and the children quickly rise up to drive the race car to the airport. Their bodies make rapid movements, heads turning quickly to see if everyone is joining, and all the feet are stepping the pulse from the melody. In the race car, the children hold their arms as if there are steering wheels

in front of them. They all run in circles and make motor sounds and shouts of joy because they are driving so fast. They make it to the airport and enter the aircraft. When the music suddenly stops, they realise that they finally are in Palestine, and the mood changes. Their bodies relax, the faces open up and one boy exclaims: 'What is this smell?' 'It's the smell of meatballs', says the boy with a family background from Palestine.

Analysing this episode, there are various aspects to highlight. The first is that the children have been given a space for exploration, inventing a story, co-creating meaning with two artists. Others, not they, set them in an exploratory mode, but they subordinate to the setting and seem exalted and very observant of others' suggestions. They are aware of their situation. They know they are to co-invent a story, and they enter it without questions.

The framing is a rather ordinary room with very few artefacts, except Mitwa with his rucksack in his red chair in the middle of the room. Here, children create a story for Mitwa, and they identify so much with him, they seem to *be* this main figure of their story. He becomes a 'sentient being' at the moment they identify with him. They drive the race car together and feel the rhythm and rapidity of travel as if they were one person, not a group. By *being* Mitwa, they control his thoughts and feelings.

It is the travel music that triggers the children. The pulse, the rhythms, the mood in the music release engagement, initiative, impatience and expectations of something exciting. This is visible in how they use their voice: the timbre of their voices reveals expectations that something important will happen. Their body language is resolute, as if there is a clear goal ahead. They act in accordance with the music, with determined, quick moves and foresight. The music has become embodied and we have identified transition points. Each of them is in a condition in which the *musicking* phenomenon is prominent. The music works, and they sway with the storyline.

10.5 Conceptualising Exploration Through Identifying Transition Points

We asked how institutional practices can open or delimit children's music and musical exploration. Deciphering details concerning attachment to artefacts and how these become significant allows us to elaborate on how children and teachers communicate and interact when music is involved. Teacher practices will always condition the participatory space for music and musical exploration. What these cases do not show is that teachers can also delimit the musical space of the children. This can be seen in stiffness, stopping, children's limited urge to explore and, not least, the word *no*. Another example can be illustrated by contrasting monologist and dialogic educational cultures, with its inherent principles and practices. A monologist culture is characterised by transferral of content, e.g. music will be introduced by 'show and tell', and regulated by rules and regulation, while inquiry, curiosity and uncertainty, rather than regulations, characterize cultures of exploration. Transformation can then occur when elements of following up are added to the 'show and tell' (Chap. 6).

Through the literature review and the three examples, we found key elements of ‘exploration’ in children’s musicking practices and, furthermore, conditions and mediating practices for teachers.

In the first example we identified the teacher’s dialogical engagement. It was recognized as closely related to the children’s longstanding attentiveness and interest: what can be identified as embodiment or what Coppens et al. (2014) call *observing* and *pitching in*. Researcher Schei observed how the one-year-olds were eager to try out what the teacher had shown them. The example shows how young children experience music as a regular activity that create certain expectations for and curiosity about new and old elements introduced by the teacher. Eventually, there are transition points where the children pitch in after observing the teacher. The music becomes embodied and musical activities can be identified through children’s bodily expressions. Body, movement and sensation are both a precondition for musicking as well as a manifestation of it. The second narrative shows how a child deeply engaged in an imaginary world that includes music, dance and a story about pirates becomes a co-creator of meaning through the child’s initiative. Musicking takes place as a dancing activity where an imaginary artefact, a sword, constitutes an important element in the ritual dance co-created by the peer community. In the third example, music became a trigger for action, with quick moves, rapid gestures, swift speech and expressive fictional play.

The model ‘exploration as dialogical engagement’, introduced by Ødegaard in Chap. 6, can be elaborated when exploration with music is in the foreground. If both the children and the teachers agree that all kinds of artefacts are potential music instruments to be explored, children and teachers might co-develop their environment and how they might use the available artefacts. If the teacher’s condition is that all children can take part in music activities, whether by listening or doing, they contribute to children’s musical development by facilitating the space of exploration. Through our analyses we have identified transition points, particular moments when the music explorer is becoming a *musical* explorer.

The transition points are *the musicking moments* when the explorer has left the exploration behind and relate to the artefact with devotion. It implies that the explorer now is in a condition where he or she relates to the artefact with embodied knowledge about what to do with the artefact, how it works and how they can connect to it. There is a presence in own activity that overshadows whatever is happening outside of the activity.

We have illustrated through the three narrative events how transition points might occur in institutional pedagogical practices and, possibly, establish attunement:

- In routinised activities in which the teacher creates situations where children are given the opportunity to be curious and eventually pitch in by exploring songs, rhythm, sounds from a variety of instruments and other material objects
- When children are given participatory space to explore many perspectives of musical experience and expression, for example the co-creation of dance
- When staging a mode for musicking through fictional drama

10.6 Music and Musical Exploration

Who is musical, and what does it mean to be musical? These are relevant questions when studying music and musical exploration in the field of kindergarten. Situated in the twenty-first century, the child is considered a competent human, which influences the way we form children's possibilities to be creative in kindergarten (Bae, 2010; Corsaro, 2005). We will argue that musicality becomes apparent when children explore music, whether they explore music instruments, artefacts that can function as music instruments, recorded music used for play or dance, or music supporting an activity. This view probably would not have been accepted in the twentieth century. Throughout the 1900s, there was an ongoing measuring of musical talent by researchers, and questions about musicality were common. Tests that were conducted were 'narrowly focused on perception, although there is no firm evidence that perception and production are correlated' (Levitin, 2012, p. 635). Levitin states that in tests individuality, emotions and creativity was not possible to register. Mostly, well-skilled adults were tested, not children – and not at all children under age three. To understand the shift of the notion of musicality, we must allow ourselves to exclude such tests and, rather, focus on what we, as researchers, see and hear happen when children explore music in kindergarten and how teachers support and contribute to their explorations. Extensive research on the intrinsic musical nature of human interaction shows how the need for music and the ability to act musically is inherent in every human. Malloch and Trevarthen (2009) document how even the youngest children use elements from music, rhythm, timbre, timing and melodic gesture to communicate. The activities triggered by music reveal how music matters when human beings open up and allow the music to be explored, no matter whether the explorer is a child or an adult. Music has inherent power when used in everyday life (DeNora, 2000). When not used, it is an artefact with unknown meaning. Sometimes, the role of the music is not in the foreground, but no matter foreground or background, musicality is prevalent, because music works as a trigger for activity, as Small (1998) outlines with his concept of 'musicking'. The one-year-olds in Schei's research wanted to explore the drums after watching the teacher demonstrate what sounds the drums might produce, and they demonstrated musicality in many ways when they started to play. Immediately, they showed how their new knowledge was embodied. They had obtained knowledge to produce sound and rhythm and to dialogue with the drums and others in the room. They were aesthetic decision makers, to borrow Margaret Barrett's notion of children's musical thinking (Barrett, 1996).

Musicality, then, should not only be considered the ability to produce music, to sing, play and dance, but also to display flair, demonstrated in the ability to sense relational conditions, know how to engage in dialogue with mates and teachers, and adjust and subordinate one's own expression when needed for the sake of group relationships. There are moments when the explorer becomes so devoted to that which is explored that the exploration is left behind, and the *doing* is at the core. These transition points, we coin as *the musicking moments*. Curiosity about music is

related to the phase of exploring what to do and how to act with an artefact. Musicality, then, is embedded in, and becomes apparent in the action of exploration when children exclusively reveal their affiliation with that which they find meaningful.

To understand how music is meaningful and significant to children, one should study such activities where mediating practices release visibly embodied joy, because such activities release pedagogical attunement.

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Chapter 11

Exploration Through Process Drama with Kindergarten Children



Siv Ødemotland

11.1 Introduction

A quick review of books and articles about educational drama, especially on process drama, reveals that terms such as “explore” and “exploration” are frequently used. In process drama, exploration is crucial and implicit. It could be said that in process drama, exploration is the main point. In this kind of work, several elements are explored simultaneously; various aspects of a theme, a narrative, or a situation and the drama conventions in use are explored.

There is a long tradition in Europe of using theatre for educational purposes, originally in order to promote faith and moral judgment. As in all education, both drama and theatre have had an impact on children’s cultural formation, understood as the continuous process of development and learning in the society they live in (Ødegaard & Krüger, 2012; Ødemotland, 2013). The idea and practice of drama in education has developed over time according to emerging pedagogical theories. During the 1970s, there was rich and broad development in the field in which the seeds of process drama were sown. The ideas of the Soviet psychologist Lev S. Vygotsky, among others, were incorporated into the methodologies (Ferrari, 2011). The process drama pioneer Gavin Bolton turned to Vygotsky to develop a theory of drama in education (Bolton, 1979). The concept of *process drama* was not yet in use, but the genre was. Bolton was concerned about what he called “internal action” in this kind of drama in education (DIE). He drew a line to children’s play as he saw a need to understand this activity and to grasp the idea of DIE as symbolic or make-believe play. According to Bolton, make-believe play is a mental activity in which meaning is created by symbolic use of actions and objects (Bolton, 1979). Observations of make-believe play usually are a description of the external actions,

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M. Hedegaard, E. Eriksen Ødegaard (eds.), *Children’s Exploration and Cultural Formation*, International Perspectives on Early Childhood Education and Development 29, https://doi.org/10.1007/978-3-030-36271-3_11

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Bolton claims. The internal and external activity is occurring simultaneously, however. There is an interdependence of the two “that characterizes symbolic play from other forms of play and drama from other art forms” (Bolton, 1979, p. 19). Bolton refers to Vygotsky when he suggests that DIE is thought in action: “Its purpose is the creating of meaning, its medium is the interaction between two concrete contexts” (Bolton, 1979, p. 21). Bolton suggests classifying meanings in two ways. The first one is a subjective way referring to personal, individual, egocentric, and affective meanings that are brought to an experience. The second is an objective way referring to collective, social, impersonal, and scientific meanings. Bolton’s theory has had a great impact on the further development of process drama; exploration has since then been crucial in this kind of work.

The questions asked in this chapter are: how may process drama be a tool for exploration of the system of law, a courthouse, judicial conflicts, and trials for 5-year-old children in kindergarten? What are the challenges for the teacher, and what knowledge, competences, and qualifications are needed for such work? I will first briefly present the concept of process drama. Then I will clarify the close connection between process drama and children’s dramatic play, and I will comment on the demands on the teacher or leader guiding process drama with young children. Finally, I will discuss an example where 5-year-old kindergarteners take part in a programme using process drama at the local courthouse. The structure of this last part follows the same form as the process drama. After each sequence of the example, I will discuss the children’s exploration and the leader’s work.

11.2 Part I Process Drama

Process drama is a genre within educational drama developed in the UK by Dorothy Heathcote and Gavin Bolton in the 1960–1970s. The concept of *process drama*, however, was not in common use until the late 1980s and early 1990s (Dunn, 2016). This type of work focuses on collaborative investigation and problem solving in an imaginary world (DICE, 2010). It is a highly engaging form, where participants of all ages, together with the teacher or leader, explore themes, ideas, and feelings. The aim is not to perform or entertain. No audience is involved, apart from the participants themselves watching each other in the process. It is a way of working which is based on improvisation rather than a script.

The work consists of episodes or sequences, often in a nonlinear fashion. A variety of working methods and drama conventions may be used to explore, reflect upon, and express a theme which concerns aspects of human beings and their society. The drama conventions are dramatic forms used as poetic, aesthetic, structuring, and reflecting devices (DICE, 2010; Dunn, 2016, Eriksson, 2009; Hallgren, 2018, Neelands & Goode, 2011/1990).

In between the sequences, there are opportunities to share thoughts, make clarifications, and have discussions about the work so far. Here one can also discuss possible expectations of what will come next.

Some sequences of a process drama involve being in role, in what may be called the dramatic fiction, within which the participants behave, speak, and act *as if* it were real. In process drama, identifying and interacting with other roles is essential. Meaning is constructed when one bodily and mentally tries out being somebody else in a different context. Thus, one opens up for a change of role and perspective (Vangsnes & Økland, 2017, p. 172).

Being in role together implies that among the participants there must be an acceptance for “the ‘one Big Lie’: that we are in this moment living at life rate in an agreed-upon place, time, and circumstance and are together facing the same problem” (Heathcote, 1984a/1975, p. 92), like children do when they play. When children play hospital, for instance, they behave like doctors, nurses, or patients as if it is a real situation. There is an agreement among the children on this, whether it is uttered or not. We find the same kind of agreement in process drama, but here it is the teacher or leader who sets up the dramatic event and *frames* the situation.

Dorothy Heathcote introduced the concept of framing (Heggstad, 2008, p. 90). Being framed into a role provides the chance to enter the dramatic fiction with a certain perspective to explore from. In process drama, the participants are framed into a collective role, as individual members of a group. They may, for instance, be servants at a castle, shopkeepers in a street, or members of a board. From the framed position, the participants have the opportunity of influencing what is happening. According to Heathcote, this is the most important factor, “being framed into *position of influence*” (Heathcote, 1984b/1980, p. 168). As such, process drama is a democratic working method.

In any social encounter, there are two aspects present: “One is the action necessary for the event to progress forward towards conclusion. The other is the perspective from which people are coming to enter the event” (Heathcote, 1982, p. 21). This, Heathcote argues, is frame, and she adds that frame is the main agent in providing tension and meaning for the participants. Tension and meaning are two central concepts within process drama (Heggstad, 2008, p. 114).

Cecily O’Neill suggests the use of pretext as a starting point:

The ideal pre-text ‘rings up the curtains’ by framing the participants effectively and economically in a firm relationship to the potential action. It may hint at previous events and foreshadow future occurrences so that the participants develop expectations about the dramatic action. The pre-text will also determine the first moment of the action, establishing location, atmosphere, roles, and situations. It provides the arc from which it is possible to begin to interfere the full circle of the action. (O’Neill, 1995, p.22)

Pretext refers to the source or impulse of the drama process. It may be an object, a piece of music, a story, a location, or a character. In the example I will use later in this chapter, the courthouse building in the city centre is the pretext (O’Neill, 1995).

A process drama may last one session or may consist of many sessions stretched over days and weeks. This gives an opportunity for in-depth exploration (Hallgren, 2018). It could very well be one of the activities in working with a theme in Tarp’s model, as Hedegaard presents earlier in this book.

As previously mentioned, process drama is closely related to children's play. In the next section, I will outline this connection further by showing some of the similarities between these two activities.

11.3 Process Drama and children's Play

The similarities between process drama and children's play are clear (Heggstad, 2012/1998). Both activities operate within a dramatic fiction – *as if* it were real, at the same time with an awareness of the here and now. The four core elements within the dramatic fiction are *story*, *character*, *space*, and *time*. Whether expressed or not, these core elements are always present in the dramatic fiction. In both children's play and process drama, there is the element of a story with a content more or less clear and articulated. Often the children, at the beginning of their play, express what they are going to play, such as family life. Likewise, with character and space, children in their play decide who should be who and where they pretend to be – such as in some home. The element of time is more seldom clearly expressed in children's play. Still, the play is going on in some time other than here and now. Sometimes, children turn on and off the light to express night and day in their play.

Process drama and children's play also both include stops and discussions out of the dramatic fiction. As explained earlier, process drama consists of sequences where various drama conventions are used to shed light on and explore a theme, question, or problem. In between these sequences, there may be stops in which, for instance, necessary clarifications and discussions are acted out. When playing, children may also make stops in the dramatic fiction for the same reasons. This may be noticed in the way their bodily and language attitude change. Often, they switch from present to past tense as they speak. Kindergarten children frequently explore the same theme over time in their play. Sometimes the play may take a new path from the theme, depending on the children's ideas. They then explore new aspects before they are back on track with the original theme.

The similarities between the child-initiated play and the teacher-initiated process drama seem obvious, even to young children. I have often experiences that after participating in process drama, children have expressed how they enjoyed “the playing.” In process drama, the children use their experiences and skills from dramatic play, and vice versa; experiences from process drama may also inspire their play.

There are also some clear differences between process drama and children's dramatic play. The children initiate dramatic play, and they play for the pleasure of it. In process drama, it is the teacher who initiates the activity, and she has clear educational aims for the work. In the following section, I will turn to the teacher and her role as leader of the process drama.

11.4 The Teacher's Responsibility, Role, and Attitude in Process Drama

In process drama, the teacher is not the one to determine exactly what is going to happen. She is the leader acting as a guide, questioner, participant, and onlooker (Wagner, 1999/1976). Being a teacher or facilitator leading a process drama requires an open attitude towards the children. She needs to be willing to step down from the role of the one who knows and move to the role of the one who wants to know. The teacher should sometimes lead clearly, at other times support, and at other times just pull back to let the children lead the exploration. Implicit in process drama is a wish for the children to explore, create, and reflect (Vangsnes & Økland, 2017).

Before starting a process drama, the children may not know what is going to happen and what they are going to be involved in. The teacher therefore needs to make clear, both verbally and bodily, that she is entering a dramatic fiction. By observing what the facilitator says and does, and how this is acted out, the children find their roles and reactions in this new context. The teacher's positioning gives the children an indication of change in the structure, and she is also a model for the children in how to behave and what language to use (Ørving, 2017).

What the teacher does is what makes the difference, according to Jonothan Neelands. He suggests that process drama and other educational drama activities "should be an artistic as well as an educational journey" (Neelands, 2009, p. 14). In process drama, the teacher has some goals for what is to be explored, how, and why. Artistic awareness and knowledge of the aesthetics of theatre heighten the quality of the work. The teacher has prepared a frame and some possible drama conventions to structure the work. Within the frame, for instance a meeting where divers discuss what to do with the object they found in the sea, she will never be in total control. She will not know which ideas the children will express nor how they will be expressed. Process drama requires a teacher willing to be spontaneous and take risks (Dunn, 2016). O'Neill notes: "It involves the subtle attention to detail, nuance and implication; the ability to exploit the unpredictable in the course of the work; the confidence to shift both educational and artistic goals where appropriate; and the security to deal with disappointment and possible failure" (O'Neill, 2006). The teacher should have the ability to improvise and to be mentally ahead of the children to plan the next step (Ødegaard, [this volume](#)). She needs to be willing to expose herself to uncertainty and to have a philosophical attitude in order to encourage the children to explore the many wonders and aspects of the world. The teacher should have a profound interest in what the children bring into the process drama, their ideas, their thoughts, and their attitudes, and should challenge them to go deeper in their thinking (Wagner, 1999/1976).

From the start of the development of process drama, opening questions have been crucial. Heathcote always started her work very openly by asking the children what they wanted to work with. Questioning was her most important tool to involve the children in a work that explores significant human experiences. Wagner has organised seven varieties of Heathcote's questions: questions that seek information,

questions that supply information, branching questions (which call for a group decision between alternative courses of action), questions that control the class, questions that establish mood and feeling, questions that establish belief, and questions that deepen insight (Wagner, 1999/1976).

The questions used in process drama are what we may call authentic questions – questions without a clear given answer. Such questions send a signal to the children that the teacher is interested in their ideas and thoughts. The teacher should recognise what the children bring into the process drama by adding comments or follow-up questions or bringing it further in the work (Ørvig, 2017).

“Dramatic tension is the fuel which fires the imperative for actions in a play” (Bowell & Heap, 2001, p. 58). Using dramatic tension is also crucial in process drama. Without the tension, there is no drama. It is the facilitator’s responsibility to provide tension. This can be done by holding back information, giving small hints, bringing in some new information, showing uncertainty, or pointing out possible occurrences. She may bring in a letter, a message, sounds, or darkness, for instance, to introduce tension to the process (Heggstad, 2012/1998).

As we have seen, performing process drama with children demands an open-minded and playful teacher who is willing to take risks. Both teaching and artistic skills are required. No one person has total control of the situation, as the children and the teacher are equally important in the creative process.

The following, Part II, is an example of how process drama may be acted out.

11.5 Part II: An Example – With Analysing Comments

This example of a process drama has eight sequences, which are described chronologically. After each description of a sequence, in italics, there is an analysis of what happened, the children’s exploration, and the teacher’s role.

The facilitator is the one leading the process drama. In a kindergarten context, the facilitator may be the teacher or somebody else. She is the one who invites the children into the pretend world. The facilitator may be regarded as “a mediator between the participant and the material under exploration” (DICE, 2010, p. 202). The drama facilitator in this example is a former and experienced kindergarten teacher. She is developing different educational programmes at historical sites for kindergarteners and younger pupils in elementary school. Process drama is the main working method in these programmes.

11.6 At the Courthouse

It was the 200th anniversary of the Constitution. This event was celebrated in various ways throughout the country, including in schools and kindergartens. The local Children’s Culture House in one of the cities provided a specific programme for

kindergarteners to attend. Through process drama, children were invited to explore concepts such as laws, regulations, court, jury, judges, disagreements, disputes, accused, and defence, in addition to exploring the old courthouse, its symbols, and some of its history. Reflecting upon laws and regulations provides useful knowledge and convenient background for further discussions in the kindergarten, especially when disagreements among children occur. Listening to other people's views and trying to understand other perspectives is an important competence in the kindergarten.

This morning the group of 12 children (aged five) and two kindergarten teachers meet on the square outside the grand courthouse. The facilitator invites the children to examine the building and its features, size, and symbols.

This process drama is a site-specific event. There is a long tradition of doing process drama "on the site" (Birkeland & Krosshus, 2017, p. 243). The actual building plays a central communicative part. The architecture of the building, its history, and its role in the society influence the work. The building provides the children with a sensuous experience throughout the work. This is a great advantage for this process drama. Within a kindergarten context, children and teachers may build a scenography as part of a process drama and try to imagine what the space would look like.

The facilitator went over to the group. She presented herself, her colleague, and the courthouse's caretaker, who also was involved in the programme. Initially they had a little talk to get to know each other before the facilitator started the programme. In process drama, the beginning is important. How can the children's attention and interest be captured? There are a variety of options. Using a pretext is an efficient tactic, because it brings the children straight into the work. Here the building is the pretext, the firm base for the dramatic encounter of the process drama (O'Neill, 1995). The facilitator started by inviting the children to explore the building from the outside, from across the open space in front. In a sense, at the moment the group gathered and turned towards the building and collectively explored it, the curtain went up, and the event began. A silence among the children often follows a pretext. This also happened this morning at the moment when the group turned around to examine the courthouse. The pretext engages and activates the exploration, *together* with the participating teacher (Ørvig, 2017). The facilitator played an important role here in how she gathered the children, how she asked them to turn towards the building, how she used her body and gestures, and what questions she used in the exploration. To spend some time exploring what they actually saw heightened the interest for what might be inside the building and what would happen next.

At the end of this sequence, the facilitator asked the children to specially notice one of the basement windows for later. In that way, she built an expectation of something to come, and the children seemed intrigued by it. Process drama invites multidisciplinary exploration. Here is also an opportunity to raise awareness of concepts such as light, shadow, height, width, colours, shapes, and numbers on the façade of the building.

As they move on to the broad stairs outside the front door, behind the columns, the facilitator invites the children to a talk. She asks open-ended questions such as “What is law?” and “Why do we have laws?” “If you and I make an agreement, an appointment, or a promise, do I have to stick to it?” The children agree. “If anything happens which prevents me from keeping the agreement or appointment or promise, I probably should contact you so that we can make a new one?” They still agree. “You probably have rules in your kindergarten. Is it allowed to run and shout indoors?” “Nooooo!” they answer, slightly shocked. “But on the playground, it is OK,” they add. The children are now eager to discuss rules and regulation in the society. They agree that some kind of system is needed in order to live peacefully together. The facilitator tells them about the parent of all laws in the country: the Constitution, which in this country is celebrated every year as a national as well as a family event for everybody, and that date is known to every five-year-old.¹

In this sequence, the facilitator tuned the children in to the theme. She started out from a general basis on law and legislation and then moved to a more concrete and personal level: the children’s thoughts on what is just and fair in everyday life. Acceptance is a common strategy in process drama for encouraging the children to start reflecting, and it provides them with self-confidence towards the theme and what is to come next (Heggstad, 2008). The children listened attentively and actively, but they also contributed with comments. The facilitator listened to the children and responded to their utterances with comments and follow-up questions (Ørvig, 2017). The children were silently exploring what the facilitator told them. The facilitator had prepared thoroughly where this sequence should be acted out; there should be a chance for the children to sit, in order to keep their attention and concentration. She used both teaching and artistic skills when it came to her choice of language, pauses, and voice, where she placed herself according to the children, at what level, and how to use her eyes, gestures, and facial expressions. How she uses her artistic competence here makes a difference, for instance how she pauses to increase tension (Neelands, 2009).

The group is invited into the hall, underneath the big glass ceiling, which provides daylight into the middle of the huge stone building. The facilitator asks the children to look up to where they can see the big door to one of the main courtrooms. Behind that door, she tells them, are judges in black robes who are experts on law. There are also co-judges who help the judges to decide what is right and what is wrong. Suddenly a person in black robes walks through the hall and the children gasp and whisper, “Look! There is a judge!”

Here they also listen to the story of how that glass roof was smashed by an explosion on the harbour during World War II and how the heavy iron frames made cuts in the stone floor. “Can you find the cuts?” They do: “Here is one!” and “Here is one more!” The facilitator continues, “There is a law to protect old buildings and keep their history. Therefore, this floor has not been changed in spite of the scars. Isn’t that nice? A law may protect.”

At this point in the process drama, the tension and the children’s interest increased. The facilitator gathered the children in the middle of the hall and asked them to sit on the floor. She used a low voice, a symbol of respect for the law and for the skilled people trying to solve difficult judicial tasks in the offices and courtrooms nearby. With her words and behaviour, the facilitator serves as a model for how the group

¹The 17th of May.

should act in this context (Ørvig, 2017). The children listened closely to the story from the war, and all of them were eager to explore the floor and find the cuts and scars.

They move on, down to the basement. Everyone takes their coats off and gathers in a small corner. The facilitator invites the children to a role-play where they all are divers in the sea. "What is diving? What do we need to be divers?" The group discusses what diving can be like, what's in the sea – maybe treasures? What can be the obstacles? How may they communicate without being able to speak? They agree upon some important signs to communicate, signs meaning: danger, let's go back, let's go farther down, up to the surface.

This is an example of how process drama does not have a classical linear dramaturgy with a beginning, middle, and end. There is opportunity for moving freely in time, space, and role (Hallgren, 2018). To adults unacquainted with process drama, this sequence may seem confusing. Why diving? Why now? What has this to do with law and conflicts? There is not a clear logical connection to what the children have experienced previously in the process drama. The children, however, did not seem to bother. They are familiar with shifts in ideas when they play. They easily accepted the idea of diving, and it seemed as if it was interesting for them to explore. The dramatic tension was gradually increasing again. So now they were actively exploring this idea and creating their own sign language to use in the deep. The facilitator had found a suitable corner where there was just enough space for the group to sit closely together on the floor. There were no disturbances. The space was in a basement hall outside a courtroom seldom in use.

It is time to put on the diving equipment, as if it is real. They mime: the suit, quite strenuous. The flippers, difficult to walk with. The flasks, heavy. At last the masks; remember to spit in them to prevent condensation. Finally, everybody is ready to dive in. They all swim into the neighbouring room in silence. From time to time, they signal to each other. There are some steps up to a narrow and quite dark hallway. They swim a bit farther into the dark until one child makes the "danger" sign, and they all swim back in a hurry. On their way back, some find an interesting metal box. They bring the box back to the shore.

The children were now framed as divers. The facilitator led them step-by-step through the dressing process using mime. At the same time, she opened up for possible knowledge about diving among the children. Actually, spitting into the mask was knowledge initially provided by a child. In being framed, the children become somewhat protected. It is the facilitator's responsibility to shield the participants from unwanted personal exposure. A way to provide protection is to use distance; there should be a distance between the individual and the given role in the dramatic fiction (DICE, 2010; Eriksson, 2009; Heggstad, 2012/1998). A way to secure a distance is to frame the children as adult divers in a setting they have probably not experienced before. What happens within the dramatic fiction is not real, and the children are well aware of that. They all pretended to be somebody else, divers. This situation provided a way to freely explore what being a diver might be like. Whatever "my" diver says or does is not "me." These utterances are the diver's, not "mine." The distance of the role protects the child from an eventual criticism of the utterances. Each child may create a diver to their liking, according to what they want to explore: a diver who is clever, eager, scared, selfish, or brave, for instance.

The facilitator demonstrated what bodily effort was necessary to put on the diving gear. The children almost forgot to spit in the mask, which would have led to condensation when they came under water. The facilitator noticed the “mistake” with a laugh, and with that she brought humour into the work. The children obviously found the diving interesting, and there was a clear commitment to the “one Big Lie” (Heathcote, 1984a/1975, p. 92). They explored how diving might feel as they made no sounds, moved slowly and gently in the water, and made use of the signs they had agreed on. This was an improvised sequence. The facilitator and the children were improvising bodily together. Although the teacher had set the frame, and she knew there were spacious limitations within that frame, she could not know what the children would come up with. She had to accept and build on whatever ideas the children improvised and explored. It is the “spontaneous and unpredictable nature of process drama that makes it such an exciting form – for participant and facilitator” (Dunn, 2016, p. 130).

Now everyone gets rid of the diving equipment. There is a discussion about the box they had found while they were diving. Maybe it is a treasure! Who has lost it or thrown it away? Eventually they open it. The content is a metal object and nobody can understand what it is. It seems obvious that it is not a treasure, nothing of value. The object is passed along in the group for everybody to examine. They discuss what it may be, why it was in the box, whether it is important or valuable. The children develop possible stories: maybe it belongs to a shark king? Or to some pirates? Or maybe it is equipment for searching for gold? Maybe something from the explosion during the war? The facilitator says that clearly, it is an old object. It may be an object protected by the law, like the building. In that case it is a duty to pass it over to the authorities. The museum will find out what the object is and what to do with it.

A prop was brought into the process drama, and new tension arises. The facilitator, still in role as a fellow diver, spent some minutes with the group to fantasize about what might be inside. This increased the dramatic tension even more. When the content finally was revealed, the object was something nobody had ever seen before. The children seemed slightly confused and maybe disappointed. The fact that the object was unfamiliar, however, opened up the opportunity for more exploring and fantasizing. The dramatic tension increased, the energy in the group rose, and they eagerly took part in the discussion of what the object might be, creating possible stories behind it. Some ideas connected to the story about the explosion during the war that they heard earlier, upstairs in the hall. Others connected to stories about pirates that the children probably were familiar with. The facilitator then brought in the possibility of a law protecting the object and that they therefore could not keep it.

The drama convention *meeting* was used in this sequence. The group was gathered within the dramatic fiction, “to hear new information, plan action, make collective decisions, and suggest strategies to solve problems that have arisen” (Neelands & Goode, 2011/1990, p. 35). The facilitator, in role as a fellow diver, was leading the meeting. This sequence was focusing on an issue central in the further work. The children, in role as divers, had the opportunity to explore their hypotheses and speculations about the box, its content, and what to do with it. Towards the end of the meeting, the process drama connected to the original theme again.

The facilitator, out of role, informs the children that they now will enter a courtroom and listen to another diving story about an incident that happened some time ago. In that story, she says, there are two divers who cannot agree. "And all of us will try to help them find out what is right and wrong." She tells them that the children have to pretend to be the co-judges and that she will pretend to be the judge. The colleague of the facilitator and the caretaker will be the two divers in the case, and they put on jackets as a symbol that they now are pretending to be someone else. The divers both think what happened is unfair, and they want to express their views on the case. The facilitator informs the two, as the children listen: "They say you did something wrong in this case, but both of you totally disagree and are eager to tell your version of the story."

The facilitator puts on a black judge robe and brings forward the big red book of laws with the coat of arms printed in gold. She asks the children as co-judges to come forward and put a hand on the book. She asks them to repeat after her: "I promise to do my best to listen to what will be said in this case and then say what I think is right."

They all enter the courtroom. The facilitator as the judge finds her place behind the old, stern, dark wooden counter, one step up. The two kindergarten teachers are co-judges, together with the children, but at some point, the two get other roles. One is an expert on old objects; the other is an expert on diving. They use scarves as costumes to make their changes of roles clear. They also have a piece of paper, a statement, to read, or they may improvise.

The children and teachers sit down in two groups, alongside each side of the counter, one teacher in each group, in the shape of a U. In the opening of the U is the space for the two divers in the conflict. One at a time, they rise and explain their version of what happened that day. The jury and the judge ask questions to shed more light on the case. The two persons in conflict leave the room, and there is a discussion between the judge and the jury on what will be the right solution to the conflict. This discussion takes some time. The children seem to find it difficult to decide what is right and what is wrong in this case. Together with the judge they have to reach a conclusion. Eventually the two parties are summoned and the result shared with them.

Two drama conventions are in use in this sequence, *ritual* and *teacher-in-role*. According to Neelands & Goode, *ritual* within process drama belongs to what they call *poetic action*. These actions are useful as means "of making a deliberate shift" and "to conventions which heighten the awareness of form and which allow for the exploration and representation of key symbols and images suggested by the work" (Neelands & Goode, 2011/1990, p. 45). A *ritual* is "a stylized enactment bound by traditional rules and codes, usually repetitious and requiring individuals to submit to a group culture or ethic through their participation" (Neelands & Goode, 2011/1990, p. 45).

In this last part of the process drama, the children were framed as co-judges. The framing was amplified by a ritual where they all, at the same time, put their hand on the law book and repeated the oath the facilitator uttered. The moment was filled with symbolism and seriousness.

The second convention, *teacher-in-role*, is a way of leading the group from *within* the dramatic fiction. The facilitator puts on a suitable role to excite interest, invite involvement, create choices and ambiguity, and create opportunities for the group to interact in role. In this convention, the facilitator is not acting spontaneously; she is rather trying to mediate her aims of the process drama through role involvement (Neelands & Goode, 2011/1990).

Within the dramatic fiction, the children use what they already know, things they have experienced, heard, observed, or seen, and one often finds that they express themselves differently than they do in their everyday life. They may use a different and more complicated style both in language and attitude. This is similar to when they play, when they are above their average age, above their daily behaviour – a head taller than themselves (Vygotsky, 1976). There is a difference between ordinary dialogue and the dialogue within the dramatic fiction (Ørvig, 2017).

The atmosphere in the courtroom was quiet and serious. The symbols, the dark colours, the two leaded glass windows, and the seriousness that the judge and the two parties of the case acted out may have been the reason why the children did not participate much verbally in this part. Or they may – at this point – have been tired. Additionally, the case was difficult to solve. The facilitator who chose to come forward quite early in this sequence, as judge, asked every co-judge for his or her opinion. Although the children did not say much, they could explore the courtroom, the role of the judge, the experts, and the two sides of a possible case.

Summing up.

Afterwards, the facilitator praises the children for being concentrated for such a long time. “Imagine, in the courtrooms in this building, they may need many hours, a whole day to solve a case. And sometimes they spend many days – even weeks. It takes time to listen to all the views. According to the Constitution, everybody has the right to be heard in court. Somebody must listen, even if it takes days and weeks. This is serious. They need to reach a conclusion to find out what is right, according to the law.”

It is time to depart, and the children dress and leave through a back door. They gather in front of the building at the same place where it all started. Now they examine the building once more. This building is no longer just a building in the city. The children have an interest and ownership in it; they know something about it. Gazing at the building, they discuss where they think the big courtrooms are. Finally, the facilitator points out some windows in the basement, the windows to “their” courtroom.

In this last sequence, the facilitator provided a chance for the children to reflect on what they had been a part of. She returned to the core element of the Constitution, which she told them about on the stairs in the very beginning: everyone has the legal right to be listened to in disputes. The parties of a case in court have the right to tell their version of the story. She also brought in the element of time, which corresponded very well with the children’s experience, as several of them seemed to think that it took a long time to solve the case. At the same time, the amount of time it takes shows the seriousness and importance of justice in the society.

The facilitator accompanied the group back to the square. The pretext of the process drama, the building, is included in this final sequence (DICE, 2010). Once more they explore the building from the outside, only now with new knowledge of what kind of building it is and fresh impressions of what is going on inside. They may have developed ownership of the building, as they have been a part of its activities. If they come by the building again, they may show their companions that special room in the basement, which they likely would call “their” courtroom.

11.7 Conclusion

In this chapter, I have used an example to present how exploration is a vital element of process drama. We have seen that in the development of process drama there is a strong connection to the cultural historical tradition. Vygotsky's theories in particular have had a great impact from the beginning. We have also seen that there is a close connection between process drama and imaginary play.

Process drama allows teachers and children to be equitably together in an educational context. Although a responsible leader of the process drama, the teacher needs to have an open mind and willingness to welcome the children's ideas into the work. There is a need for both educational and artistic skills, such as awareness of details, symbols, and dramatic tension, in order to provide opportunities for exploration and at the same time demonstrate the artistic quality necessary. The example used in this chapter was a site-specific process drama. In this case, the children and their teachers had to travel to the courthouse. Most of the time, process drama is acted out in an everyday environment, like the kindergarten. There is no need for extra equipment; process drama is costless. Like in children's play, imagination is crucial for pretending this corner is a castle. Anything can be everything within the safe environment of the kindergarten. The only thing needed is a teacher with improvisational skills, playfulness, and aesthetic awareness who has a willingness to expose herself to the uncertainty of the outcome.

The example in this chapter was a programme for kindergarten children aged five in which process drama was the working method. The theme of the programme was the system of law, judicial conflicts, and trials, and it was acted out in the old courthouse of the city. Through the programme, the children had the opportunity to explore the building, its content, and its history. They also explored what a judicial conflict might be and had a taste of what is just, according to the law. Step by step, the programme facilitator opened doors to new aspects of the theme to explore. The programme has been going on for some time; many groups of children have attended. A mother commented afterwards that her daughter had talked a lot about her experience. It had made a deep impression on the child in a positive way, the mother said. For a long time, the child frequently talked about it; there was so much to reflect upon.

Process drama is an explorative, engaging, and playful genre to work with and a democratic and enjoyable way for adults and children to work together within an educational context. It provides a great opportunity for exploring all aspects of life and society and as such contributes to cultural formation of the children. It is a useful and efficient working method that should be encouraged to be used in kindergarten and therefore also in teacher training.

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